Course Information
Division: Science
Course Number: AGR 135
Title: Conservation and Natural Resources
Credits: 3
Developed by: Dr. Nathan Cline
Lecture/Lab Ratio: 3 Lecture/0 Lab
Transfer Status:

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<th>ASU</th>
<th>NAU</th>
<th>UA</th>
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<td>Elective Credit</td>
<td>Elective Credit</td>
<td>RNR Departmental Elective</td>
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Activity Course: No
CIP Code: 01.0300
Assessment Mode: Final Exam (50 Questions/100 Points)
Semester Taught: Fall and Spring
GE Category: None
Separate Lab: No
Awareness Course: No
Intensive Writing Course: No
Diversity and Inclusion Course: No

Prerequisites
ENG 091 with a grade of “C” or higher or reading placement test score as established by District policy

Educational Value
Students in preparation to become elementary teachers. Students wishing to transfer to the university, those interested in issues effecting the environment.

Description
Fundamentals of ecology and their relevance to human impact on natural ecosystems. A liberal studies course for non-science majors with an emphasis on contemporary issues. Identical to BIO 105 without lab.

Supplies
Composition Books
Competencies and Performance Standards

1. Describe how environmental forces affect all living creatures on earth.
   Learning objectives
   What you will learn as you master the competency:
   a. Show an increased awareness of environmental issues.
   b. Classify environmental problems and laws of nature.
   c. Identify the need to have and to promote knowledge of environmental concepts.
   d. Describe the Ecology of Natural Systems: energy relationships, the ecological niche, nutrient cycles, and major ecosystems of the earth.

   Performance Standards
   Competence will be demonstrated:
   o in presentation of an organized summary of the assigned topic
   o by completion of the written responses on evaluation tools

   Criteria – Performance will be satisfactory when:
   o learner participates in class discussions and activities
   o learner adheres to the stipulated time schedule
   o learner illustrates any action affecting how one species will affect other species
   o learner describes the processes that interconnect all creatures

2. Evaluate specific environmental topics.
   Learning objectives
   What you will learn as you master the competency:
   a. Describe ecosystems and natural growth: population growth, environmental resistance, and natural ecosystems.
   b. Predict future populations and consequences of population density.
   c. Identify the sources of energy: fossil fuel sources & availability
   d. Describe nuclear energy and how it affects the environment: radioactivity, safety in nuclear fission reactors, the disposal of radioactive wastes, & the future of nuclear power.
   e. Analyze food production and world hunger.
   f. Analyze the control of pests and weeds.
   g. Describe the effects of Water Pollution, Air Pollution, and Solid Wastes.

   Performance Standards
   Competence will be demonstrated:
   o in completion of a research paper on assigned environmental topic: sources of energy, nuclear energy and the environment, food production and world hunger, and control of pests and weeds
   o in presentation to the class summarizing the information gained through developing the research paper
   o in completion of the assigned project

   Criteria – Performance will be satisfactory when:
   o learner participates in class activities and projects
   o learner cooperates with others in the group to achieve an objective of a project
3. **Describe environmental issues and evaluate the role of science one’s daily life.**

   **Learning objectives**
   
   *What you will learn as you master the competency:*
   
   a. Develop positive attitudes and values toward the environment.
   b. Enhance civic and social responsibility toward environmental issues.
   c. Analyze information about environmental issues that relate to the learner's own life.
   d. Transfer an environmental concern into a personal action to the benefit of the issue.

   **Performance Standards**
   
   *Competence will be demonstrated:*
   
   o in completion of the journal documented summaries of newspaper articles related to science and the environmental issues
   o in completion of report on identifying various library and on-line resources

   **Criteria – Performance will be satisfactory when:**
   
   o learner participates in class activities, field trips and projects
   o learner cooperates with others in the group to achieve an objective of a project
   o learner discusses information he/she acquires from the newspaper articles

   **Types of Instruction**

   Classroom Presentation

   **Grading Information**

   **Grading Rationale**

   Each student is required to complete a research paper, following a specific format. Essay questions, short answers, and presentation of the assigned research topic are required. Final exam will count as 10% of the course grade.

   **Grading Scale**

   A  90 - 100%
   B  80 - 89%
   C  70 - 79%
   D  60 - 69%
   F  0 - 59%