

ENSP - ENVIRONMENTAL SCIENCE AND POLICY

ENSP101 Introduction to Environmental Science (3 Credits)

One of two required courses that introduce students to the topics studied and methods employed in environmental science and policy. Emphasis on scientific ways of knowing; the systems, cycles, flows, and interfaces that characterize the atmosphere, lithosphere, hydrosphere, and biosphere; the analysis of human impacts on these systems; and the nature of scientific uncertainty and methods of quantifying environmental processes.

ENSP102 Introduction to Environmental Policy (3 Credits)

Second of two courses that introduce students to the topics studied and methods employed in environmental science and policy. Emphasis on the process of formulating, implementing, and evaluating policy responses to environmental problems, with particular attention to policy controversies related to scientific uncertainty, risk assessment, the valuation of nature, and distributional equity. May be taken before or after ENSP101.

Additional Information: May be taken before or after ENSP101.

ENSP250 Lawns in the Landscape: Environmental Hero or Villain? (3 Credits)

Examination of the lawn as an element in the anthropogenic landscape and its influence on global warming, regional air and water quality, ecological diversity, mammalian pesticide exposure and consumptive water use. Demographic and socioeconomic factors are examined in the context of being predictors of landscape aesthetic desires and lawn management behaviors. Policies that incentivize lawn alternatives or changes in lawn management behavior are discussed. Cross-listed with PLSC250.

Credit Only Granted for: ENSP250 or PLSC250.

ENSP305 Applied Spatial Analysis in Environmental Science and Policy (3 Credits)

Intended for students interested in pursuing career or graduate research opportunities that will include identifying/querying/processing environmental datasets, detailed spatial analysis of environmental data, and applications of predictive environmental modeling. Students will learn necessary skills to analyze and process environmental data through hands-on training in commonly used software and a series of topical case studies. Data analysis and data processing will be taught using publicly available real-world environmental data sets.

Prerequisite: GEOG373; or permission of Environmental Science and Policy Program.

Recommended: ENSP101 and ENSP102.

Restriction: Must have earned a minimum of 60 credits; and permission of Environmental Science and Policy program.

ENSP306 Fundamentals of Qualitative Research Methods for Environmental Studies (3 Credits)

An introduction to research design and methods, with an in-depth focus on qualitative research methods and application to environmental studies. Topics include: writing an appropriate research question, identifying relevant methods, submitting a proposal to the Institutional Review Board, choosing appropriate sampling approaches, conducting interviews, focus groups, ethnographies, analyzing textual data, and presenting qualitative results.

Recommended: ENSP101 and ENSP102.

Restriction: Junior standing or higher; and must be a major in the Environmental Science and Policy program; or permission of Environmental Science and Policy program.

ENSP330 Introduction to Environmental Law (3 Credits)

An overview of environmental law, from its common law roots to its role in the modern regulatory state, including an examination of major federal environment statutes and the policy debates inherent in them. Other areas covered include civil and criminal enforcement, standing to sue, land use control, and regulatory takings.

Recommended: ENSP101 and ENSP102.

Restriction: Junior standing or higher. And must be a major in the Environmental Science and Policy program; or permission of Environmental Science and Policy program.

ENSP340 Water: Science, Ethics, and Policy (3 Credits)

Exploration of the science, policy, and ethical aspects of water resource protection and management. Focus on water pollution, water availability, ecosystems, and sustainability

Recommended: ENSP101 and ENSP102.

Restriction: Must have earned a minimum of 60 credits. And must be a major in the Environmental Science and Policy program; or permission of Environmental Science and Policy program.

ENSP342 Environmental Threats to Oceans and Coasts: Towards an Integrated Policy Response (3 Credits)

An interdisciplinary study of the challenges of maintaining the health and vitality of oceans and coasts in the face of climate change, extreme weather, and other threats including pollution, and oil and gas development. Exploration of four broad themes: resource management, conservation and stewardship, pollution, and coastal zone management. Also, an analysis of current efforts to integrate these themes through ecosystem-based management; marine spatial planning; and related policy responses.

Recommended: ENSP101 and ENSP102.

Restriction: Must have earned a minimum of 60 credits. And must be a major in the Environmental Science and Policy program; or permission of Environmental Science and Policy program.

ENSP350 Energy Resources: Science and Policy in the 21st Century (3 Credits)

Energy resource production and consumption, including historical context, current trends in the U.S. and globally, and social and environmental implications. Includes fuel-source formation, history of use, modern trends in consumption, production, pricing and trade, reserves and resources, environmental and social impacts, future outlook and potential new technologies related to energy efficiency and conservation.

Prerequisite: ENSP101 and ENSP102.

Restriction: Must have earned a minimum of 60 credits; and permission of AGNR-Dean-Environmental Science & Policy Program.

Credit Only Granted for: ENST405, ENSP350, ENST605, or MEES698Z.

ENSP360 Every Drop Counts: Water, Food and Global Public Health (3 Credits)

In-depth interdisciplinary study of the public health issues related to water use for global food production. Topics will include accessibility and availability of safe water for agriculture worldwide, potential microbiological and chemical hazards in agricultural water, alternative water sources such as reclaimed wastewater and return flows, food safety approaches to managing agricultural water, and agricultural influences on surface and groundwater quality. Political, social, and economic factors relating to agricultural water will be addressed, with special focus on regions that are leaders in innovative water management and regions where access to clean water for agriculture is a major challenge.

Prerequisite: ENSP101 or MIEH300; or permission of department.

Cross-listed with: MIEH333.

Credit Only Granted for: MIEH333 or ENSP360.

ENSP370 Principles of Environmental Justice: Theory and Practice (3 Credits)

Explores the issue of environmental justice from the social science, policy, and legal perspectives. The course will begin with a theoretical foundation of environmental justice, and the historical, social and economic roots of environmental injustices and environmental racism. We will explore the different contexts within which environmental injustice manifests itself including domestic and international examples such as injustices in the food system, climate justice, environmental privilege, and urban environmental justice and pollution. We will study the ways in which people and communities have combated environmental injustices by looking at the history of the environmental justice movement, which was created to address the increasingly disproportionate impacts of environmental harms on low income populations and communities of color.

Recommended: ENSP101 and ENSP102.

Restriction: Junior standing or higher. Must be a major in the Environmental Science and Policy program; permission of Environmental Science and Policy program.

ENSP386 Internship (3-6 Credits)

Restriction: Must have internship proposal approved by the concentration advisor, the director of ENSP and the student's internship sponsor.

ENSP399 Special Topics in Environmental Science and Policy (1-3 Credits)

A substantive and specialized examination of contemporary issues in environmental science or policy.

Restriction: Must be in Environmental Science and Policy program; or permission of AGNR-Dean-Environmental Science & Policy Program.

Repeatable to: 12 credits if content differs.

ENSP400 Capstone in Environmental Science and Policy (3 Credits)

Integration of physical, biological, and social sciences with applications to environmental science and policy. Problem-solving and multi-disciplinary case study evaluations pertinent to contemporary and future issues related to the environment.

Prerequisite: ENSP101; and ENSP102.

Restriction: Must be in Environmental Science and Policy program; and senior standing; and permission of the Environmental Science and Policy Program.

ENSP489 Special Topics in Environmental Science and Policy (1-3 Credits)

A lecture and or laboratory series organized to study a selected phase of Environmental Science and Policy not covered by existing courses. Credit according to time scheduled and organization of the course.

Repeatable to: 6 credits if content differs.

ENSP499 Honors Thesis Research (1-6 Credits)

Individual research, thesis, and oral defense. The research project will be conducted under the supervision of a faculty member.

Restriction: Must be in the ENSP Honors program; and permission of AGNR-Dean-Environmental Science & Policy Program.

Repeatable to: 6 credits.