

Northwest Arkansas Community College
(Science and Mathematics Division)

Discipline Code

BOTY

Course Number

2534

Course Title

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. Three hours lecture and 3 hours laboratory weekly. Includes lecture, laboratory, field studies, EMPACTS project, and the use of GIS technology.

Prerequisites

None

Credit Hours

4 credit hours

Contact hours

45 lecture contact hours; 45 lab contact hours

Load hours

5 load hours

Semesters Offered

On Demand

ACTS Equivalent

None

Grade Mode

A-F

Learning Outcomes

Students completing this course will demonstrate:

- 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.

General Education Outcomes Supported

- Students develop higher-level thinking skills.

Standard Practices

Topics list

- 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

Learning activities

- Courses must, at a minimum, cover the core learning outcomes for each topic.

Assessments

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

Grading guidelines

- A minimum of 70% of the grade must be proctored, supervise, or otherwise verified.
- Approximately 25% of the grade must come from lab work since the lab and lecture credits for this course are combined.

Revision Date

March 6, 2022