Course Outcome Summary

BIOL 156 Introduction to Environmental Science

Course Information
Division: Science/Mathematics
Course Number: BIOL 156
Course Name: Introduction to Environmental Science
Contact Hours: 45
Lab Hours: 45
Total Credits: 4

Prerequisites
Reading 090, English 090 and MATH 090 or qualifying scores on accepted placement tests

Course Description
An introduction to environmental science stressing fundamental concepts and principles of ecology, ecosystem structure and function, population dynamics, resources and pollution. This course reflects applications of physical, chemical, biological and geological principles to define ecological change, both natural and anthropogenic. Topics include land use, food resources, mineral resources, energy, air, water and the causative interrelationships between human values and socio-economic, political, and environmental problems. Course requires laboratory work. This course is open to both science- and non-science majors.

Exit Learning Outcomes
General Education Goal: Critical Thinking
Competency: Understand and apply the elements of scientific inquiry and scientific principles in a natural science laboratory course setting.

General Education Objectives
A. Observe and describe natural phenomena and formulate hypotheses.
B. Plan and implement scientific experiments to test hypotheses.
C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
D. Evaluate experimental data and propose solutions based on this data.
E. Evaluate the proposed implications of a solution.

Course Outcomes
In order to evidence success in this course, the students will be able to:

1. Identify the scientific, social scientific and humanistic aspects of environmental issues.

Linked General Education Objectives
A. Observe and describe natural phenomena and formulate hypotheses.
B. Plan and implement scientific experiments to test hypotheses.
C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
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2. Describe the structure and function of significant environmental systems.

   **Linked General Education Objectives**
   
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   C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
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   E. Evaluate the proposed implications of a solution.

3. Identify, locate, evaluate, synthesize and present current information on environmental issues.

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   C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
   D. Evaluate experimental data and propose solutions based on this data.
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4. Use scientific reasoning to identify and understand environmental problems, formulate testable hypothesis and evaluate potential solutions.

   **Linked General Education Objectives**
   
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   B. Plan and implement scientific experiments to test hypotheses.
   C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
   D. Evaluate experimental data and propose solutions based on this data.
   E. Evaluate the proposed implications of a solution.

5. Critically evaluate arguments regarding environmental issues.

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   B. Plan and implement scientific experiments to test hypotheses.
   C. Utilize scientific laboratory skills for data collection within a college laboratory setting.
   D. Evaluate experimental data and propose solutions based on this data.
   E. Evaluate the proposed implications of a solution.

6. Understand the impact your way of life has on the environment and apply your understanding of environmental issues to your own choices.

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