Environmental Science (EVRN)

Courses

EVRN 115 Natural History of Kansas (3 Hours)
Natural History of Kansas describes physical and biological processes that have led to the present Kansas landscape. Physical science topics include geology, climate patterns and soil formation. Biological science topics include ecology and a survey of the plants and animals of Kansas. The course will consider how the physical and biological environment relates to past and present human resource uses.

EVRN 124 Oceanus: Essentials of Oceanography (3 Hours)
This course for beginning students focuses on the marine environment as a unique feature of the planet Earth and investigates areas of intense scientific and public concern: the pervasiveness of the ocean and its effect on the earth's weather, its stunning physical size and diversity of contained life forms, its contributions to the physical and historical development of man, its impact on geopolitical and economic matters, and the impact of oceanic pollutants and the potential exploitation of marine resources.

EVRN 130 Environmental Science (3 Hours)
Environmental Science seeks to describe problems and solutions associated with human use of natural resources. Students will study the major physical and biological processes that govern the complex interactions in natural ecosystems. Major course topics include human population growth, resource use and pollution. Practical solutions aimed at sustainability will be identified and examined. This is an introductory, nonscience-major survey course.

EVRN 131 Environmental Science Lab* (1 Hour)
Prerequisites or corequisites: BIOL 130 or EVRN 130.
In this lab, students will learn ecological principles that are necessary for understanding and solving environmental problems. Students will sample the local environment for various types of environmental pollution, conduct lab projects and computer simulations, and attend field trips. Field trips may include a visit to a local wastewater treatment plant, a stream ecosystem and a prairie ecosystem. 2 hrs. lab/wk. plus up to three field trips. EVRN 131 students must be currently enrolled in EVRN 130 or have successfully completed BIOL/EVRN 130 within the last three years.

EVRN 134 Principles of Sustainability (3 Hours)
Principles of Sustainability introduces students to the social, economic and environmental dimensions of sustainability and sustainable development. The course will critically examine the use of sustainable principles to guide decision making and problem solving in personal, campus, community and global contexts. Students will engage in a variety of individual, group, campus and community activities and collaborate with campus and community offices and agencies in order to identify, assess and address local sustainability needs. Students will be required to present their projects at a public sustainability forum.

EVRN 155 Bioethics* (3 Hours)
Prerequisites : BIOL 121 or Department approval.
This course introduces students to the scientific, ethical and legal issues relevant to the discipline of biology and those raised by the rapid development of new biological technologies. Students will examine the major theories of ethics, including deontology, utilitarianism, and select others. Topics include: beginning of life issues such as contraception, abortion, and nontraditional methods of human reproduction; end of life issues such as advance healthcare directives and physician-assisted suicide; and other issues such as experimentation on human and animal subjects and human environmental impacts. EVRN 155 and PHIL 155 are the same courses; only enroll in one.

EVRN 255 Freshwater Ecology (4 Hours)
Freshwater Ecology describes the interaction between freshwater organisms and their environment. Structure and function of streams, lakes, wetlands, and groundwater systems will be explored. Students will learn life histories and identification skills for aquatic organisms including plankton, fish, mollusks, insects and plants. The influence of abiotic factors such as temperature, oxygen, and nutrients will be examined. Field and classroom experiments will be used to apply concepts learned. Students will study local water quality issues and aquatic management strategies to improve ecosystem health.