

Common Course Outline
ENVS 101
Introduction to Environmental Science
3 Credits

Community College of Baltimore County

Description

ENVS 101 – 3 credits – Introduction to Environmental Science explores the inter-relationships between humans and the Earth's ecosystems. Fundamentals of ecology, water resources, populations, energy, climate, and nutrient cycling will be covered, as well as the impact of human use and management of the earth's land, water, and air resources. For students needing a lab, ENVS 101: Introduction to Environmental Science Laboratory, serves as the accompanying lab.

3 Credits

Prerequisites: ACLT 052 or ACLT 053; and MATH 082

Overall Course Objectives

Upon completion of this course students will be able to:

1. apply the scientific method in solving problems related to environmental science;
2. present environmental information using effective written and/or oral communications;
3. describe, numerically and graphically, various presentations of data;
4. apply mathematical methods to the interpretation of environmental data;
5. describe conditions that promote various ecosystems and appraise the impacts of human endeavors on them;
6. describe how results from various observations and technologies are used in the solution of environmental problems;
7. find, evaluate, use and cite variety of informational resources relevant to environmental science;
8. apply appropriate scientific terminology to describe attributes of ecosystems and their interactions;
9. describe the impact human activities have on natural systems;
10. evaluate a wide range of cultural and social approaches to environmental problems;
11. discuss concepts of environmental justice;
12. summarize major environmental policies and regulations;
13. assess the effect and importance of individual behavior in environmental issues;
14. compare and contrast technologies that prevent, control and reverse environmental harm;
15. explain how the earth's natural systems operate and interrelate with one another;
16. delineate biogeochemical cycles within and flow of energy through an ecosystem;
17. delineate geographic distributions of environmental impacts;
18. develop informed views based on critical evaluation of both scholarly and popular resources, and

19. engage in problem solving of environmental issues.

Major Topics

- I. Nature of environmental science
- II. Biogeochemical cycles
- III. Ecosystem services
- IV. Ecology and biodiversity
- V. Atmosphere and climate change
- VI. Water resources
- VII. Land resources
- VIII. Human population
- IX. Energy
- X. Environmental regulation
- XI. Environmental technologies
- XII. Sustainability

Course Requirements

Grading procedures will be determined by the individual faculty member but will include the following:

Grading/exams

- A minimum of 4 exams and 3 quizzes
- A minimum of 1 activity requiring student collaboration
- At least one in-class activity or presentation
- At least two written assessments based on supplementary materials

Writing: Multiple assessments will infuse CCBC General Education Program objectives; at least one assignment worth a minimum 5% of the total course grade will allow students to demonstrate at least 5 of the 7 General Education Program outcomes. Students are required to utilize appropriate academic resources.

Other Course Information

This course is an approved 3-credit Biological and Physical Sciences General Education course. When successfully completed, along with the companion course, ENVS 102, Introduction to Environmental Science Laboratory, the combined courses constitute an approved 4-credit Biological and Physical Sciences General Education course.