

# ENVIRONMENTAL SCIENCE (ENVS)

## ENVS 105 Environment and Humanity (4)

Is a lecture and lab course that introduces the non-science major, through a problem-solving process, to the study of environmental science. The basic ecological processes are studied from an ecosystem perspective with an emphasis on the resources provided by the natural world. The relationship between humans and the environment is investigated by studying the effects of people and population size on the energy and resource consumption and waste production. The ecology and basic science that are involved in many environmental concerns will be investigated through experiment, data collection, and analysis. The use and limits of science for making environmental decisions is emphasized by the problem-solving component of the course.

**Meets general education requirements:** GE-Math/Science/Comp Sci Elec, GE-Scientific Inquiry

**IAI Course Number:** L1 906, P1 908L

## ENVS 115 Science of Fly Fishing (3)

Investigates the basic scientific principles behind the sport of fly-fishing in streams of the Midwest. The sport of fly-fishing integrates the art of casting and predicting fish behavior with the physics of high-tech fly rods, chemistry and fluid mechanics of water, and biology of fish and their prey. Student will make observations, devise hypotheses, design experiments, collect data, interpret the findings and report the results of projects that emphasize the physics, chemistry and biology of fly-fishing. The science of fly-fishing is inherently interdisciplinary with interactions between the biotic and abiotic, between terrestrial and aquatic, and between people and nature. Thus, students will take interdisciplinary approaches to act as scientists, fishermen and citizens in order to: seek a wider understanding of the natural world; to question how humans interact with our environment; to appreciate the natural beauty and evaluate our role as stewards of our aquatic environments; and to become life-long learners by including the scientific enterprise in an arsenal of problem-solving tools. This course is not like commercial fly casting classes that teach students how to cast a fly rod and how to fish so they can catch more fish, but rather teaches students how to use a scientific approach to the wonderful and enjoyable sport of fly-fishing and to life.

**Meets general education requirements:** GE-Math/Science/Comp Sci Elec, GE-Scientific Inquiry

## ENVS 120 Earth Science (4)

Is an introduction to basic earth science concepts and methodology including geology, meteorology, and physical geography. Laboratory includes field and computer experience. Three lecture periods and one two-hour laboratory meet per week.

**Meets general education requirements:** GE-Math/Science/Comp Sci Elec, GE-Scientific Inquiry

**IAI Course Number:** P1 905L

## ENVS 194 Topics (1-4)

Is a title given to a course which covers broad themes, practices, and subject content not currently offered in the curriculum. This course is directed primarily at non-majors and may be used for general education where approved.

## ENVS 199 Topics in Environmental Science (1-4)

A course which covers specific themes, practices, and subject content not currently offered in the curriculum. This course is directed primarily to student majoring in the subject area and could be used to complete major requirements. The course will provide an in-depth study of a specific topic.

May be repeated for up to 2 hours

## ENVS 210 Environmental Science and Social Implications (3)

Focuses on environmental issues dealing with the complexities generated from the impact of science and technology on our society. The course will use the Franciscan perspective to examine the relationship between humans and the environment and will include economic, political, philosophical, ethical, and spiritual dimensions. The course will also prepare students to employ proper scientific language in order to communicate their ideas coherently and accurately.

**Restrictions:** Enrollment is limited to students with a major in Applied Organizational Mgmt, Business Management, Health Care Leadership, Nursing, BSN Completion or Organizational Leadership. Enrollment limited to students in the following colleges: Business Health Admin. Business Health Admin. Business Health Admin. Nursing

## ENVS 300 Environmental Issues (3)

**Prerequisite:** (BIOL 361 or ENVS 105)

Is an issue-oriented course in which teams of students address local environmental issues with a multi-disciplinary approach. The problem will be thoroughly defined from many perspectives and potential solutions developed and presented.

## ENVS 400 Senior Inquiry (3)

**Prerequisite:** ENVS 300

Provides an opportunity for students to gain experience working with professional environmental scientists and to further develop independent problem solving skills. Options include internship, original research or preparation of an environmental grant proposal.

## ENVS 494 Topics: Environmental Science (1-4)

This is a specialized course offered depending on student and faculty interest.

May be repeated for up to 4 hours

## ENVS 496 Independent Study (1-3)

Allows students to select their own topic of investigation and determine their own way of pursuing and reporting work. A faculty advisor serves as a resource person. Students provide goals, materials, and criteria for evaluation.

## ENVS 498 Environmental Science: Internship (3)

Provides a supervised, practical experience for an extended period of time for advanced students.