

EARTH-SPACE SCIENCE (ESS)

Environmental Science

Environmental Science offers students a variety of scientific perspectives on environmental issues. This course of study will provide the opportunity for students at Wisconsin Lutheran College to focus on the growing interfaces of biology, chemistry, and earth science as applied to the environment. Wisconsin Lutheran College provides an environment in which a student can study the complexities of creation in a classroom where God's intricate design can be recognized as such. The study of the environment and the relationship that humans have with the environment and with each other regarding environmental issues will be addressed from a Christian perspective. This major will help prepare students to be active in society as stewards of God's creation. The environmental science major differs from the environmental studies major in that it requires greater depth in science. The environmental science major also has an interdisciplinary nature, but the major allows students to choose a direction within the science disciplines in the elective options.

Course of Study

The environmental science major requirements are comprised of 39 credits of interdisciplinary core courses and 8 credits of electives.

1. Core courses: ESS 182, 300, 498, CHE 161, 162, 168, 169, 210, BIO 201, 202, 380, and POL 200 or 202.
2. At least 8 credits from the following: BIO 283, 310, 321, 322, 324, 481, 483, CHE 221, 222, 228, 310, 410, COM 331, PHI 316, any Physics course.

Environmental Studies

Environmental studies offers students a variety of scientific, social, economic, and political perspectives on environmental issues. This course of study will provide the opportunity for students at Wisconsin Lutheran College to focus on the growing interfaces of biology, chemistry, earth science, and society as applied to the environment. Wisconsin Lutheran College provides an environment in which a student can study the complexities of creation in a classroom where God's intricate design can be recognized as such. The study of the environment and the relationship that humans have with the environment and with each other regarding environmental issues will be addressed from a Christian perspective. This major will help prepare students to be active in society as stewards of God's creation. The interdisciplinary nature of the major provides the opportunity for students to focus in an existing discipline with an emphasis in business administration, communication, philosophy, or history.

Course of Study

The environmental studies major requirements are comprised of 27 credits of interdisciplinary core courses and 18 credits of electives.

1. Core courses: ESS 182, 300, 498, CHE 161, 168, BIO 201, 380 and POL 200 or 202.
2. At least 6 credits from the following: BIO 202, 283, 483, 481, CHE 162, 169, 210, COM 331, PHI 316, PHY 101.
3. At least 12 additional credits from the following disciplines: Business Administration, Communication (not including COM 101), History, or Philosophy.

Course Descriptions

ESS 182 Environmental Science. 4 cr.

A study of natural resources and basic concepts of ecological biology. The physical and biological aspects of the earth's ecosystems will be studied in light of today's environmental problems. This course includes extensive field study in the Milwaukee area and makes use of environmental impact assessment as an application of concepts learned in the course. 3 lec., 3 hrs. lab.

ESS 300 Geomorphology. 4 cr.

This course will focus on the study of earth surface processes in geological environments. Topics will include: weathering, erosion, nutrient cycles, sediment production, and landforms. Laboratory exercises will include topographic map interpretation and instruction in geographical information systems (GIS) with an emphasis on environmental applications. 3 lec. 3 hours lab; Prereq: ESS 182 or consent of instructor.

ESS 490 Internship. 1 - 3 cr.

By arrangement of department.

ESS x91 Special Topics. 1 - 3 cr.

In-depth study of advanced topic in environmental science. Prereq: varies with topic. May be repeated for credit with a new topic.

ESS 498 Undergraduate Research. 1-3 cr.

Students arrange for independent research with a faculty research advisor. Students are encouraged to repeat this course with their research advisor. However, no more than 3 credits may be applied toward the major. Work may be carried out off campus with permission of the advisor. Written report required. If two or more credits are received, an oral presentation is also required. Prereq: Consent of instructor.

ESS 199-499 Independent Study. 1 - 3 cr.

By arrangement of department.