ENVIRONMENTAL BIOLOGY MAJOR (B.S.)

Purpose
The purpose of the Environmental Biology major is to prepare students for graduate school and employment in the environmental sciences.

Program Learning Outcomes
The student will be able to:
1. Apply standards and principles of safe practice in the laboratory or field environment.
2. Understand ethical issues in the life sciences in light of a biblical/Christian worldview.
3. Demonstrate knowledge of fundamental environmental concepts.
4. Conduct, analyze, and summarize environmental research.

Programs of Study
Delivery Format: Residential Only
- Environmental Biology (B.S.) - Resident
- Environmental Biology (B.S.), Teacher Licensure - Resident

Career Opportunities
- College Professor/Researcher
- Environmental Health Worker
- Environmental Field Technician
- Environmental Lawyer
- High School Biology Teacher
- Middle School Biology Teacher

Courses
ENVR 215 Principles of Environmental Science 3 Credit Hour(s)
Prerequisite: ACT Composite with a score of 20 or (pre2016 post1995)SAT Math with a score of 530 or SAT Section Math with a score of 530 or MATH 115
This course surveys the principle components of ecosystems and the structure and dynamics of populations and communities. These principles are then integrated and applied to environmental issues including: biological and sociological impacts of human population growth; use and management of natural resources; sources and regulation of pollution; and biological and economic aspects of conservation.
Offered: Resident

ENVR 220 Physical Geology 3 Credit Hour(s)
An introduction to the materials and processes of the geosphere. Topics include: minerals; rocks; and geological resources; surficial features and processes; natural hazards; plate tectonics; fossils; hydrology; and soils.
Offered: Resident

ENVR 221 Physical Geology Laboratory 1 Credit Hour(s)
A hands-on investigation of geological materials, features, and processes. Emphasis is placed on techniques to identify rock and mineral samples, utilize topographic and geologic maps, identify and interpret geological structures, and measure rates in geological settings (e.g., plate motion, erosion, and water flow). Includes local field trip(s).
Offered: Resident

ENVR 320 Environment and Sustainability 3 Credit Hour(s)
Online Prerequisite: BIOL 101 or PHSC 210 or BIOL 225
This course surveys the major components of ecosystems and the structure and dynamics of populations and communities. These components are then integrated and applied from a sustainability perspective to environmental issues including human population growth, land, water and air resource management and use, conservation of biodiversity and energy sources and use.
Offered: Online

ENVR 330 Energy Resources and Efficiencies 3 Credit Hour(s)
Online Prerequisite: BIOL 225 or ENVR 320 or BIOL 101 or PHSC 210
An analysis of the various sources of energy (both fossil and renewable) utilized by modern societies, including the means by which these sources are acquired, produced, distributed, and consumed. Includes a survey of methods by which user-end efficiencies and/or alternatives can reduce the amount of energy consumed.
Offered: Online

ENVR 350 Environmental Science and Policy 3 Credit Hour(s)
Online Prerequisite: BIOL 101 or BIOL 225 or ENVR 320 or PHSC 210
This course will investigate the scientific and policy-based aspects of several controversial environmental issues as well as their impacts on businesses and private citizens. It will present multiple perspectives for each issue and will take a debate-style format that stimulates student interest and develops critical thinking skills. Readings and discussions will focus on the interplay between scientific results and the policies proceeding from them including the appropriateness of such policies.
Offered: Online

ENVR 370 Geographic Information Systems (GIS) 3 Credit Hour(s)
This course is designed to provide practical experience in spatial database design and analysis using Geographical Information System (GIS) as applied primarily to the environmental sciences. Topics include: the history of GIS; GIS data structures and sources of data; GIS tools; software applications; and resources. Exercises include: spatial data display and query; map generation; and simple spatial analysis using ArcGIS software.
Offered: Online