ENVS 101 Introduction to Environmental Science
ENVS 101 Introduction to Environmental Science (3 cr)
*Gen Ed: Natural and Applied Sciences*
Introduction to basic principles in the biological, physical, and social science areas of environmental science.

ENVS 102 Field Activities in Environmental Sciences
ENVS 102 Field Activities in Environmental Sciences (1 cr)
*Gen Ed: Natural and Applied Sciences*
Field studies for ENVS 101. Field demonstrations on waste management, water, air pollution, and the ecosystem. Field trips required.

Prereq or Coreq: ENVS 101.

ENVS 200 (s) Seminar
ENVS 200 (s) Seminar (cr arr).

ENVS 225 (s) International Environmental Issues Seminar
ENVS 225 (s) International Environmental Issues Seminar (3 cr)
*Gen Ed: International*
Same as IS 225. Designed for individuals who have an interest in understanding environmental issues from a global perspective. The course focuses on various social and physical issues related to the environment and natural resources using human population dynamics as a backdrop. ENVS 101 recommended. (Spring only)

ENVS 299 (s) Directed Study
ENVS 400 (s) Seminar
ENVS 400 (s) Seminar (cr arr)

Prereq: Junior standing.

ENVS 404 (s) Special Topics
ENVS 404 (s) Special Topics (cr arr)

ENVS 405 (s) Professional Development

ENVS 409 Principles of Environmental Toxicology
ENVS J409/J509 Principles of Environmental Toxicology (3 cr)
Same as FS J409/J509. Fundamental toxicological concepts including dose-response relationships, absorption of toxicants, distribution and storage of toxicants, biotransformation and elimination of toxicants, target organ toxicity and teratogenesis, mutagenesis, and carcinogenesis; chemodynamics of environmental contaminants including transport, fate, and receptors; chemicals of environmental interest and how they are tested and regulated; risk assessment fundamentals. Students registering for FS 509 are required to prepare an additional in-depth report. Recommended Preparation: Biol 102 or 115, Chem 111, 112, 275, and Stat 251.

ENVS 415 Environmental Lifecycle Assessment
ENVS J415/J515 Environmental Lifecycle Assessment (3 cr)
Environmental life cycle assessment is the study of the environmental impacts resulting from the human production of goods and services from raw material acquisition through ultimate disposition. The class covers the basic concepts of life cycle assessment including definition of system boundaries, inventory of energy and material inputs and resultant emissions, assessment of impacts on human health and the environment, and interpretation of results. Recommended preparation: basic physical and biological sciences and familiarity with spreadsheet programs such as Excel. Additional assignment/projects required for graduate credit.

ENVS 428 Pollution Prevention
ENVS 428 Pollution Prevention (3 cr)
Basic concepts of pollution prevention and waste minimization; pollution prevention strategies and case studies for solid waste, hazardous waste, water and energy use, and air pollution. (Fall only)

ENVS 429 Environmental Audit
ENVS 429 Environmental Audit (3 cr)
Details on a variety of equipment and processes used by business in order to decrease generation of solid and hazardous waste. (Fall only)

ENVS 436 Principles of Sustainability
ENVS J436/J536 Principles of Sustainability (3 cr)
See FS J436/J536.

ENVS 446 Drinking Water and Human Health
ENVS J446/J546 Drinking Water and Human Health (3 cr)
Understand the characterization, testing, and treatment of chemical, microbial and hazardous compounds and their impact on human health. Be familiar with drinking water standards, regulatory aspects and protection of municipal, community, and private well systems. (Spring, Alt/yr)

ENVS 450 Environmental Hydrology
3 credits
Cross-listed with SOIL 450
Carries no credit after BE 355 or CE 325. Comprehensive understanding of the hydrologic processes associated with the environmental processes. Includes components of the hydrologic cycle, analysis of precipitation and run off, evapotranspiration, routing, peak flow, infiltration, soil and water relationships, snowmelt, and frequency analysis. (Spring only)

Prereq: MATH 170 .

ENVS 479 Introduction to Environmental Regulations
ENVS J479/J579 Introduction to Environmental Regulations (3 cr)
Interpretation and implementation of local, state, and federal environmental rules; introduction to environmental regulatory process; topics include regulatory aspects of environmental impact assessment, water pollution control, air pollution control, solid and hazardous waste, resource recovery and reuse, toxic substances, pesticides, occupational safety and health, radiation, facility siting, environmental auditing and liability. Additional projects/assignments reqd for grad cr. (Fall only)

ENVS 482 Natural Resource Policy and Law
ENVS R-J482/R-J582 Natural Resource Policy and Law (3 cr)
Examination of U.S. natural resource policy and law including historical contexts and current policies and laws. Additional projects/assignments reqd for grad cr. Recommended Preparation: an undergraduate course in political science. (Spring, Alt/yr)

ENVS 484 History of Energy
ENVS 484 History of Energy (3 cr)
Covers the history of humanity's relationship to energy. Takes a historical approach beginning with ancient sources of energy, the discovery and exploitation of coal and the industrial revolution, the critical importance of oil and its derivatives, natural gas, nuclear and renewables. Finishes with a look to possible future energy sources.

ENVS 485 Energy Efficiency and Conservation
ENVS 485 Energy Efficiency and Conservation (3 cr)
Includes aspects of science, policy, and economics of energy use and efficiency measures. Considers use trends and existing and potential efficiencies primarily on a national scale with some consideration of both global and local situations. Focuses on residential and transportation energy with some coverage of commercial and industrial energy use.
ENVS 497 (s) Senior Research

*Gen Ed: Senior Experience*
Open only to majors in environmental science. Preparation of proposal, poster, formal presentation and written thesis or report based on research or project conducted with a faculty member. Research addresses an environmental problem using laboratory, field, or library techniques. 

**Prereq:** Senior standing
**Prereq or Coreq:** Engl 316 or Engl 317.

ENVS 498 (s) Internship

ENVS 499 (s) Directed Study

ENVS 500 Master's Research and Thesis

ENVS 501 (s) Seminar

ENVS 502 (s) Directed Study

ENVS 504 (s) Special Topics

ENVS 505 (s) Professional Development

ENVS 509 Principles of Environmental Toxicology

ENVS 515 Environmental Lifecycle Assessment

ENVS 536 Principles of Sustainability

ENVS 541 Sampling and Analysis of Environmental Contaminants

ENVS 546 Drinking Water and Human Health

ENVS 552 Environmental Philosophy

**ENVS 577 Law, Ethics and the Environment**

*3 credits*
Cross-listed with AGEC 577
Examines the laws and related ethical questions pertaining to agricultural and natural resource issues. Graduate credit includes special projects and additional discussion meetings. Recommended Preparation: BLAW 265.

**Prereq** for 477: Junior standing
**Prereq** for 577: Graduate standing and FOR 235, CORE 106, or POLS 364; or Permission.

ENVS 579 Introduction to Environmental Regulations

ENVS 582 Natural Resource Policy and Law

ENVS 598 (s) Internship

ENVS 599 (s) Research

ENVS 599 (s) Non-thesis Master's Research (cr arr)
Research not directly related to a thesis or dissertation.

**Prereq:** Permission.

ENVS 600 Doctoral Research and Dissertation

ENVS 604 (s) Special Topics

**ENVS 604 (s) Special Topics (cr arr)**
**Prereq:** Enrollment in a Doctoral Program and Permission.