

BOTY 2534 Environmental Biology

Catalog Description: This is a general education course which focuses on the fundamentals of ecology and conservation. Special emphasis will be placed on the ecology of man and his efforts on behalf of and interrelationships with ecosystems. Includes lecture, laboratory, field studies, EMPACTS project, and the use of GIS technology.

Prerequisite: None

Credit / Contact / Load Hours: 4/6/5

Target Audience and Transfer: This is a general education course that will transfer to the University of Arkansas as a 4 hour laboratory science.

Student Learning Outcomes: Students completing this course will:

- Demonstrate a basic understanding of ecology and conservation with special emphasis on humanity's impact on the environment.
- Use various laboratory instruments and techniques, and apply these skills to selected laboratory experiments and field observations representative of certain ecological principles.
- Use the scientific method and critical thinking to make decisions from a scientific standpoint.
- Collect, organize, analyze, interpret, and present data in conjunction with preparation of a formal laboratory report and/or EMPACTS project.

Topics:

- Basic ecological and conservation principles
- Concept of succession exploring various biotic and abiotic factors
- Forest ecosystems
- Human population growth
- Problems and management of wildlife populations
- Factors leading to extinction of certain populations
- Water conservation and pollution
- Karst bedrock formations in NorthWest Arkansas
- Water quality laboratory
- Microhabitat stream study
- Diversity of aquatic plants, phytoplankton, invertebrates, and fish populations.
- Air pollution effects on the environment
- Basic Chemical principles
- Energy related problems including nuclear energy

Northwest Arkansas Community College
Division of Science & Mathematics

Forms of Assessment: Variable methods, which include but are not limited to, written and oral presentations utilizing project-based learning methodology, field activities, and laboratory activities.