

**Common Course Outline**  
**ECON 163**  
**Issues in Environmental Economics and Sustainable Development**  
**3 Credits**

**Community College of Baltimore County**

**Description**

**ECON 163 – 3 credits – Issues in Environmental Economics and Sustainable Development** examines theoretical issues such as sustainable development and the allocation of non-renewable resources to future generations, renewable and exhaustible energy resources, water scarcity, overharvesting of fisheries and forests, wetlands, recyclable resources, population growth, and policy options for a sustainable future. *Students can only receive credit for either ECON 152 or ECON 163 but not both.*

**3 credits**

**Prerequisites:** ACLT 052 or ACLT 053; and MATH 081

**Overall Course Objectives**

Upon completion of this course students will be able to:

1. distinguish between physical limits and economic scarcity from a personal and societal perspective recognizing personal responsibility to promote a sustainable future;
2. apply the concept of economic scarcity to the case of natural resources and various indicators of emerging resource scarcity;
3. contrast economists' utilitarian interpretation of natural resources with the view that the economy is part of the natural ecosystem, subject to ecological limits;
4. differentiate natural resources in terms of renewability, recyclability, and storability;
5. describe the current state of selected natural resources in terms of stocks, reserves, global distribution, economic value, ownership patterns, ecosystem significance, and rate of consumption or depletion;
6. explain the ethical considerations and the role of markets in allocating scarce resources;
7. assess market outcomes in terms of efficiency and equity criteria;
8. analyze the causes of natural resource problems in terms of perverse incentives, market failures, and government failures;
9. relate the treatment of natural resources to patterns of ownership rights (private property, common property, and open access);
10. analyze the socioeconomic problem of allocating resources across generations in terms of user cost, economic rent, present value, and discount rate ;
11. evaluate definitions of sustainability and sustainable development ;
12. compare and contrast different positions in the scientific debate concerning population growth, economic growth, sustainable development, and biophysical limits;
13. explain theoretical issues in the valuation of environmental resources and apply empirical methods of valuation;

14. find, evaluate, use, and cite appropriate academic sources to assess market-based, command-and-control, and other policy approaches for managing, allocating, and conserving selected natural resources and;
15. recommend and justify policy recommendations to address complex environmental concerns.

## **Major Topics**

- I. Introduction
  - A. Relationship between the economic system and the environment
  - B. Definition and taxonomy of resources
    - i. Factors of production and natural capital
    - ii. Renewability, storability, recyclability
    - iii. Reserves
  - C. Indicators of emerging resource scarcity and overview of current status of world resources
  - D. Population, poverty, economic growth, and resource consumption
  - E. Socioeconomic and cultural aspects of resource scarcity and consumption
- II. Valuing Economic Resources
  - A. Marginal analysis and optimal outcomes
  - B. Market valuation and static efficiency
  - C. Methods of valuation
- III. Property Rights and Market Failures
  - A. Common property and open access resources
  - B. Externalities
  - C. Public Goods
- IV. Defining Sustainable Development
  - A. Biophysical laws, ecosystem fundamentals, and ecological limits
  - B. Dynamic efficiency
  - C. Reconciling efficiency and intergenerational equity
- V. Applying Normative Economics to the Analysis and Solution of Natural Resource Problems
  - A. Energy
  - B. Ground and surface water
  - C. Forests
  - D. Fisheries
  - E. Recyclable resources
- VI. Conclusion
  - A. Prospects for sustainable growth
    - i. Range of probable scenarios
    - ii. Elimination of perverse incentives
  - B. Role of market allocations
    - i. Full-cost pricing
    - ii. Property rights
    - iii. Cost effectiveness
  - C. Information and democratic participation
  - D. Trade and international cooperation
  - E. Population stabilization

## **Course Requirements**

Grading procedures will be determined by the individual faculty member and will include at least five independent measures of student performance (not including attendance and class participation).

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

At least two proctored tests or exams

At least two case study assignments

At least 250 pages of collateral reading will be assigned to inform students of current issues in natural resource economics and sustainable development. A portion of this requirement may be satisfied by readings associated with a research paper of at least 1,500 words worth at least 10% of the total course grade

Written Assignments: A case study of at least 1,500 words with an annotated bibliography, worth at least 10% of the total course grade, will be required for students to demonstrate at least 5 of the 7 General Education Program outcomes:

1. Written/Oral Communication;
2. Critical Analysis and Reasoning;
3. Technological Competence;
4. Information Literacy;
5. Scientific and Quantitative or Logical Reasoning;
6. Local and Global Diversity; and
7. Personal and Professional Ethics.

Students are required to utilize appropriate academic resources.

## **Other Course Information**

This course is an approved General Education course in the Social and Behavioral Sciences category. Please refer to the current CCBC Catalog for General Education course criteria and outcomes.

Date Revised: 02/18/2015