ENVIRONMENTAL STUDIES

Chair of Environmental Studies Academic Program: Keith Kisselle
Director of the Center for Environmental Studies: Peter Schulze
Director of Thinking Green Campus Awareness: Mari Elise Ewing
Faculty: Mari Elise Ewing, Keith Kisselle, Peter Schulze

Steering Committee: Peter Schulze (chair), David Baker, Cate Bowman, George Diggs, Karánn Durland, Mari Elise Ewing, Ryan Felix, Audrey Flemming, Loriann Garcia, Karen Glenn, Steve Goldsmith, Max Grober, Jessica Healy, Terry Hoops, Keith Kisselle, Wolfgang Lueckel, Wayne Meyer, Daniel Nuckols, Julia Shahid, Brad Smucker, Ivette Vargas-O'Bryan

The Center for Environmental Studies fosters transition to a just society that meets the needs of current generations, future generations, other species, and the ecosystems upon which all known life depends.

Students who are interested in the environmental studies major or minor are strongly encouraged to consult with Mari Elise Ewing, Keith Kisselle, or Peter Schulze at their earliest convenience. Students also are encouraged to study the webpage of the **Center for Environmental Studies**.

Degree Plans Offered in Environmental Studies

Major in Environmental Studies
Minor in Environmental Studies

A **major in environmental studies** consists of:

Introductory Course (1 course)
_____ ENVS 135 Fundamentals of Environmental Studies (offered fall and spring)

Natural Science Requirement (2 courses)
_____ ENVS 222 Environmental Science (Spring; PREQ: ENVS 135 with C or higher)
_____ BIOL 259 Conservation and Restoration Ecology (Fall; PREQ: BIOL 115)
_____ BIOL 346 Ecosystem Ecology (Spring; PREQ: BIOL 115, 116, CHEM 111, 200-level BIOL)
_____ BIOL 353 Physiological Ecology (Fall; PREQ: BIOL 115, 116, 200-level BIOL)

Ethical or Conceptual Approaches Requirement (2 courses)
_____ ENVS 236 Environmental Justice (Spring)
_____ ECO 242 Natural Resources and Environmental Economics (typically Spring; PREQ: ECO 101 or 102)
_____ PHIL 207 Ethics and the Environment (usually Spring of even-numbered years)
_____ PHIL 307 Environmental Philosophy (usually Spring of odd-numbered years; PREQ: any PHIL class and ENVS 135)

Policy Requirement (2 courses)

_____ ENVS 245 Food Systems (Fall)
_____ ENVS 359 Resilient Systems (Fall; PREQ: Junior or Senior standing and ENVS 135 with C or higher, or instructor permission)
_____ ENVS 379 Environmental Policy (Spring; PREQ: Junior or Senior standing and ENVS 135 with C or higher)

Capstone (1 course)

_____ ENVS 489 Environmental Solutions (Spring; PREQ: Senior standing and two ENVS classes with C or higher, or instructor permission)

Electives (1 course from this list or 1 more from ENVS courses listed above)

_____ ANTH 263 Whose Amazon?: Environment, Culture, and Modernization in the Amazon River Basin (usually Spring)
_____ BIOL 220 Vertebrate Biology (some Spring semesters; PREQ: BIOL 115 and 116 or instructor permission)
_____ BIOL 222 Mammalogy (PREQ: BIOL 115 and 116 or instructor permission)
_____ BIOL 223 Entomology (Fall; PREQ: BIOL 115 and 116 or instructor permission)
_____ ECO 265 Energy Economics (usually Fall)
_____ GER 255 German Environmentalism (Spring)
_____ PHY 135 Global Climate and Extreme Weather (Spring)
_____ PSY 222 Environmental Psychology (offered every other year; PREQ: PSY 101)
_____ SOC 266 Environmental Sociology

Other Considerations When Planning for the Major:

- Any substitutions must be approved by the chair of the Environmental Studies Academic Program. At least 3 courses for the major must be at the 300-level or higher. If Environmental Studies 135 will not fit a prospective major's or minor's schedule, or is not available, students should consider Environmental Studies 245 Food Systems, Philosophy 207 Environmental Ethics, or a prerequisite for higher level courses: Biology 115 Evolution, Behavior, and Ecology; Economics 101 Microeconomics; or Economics 102 Macroeconomics.
- Due to the interdisciplinary nature of environmental studies, the major satisfies the science and social science breadth/discover requirements, partially satisfies the humanities breadth/discover requirement and, depending on courses chosen for the major, partially or fully satisfies the Advanced Writing, Quantitative Competency, Systems of Power, Privilege, and Inequality, and Applied Learning requirements.
- Students interested in environmental field study abroad should consult with the academic chair regarding course substitutions.
- Students considering environmental careers should choose a minor (or second major) that best complements their environmental interests and consider classes not required for the major but recommended for many environmental studies careers, such as Chemistry 111, Chemistry 112, Mathematics 120 (Statistics), Mathematics 151, and writing-intensive courses. Students interested in environmental careers should also obtain an introduction to geographic information systems (GIS) software by enrolling in Food Systems (ENVS 245) and/or Environmental Justice (ENVS 236).
- Students who plan to pursue further environmental study or an environmental career after graduation are strongly encouraged to consult with an environmental studies faculty member as soon as possible.

Total Credits Requirement = 9 course credits

A **minor in environmental studies** consists of:

Introductory Course (1 course)
_____ ENVS 135 Fundamentals of Environmental Studies (Fall and Spring)

Other ENVS classes (select at least 3 courses)
_____ ENVS 222 Environmental Science (Spring; PREQ: ENVS 135 with C or higher)
_____ ENVS 236 Environmental Justice (Spring)
_____ ENVS 245 Food Systems (Fall)
_____ ENVS 359 Resilient Systems (Fall; PREQ: Junior or Senior standing and ENVS 135 with C or higher, or instructor permission)
_____ ENVS 379 Environmental Policy (Spring; PREQ: Junior or Senior standing and ENVS 135 with C or higher, or instructor permission)
_____ ENVS 489 Environmental Solutions (Spring; PREQ: Senior standing and two ENVS classes with C or higher, or instructor permission)

Electives (select 1 more course from above category or 1 course from this list)
_____ ANTH 263 Whose Amazon?: Environment, Culture, and Modernization in the Amazon River Basin (usually Spring)
_____ BIOL 220 Vertebrate Biology (some Spring semesters; PREQ: BIOL 115 and 116 or instructor permission)
_____ BIOL 222 Mammalogy (PREQ: BIOL 115 and 116 or instructor permission)
_____ BIOL 223 Entomology (Fall; PREQ: BIOL 115 and 116 or instructor permission)
_____ BIOL 259 Conservation and Restoration Ecology (Fall; PREQ: BIOL 115)
_____ BIOL 346 Ecosystem Ecology (Spring; PREQ: BIOL 115, 116, CHEM 111, 200-level BIOL)
_____ EAS 265 Environmental Issues in East Asia (offered occasionally)
_____ ECO 242 Natural Resources and Environmental Economics (usually Spring; PREQ: ECO 101 OR 102)
_____ ECO 265 Energy Economics (usually Fall)
_____ GER 255 German Environmentalism (Spring)
_____ PHIL 207 Ethics and the Environment (usually Spring of even-numbered years)
_____ PHIL 307 Environmental Philosophy (usually Spring of odd-numbered years; PREQ: any PHIL class and ENVS 135)
_____ PHY 135 Global Climate and Extreme Weather (Spring)
_____ PSY 222 Environmental Psychology (offered every other year; PREQ: PSY 101)
_____ SOC 266 Environmental Sociology

Other Considerations When Planning for the Minor:
- Pre-approval from the academic chair is required to substitute any course not listed.

Total Credits Requirement = 5 course credits

COURSES

ENVS 135 Fundamentals of Environmental Studies
An introduction to major environmental issues that includes fundamental concepts of environmental studies, the roots of environmental problems, options for responding to environmental problems, and challenges of achieving sustainability. Requirements met: Science Breadth/Discover. (Usually each fall and spring)

ENVS 222 Environmental Science
The course has three purposes: to provide students with basic knowledge of key environmental topics by building upon brief introductions from Fundamentals of Environmental Studies (ENVS 135), to expand upon the field work questions and habitat types studied in other environmental studies and related courses, and to provide students instruction and experience in analyzing the science of environmental controversies. Lab required. PREQ: Environmental Studies 135 with C or higher. (Usually spring)

ENVS 236 Environmental Justice
Marginalized members of society disproportionately suffer from environmental hazards including pollution, resource depletion, "natural" disasters, and increasingly climate change. Activists and scholars began documenting these disparities in the 1960s as the environmental justice movement emerged from the civil rights movement. Environmental justice efforts now attempt to promote access to healthy environments and the decision-making processes that could remedy existing inequities. This course will examine the historic and contemporary barriers to environmental justice in the United States and then explore approaches and policies to overcome environmental injustices. We will combine exposure maps with demographic data to make our own ArcGIS StoryMaps of student-selected cases. Requirements met: Social Science Breadth/Discover and Systems of Power, Privilege, and Inequality. Cross-listed with Social Justice and Community Engagement 204. (Spring)

ENVS 245 Food Systems
This course challenges us to thoughtfully question how we secure one of our most fundamental needs - food. Our growing population and affluence means the global demand for food will most likely increase for at least another forty years. The question then is this: How might we feed these soon-to-be nine billion people sustainably? This course will explore the social and environmental problems linked to the production, storage, processing, distribution, and access of food. We will take an evidence-based, interdisciplinary approach to analyzing why these problems exist and how we might begin to solve them. Using introductory geographic information systems software (GIS), we will explore the concepts of space and place in complex food systems with an emphasis on American agriculture. Each topic in this course is deliciously ripe with controversy and well suited for study using this approach. The careful consideration of several recurring themes will make this course more than a smorgasbord of food system issues. GIS lab included. Requirements met: Social Science or Science Breadth/Discover. (Fall)

ENVS 250 Topics in Environmental Studies
A study of selected topics for beginning students based on faculty and student interests. Offered on an occasional basis. Course may be repeated when topic varies. 1 course credit.

ENVS 260 Intermediate Directed Study
Student investigation of topic of interest working in collaboration with a faculty member resulting in significant oral and written work. See On-Campus Learning Opportunities for more information. PREQ: Freshman January term or Sophomore standing. Special permission required. Offered in variable course credit from 0.25-1.00.

ENVS 294 Intermediate Student Research
Intended for less experienced students to develop and execute a research project related to environmental studies, beyond the constraints of the normal classroom, suitable for public dissemination on or off campus under mentorship of a faculty member. Typically, this work results in a formal presentation, written work, or creative works. Course credit varies from 0-1.00. PREQ: Instructor permission required.

ENVS 350/450 Advanced Topics in Environmental Studies
An investigation of selected topics for more advanced students based on faculty and student interests. Offered on an occasional basis. Course may be repeated when topic varies. Prerequisites vary. 1 course credit.

ENVS 359 Resilient Systems
This course connects people to places. It asks the question: How do we protect or restore places where people are inextricably linked to their environment? This course considers the historical and current conceptualizations of resilience and the role resilience plays in creating sustainable communities. We will first explore the ecological concept of resilience and then, using a case study approach, analyze the social and economic institutions that either build or erode a system's capacity to self-organize, learn, and adapt. For example, we will examine the characteristics that make some systems more resilient to natural disasters, disease outbreaks, or prolonged drought than other systems. We will study illustrative and diverse examples from around the world and here at home, seeking commonalities among cases while respecting context. PREQ: Environmental Studies 135 with C or higher and Junior or Senior standing or instructor permission. Requirements met: Social Science Breadth/Discover and Advanced Writing Competency. (Fall)

ENVS 360/460 Advanced Directed Study
Student investigation of topic of interest related to the major or minor working in collaboration with a faculty member resulting in significant oral and written work. See On-Campus Learning Opportunities for more information. PREQ: Junior or Senior standing. Special permission required. Offered for variable course credit from 0.25-1.00.

ENVS 379 Environmental Policy
This course builds upon Environmental Studies 135 and incorporates key ideas from ecology, economics, ethics, and other disciplines in a study of options for responding to environmental issues. The course examines both theoretical and actual approaches to solving and preventing environmental problems. Readings cover the history of environmental issues, the system of environmental laws and policies in the United States and their development, leading ideas for more effective environmental policy, and the challenge of international environmental agreements. PREQ: Completion of Environmental Studies 135 with a grade of C or higher and Junior or Senior standing or instructor permission. (Spring)

ENVS 394/494 Advanced Student Research
Intended for advanced students to develop and execute a research project related to environmental studies suitable for public dissemination under mentorship of a faculty member. Students are expected to present the results of their research in a public forum. Typically, this work results in a formal presentation, written work, or creative works. Course credit varies from 0-1.00. PREQ: Instructor permission required.

ENVS 464 Teaching/Learning Participation
An individualized study that includes sharing in the instructional process for a particular environmental studies course under the supervision of the faculty member teaching the course. Open only to certain highly qualified juniors and seniors by invitation. See On-Campus Learning Opportunities for more information.

ENVS 489 Environmental Solutions
Students identify opportunities to reduce the college’s environmental impact and propose means of doing so. In the process, they identify and answer critical questions about present operations and potential alternatives, identify and critically evaluate concepts and information relevant for devising improvements, and consider proposed solutions from various perspectives. Students critique each other’s draft proposals, work collaboratively to refine proposals, and present proposals to college officials, both in writing and in public presentations. Review of other organizations’ efforts to achieve environmental progress and study of common obstacles to environmental progress complement proposal development. PREQ: Two ENVS courses with a grade of C or higher and Senior standing, or instructor permission. Requirements met: Advanced Writing Competency and Applied Learning Experience. (Spring)

ENVS 490 Independent Study
An experiential learning activity to be approved by the Environmental Studies Steering Committee. Possible project areas include basic research, off-campus internships, and service projects. PREQ: Junior or Senior standing with preference for students who have completed their junior year. Offered in variable course credit from 0.25-1.00.

ENVS 491 Honors Thesis in Environmental Studies
Extensive independent study in the major in a topic of special interest culminating in a bachelor's thesis with oral examination by thesis committee resulting in a bachelor's degree with Honors upon completion. See Departmental Honors Program for more information. Completed in last three semesters before graduation. Offered for variable course credit from 1.00-2.00.

ENVS 492 Independent Study Off-Campus/NSOC
Student-driven independent study in a topic related to the major completed at an off-campus site. See Off-Campus Learning Opportunities for more information. PREQ: Junior or Senior standing. Special permission required. Offered in variable course credit from 0.25-1.00.