

ENVIRONMENTAL SCIENCES (ENVS)

Courses

ENVS 310. Energy and the Environment. 3 Units.

Reviews the environmental impact of traditional energy sources. Explores novel and emerging sources of renewable energy, including solar, wind, and hydroelectric systems, as well as energy storage and distribution. Focuses on individual, industrial, and community energy requirements and solutions.

ENVS 314. Air Water and Land Pollution. 3 Units.

Covers air quality, accumulated atmospheric pollutants, as well as major types and sources of air pollutants. Deals with water quality and how pollutants impact organisms in aquatic environments, surveying sources of water pollutants that include heavy metals, chemicals, biologicals, and nutrients. Discusses chemical contaminants and visible wastes in relation to agriculture, mineral and energy extraction, and industrial waste.

ENVS 410. Marine Pollution. 3 Units.

Explores contemporary issues of marine pollution such as non-persistent organic and inorganic pollution, microbial pollution, liquid wastes and the impact of coastal wastewater treatment, plastics, and solid wastes including heavy metals. Ecotoxicology topics discuss distribution of marine pollutants, bioaccumulation, biotransformation, and toxicity testing. Addresses monitoring and abatement of marine pollution utilizing biomarkers and pollution control.

ENVS 434. The Environmental Context of Community Health. 3 Units.

Presents biological, ecological, and human environmental factors found in environmental and community health studies. Includes: asset assessments; identification of key needs; and, dialogue with community partners. Consideration of possible implementation strategies and experience in a developing country. Includes three weeks of on-site environmental and community health study in a developing country.

ENVS 455. Environmental Law and Regulation. 4 Units.

Introduces local, state, federal, and global laws and policies regarding the use, ownership, protection, and regulation of natural resources. Emphasizes understanding of the decision-making process behind the rights and limits of private, public, and governmental parties when utilizing or protecting natural resources.

ENVS 464. Science Communication Outreach. 1 Unit.

Guided immersion into science communication outreach. Presentation of principles of communication outreach and small group work. Student teams participate in project that interacts with a specific, identified community. Undergraduate students will work with graduate students in small teams and engage collaborative planning to address a community need, then present, evaluate, and reflect on the experience. Cross-listing: GEOL 464.

ENVS 485. Seminar in Environmental Sciences. 0.5 Units.

Selected topics dealing with recent developments. May be repeated for additional credit.

ENVS 487. Internship in Environmental Sciences. 4,8 Units.

Working under the joint supervision of a faculty member and an off-campus sponsor, student develops an environmental sciences academic component within the internship. Student also participates directly in the maintenance or conservation of the environment. May be repeated for additional credit for up to 8 units. Prerequisite: Internship and registration approval by a faculty member in the Department of Earth and Biological Sciences.

ENVS 488. Topics in Environmental Sciences. 1-4 Units.

Reviews current knowledge in specified areas of environmental sciences. Registration indicates specific topic to be studied. May be repeated for additional credit. Offered on demand.

ENVS 495. Special Projects in Environmental Sciences. 1-4 Units.

Special project in the field, laboratory, or library under the direction of a faculty member. May be repeated for additional credit.

ENVS 497. Undergraduate Research. 1-4 Units.

Original investigation and/or literature study pursued under the direction of a faculty member. May be repeated for additional credit.