

LAST REVIEW: 2003-2004

(i.e. 2006-2007)

NEXT REVIEW: 2010-2011

(i.e. 2011-2012)

STATUS: A

(A, I, D)

COURSE TITLE: Conservation of Natural Resources

COMMON COURSE NUMBER: GEO 2370

CREDIT HOURS: 3

CONTACT HOUR BREAKDOWN

(Per 16 week term)

CLOCK HOURS:

(Voc. Course ONLY)

Lecture: 48 Lab:

Clinic: Other:

PREREQUISITE(S): ENC 1101 eligibility

COREQUISITE(S): none

PRE/COREQUISITE(S):

COURSE DESCRIPTION *(750 characters, maximum):*

A survey of the use and management of natural resources within the environment, including problems of development, pollution, biotic systems, population, resource depletion and technology. Special emphasis will be placed upon the spatial/geographical manifestation of conservation issues.

General Education Requirements – Associate of Arts Degree (AA), meets Area(s): Area 3A

General Education Requirements – Associate in Science Degree (AS), meets Area(s): Area 3

General Education Requirements – Associate in Applied Science Degree (AAS), meets Area(s): Area 3

UNIT TITLES

- 1. An Overview of Conservation and Geography**
- 2. Ecology**
- 3. Population**
- 4. Land Use and Wildlife Resources**
- 5. Water Resources**
- 6. Energy**
- 7. Pollution**
- 8. Environment and Society**

*** Complete the following only if course is seeking general education status ***

GENERAL EDUCATION Competencies and Skills *:

In the box to the right of the Competency/Skill, enter all specific **student learning outcome** unit numbers, as indicated in the course outline (i.e. 1.1, 2.7, 4.2, 4.0 and 5.12) that apply.

Course must include <u>all</u> of the following:	
1. Read with critical comprehension**	1.0-8.0, 1.2, 1.3, 1.6, 2.1, 2.4, 3.1, 3.2, 3.3, 4.1, 4.3, 5.4, 5.5, 6.3, 6.5, 6.6, 7.2, 7.3, 7.5, 7.7, 8.3, 8.4
2. Write clearly and coherently**	1.3, 1.4, 2.3, 2.6, 3.2, 4.1, 4.3, 5.4, 5.5, 6.3, 6.6, 7.4, 7.7, 8.1, 8.3, 8.5,
3. Demonstrate literacy as appropriate within a given discipline**	Cultural: 1.2, 3.1, 3.3, 3.7, 8.4 Environmental: 1.0-8.0
4. Apply problem solving skills or methods to make informed decisions in a variety of contexts**	1.2, 1.3, 3.2, 3.3, 3.7, 4.3, 5.4, 5.5, 6.3, 6.6, 7.7, 8.5
Course must include at least <u>one</u> of the following:	
5. Differentiate between ethical and unethical behavior	4.2, 4.3, 4.4, 7.1, 8.4, 8.5
6. Demonstrate an understanding of the physical, biological, and social environments and how individual behaviors impact this complex system.	1.0-8.0
7. Demonstrate an understanding of and appreciation for human diversities and commonalities.	3.1, 3.4, 3.5, 3.7
8. Speak and listen effectively.	

**General Education Competencies and Skills endorsed by 2010-2011 General Education Task Force*

****Required Competencies**

1) Read with critical comprehension.

The student will be introduced to the basic texts, concepts, vocabulary, and methods necessary for developing an understanding of the discipline and meeting the required benchmarks as stated in the course outline.

2) Write clearly and coherently.

The student will demonstrate an understanding and mastery of subject matter in a variety of ways, including writing. Writing activities may include both graded and ungraded essays, short answer quizzes, summaries, reactions, journals, and various other reports.

3) Demonstrate and apply literacy across all the disciplines (indicate which ones apply).

- a) **Information literacy** means understanding how to locate needed information, using the appropriate technology for the task, managing and evaluating the extracted information and using it effectively and ethically.
- b) **Technology literacy** is the ability to responsibly and effectively use appropriate technology to access, manage, integrate, or create information, and/or use technology to accomplish a given task.
- c) **Workplace literacy** is having the appropriate knowledge and skills to communicate and work with others effectively and perform job duties, whether it is through the use of computers and/or other technology.
- d) **Cultural literacy** is recognizing, understanding, and appreciating the similarities and differences between one's own culture and the cultures of others through a study of the arts, customs, beliefs, values, and history that define a culture.
- e) **Quantitative literacy** is having the ability to formulate, solve and interpret mathematical/statistical operations and graphical/tabular representations to make informed decisions.
- f) **Scientific literacy** means understanding the methodology and application of the scientific process, the physical and biological worlds, and recognizing that scientific knowledge is continuously updated or revised as new information is discovered.

g) Environmental literacy is creating a context within which environmental issues can be viewed, imparting knowledge to enhance one's ability to analyze the issues, make the connections between humans' decisions and actions and the challenges facing the environment, and instilling the desire to sustain the environment through ethical practices in both one's professional and personal lives.

4. Apply problem-solving skills or methods to make informed decisions in a variety of contexts.

The student will use acquired skills or methods to recognize, analyze, adapt, and apply critical thinking to solve problems and make informed decisions.

EVALUATION:

In the box to the right of the Methods of Assessment, enter all specific learning outcome numbers (i.e. 1.1, 2.7, 4.0, 4.2 and 5.12) that apply.

1. Portfolio	
2. Short essays	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
3. Research Papers	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
4. Group projects	
5. Discussions (In class and online)	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
6. Multiple Choice tests	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
7. Presentations	
8. Service Learning Projects	
9. Quizzes (pop, announced, etc.)	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
10. Take-home tests	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
11. Summaries, critiques, and analyses	
12. Reaction papers	
13. Surveys	
14. Performance	
15. Short answer tests	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
16. Classroom debates and colloquia	1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0
17. Blogs, wikis, web pages	
18. Other (Please explain)	

Common Course Number:

UNITS

Unit 1 - An Overview of Conservation and Geography

General Outcome:

- 1.0 The students shall demonstrate understanding of the nature of geography and conservation studies and the relationship between conservation and resource use.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 1.1 Demonstrate understanding of key concepts and definitions related to geography and conservation such as “sustainability”, “preservation”, “resources” and others.**
- 1.2 Interpret the relationship between humans and the environment.**
- 1.3 Appraise the relationships among population, resources and technology.**
- 1.4 Explain the process of expanding the limits of our resources.**
- 1.5 Demonstrate an understanding of the nature of conservation studies and its relationship to the discipline of geography.**
- 1.6 Demonstrate understanding of appropriate styles and quality of writing and citation of sources/references in the discipline of geography.**

Common Course Number:

Unit 2 - Ecology

General Outcome:

- 2.0 The students shall demonstrate understanding of the principles of energy and functioning ecosystems.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 2.1 Differentiate the laws of energy and matter.**
- 2.2 Demonstrate understanding of the energy flow and cycling in ecosystems.**
- 2.3 Discuss the nature/characteristics of the earth's biosphere.**
- 2.4 Compare/contrast the aspects of food chains and ecosystems.**
- 2.5 Distinguish between habitat and niche as ecosystem concepts.**
- 2.6 Discuss ecological succession.**

Common Course Number:

Unit 3 - Population

General Outcome:

- 3.0 The students shall demonstrate understanding of the effects of population dynamics and population growth.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 3.1 Differentiate among the various factors affecting population change.**
- 3.2 Assess the dimensions of the population crisis.**
- 3.3 Interpret demographic statistics concerning birth and death rates and other population characteristics.**
- 3.4 Describe the relationship between population growth and world hunger.**
- 3.5 Demonstrate understanding of population pyramids and population structure.**
- 3.6 Demonstrate understanding of concepts related to optimum population and the earth's carrying capacity.**
- 3.7 Discuss methods for controlling human population growth.**

Common Course Number:

Unit 4 – Land Use and Wildlife Resources

General Outcome:

- 4.0 The students shall demonstrate understanding of the relationship of land use and the stress exerted upon biological systems.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 4.1 Analyze the history of land use and conservation in the United States.**
- 4.2 Discuss the economics and ethics of wilderness and recreational use.**
- 4.3 Assess the implications of world-wide deforestation.**
- 4.4 Demonstrate understanding of the significance and nature of species extinction.**
- 4.5 Discuss the implications and consequences of exotic species introduction.**
- 4.6 Demonstrate understanding of key terms/concepts such as urbanization and urban land-use.**

Common Course Number:

Unit 5 – Water Resources

General Outcome:

- 5.0 The students shall demonstrate understanding of the importance and properties of water as a resource.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 5.1 Demonstrate understanding of water use and the components of the hydrological cycle.**
- 5.2 Recognize the physical properties of water.**
- 5.3 Demonstrate understanding of key aspects of aspects of water treatment and groundwater pollution.**
- 5.4 Appraise water supply problems and the need to conserve our liquid assets.**
- 5.5 Assess the uniqueness of the fragile water systems of South Florida.**
- 5.6 Discuss water pollution control laws in the United States.**

Common Course Number:

Unit 6 - Energy

General Outcome:

- 6.0** The students shall demonstrate and understanding of global energy use and the advantages and disadvantages of alternative energy sources.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 6.1** Distinguish between renewable and nonrenewable energy resources.
- 6.2** Demonstrate understanding of key terms/concepts related to energy and energy efficiency.
- 6.3** Assess world and US reliance upon fossil fuels.
- 6.4** Discuss the use of nuclear power and the consequence of such use.
- 6.5** Compare/contrast safer and cleaner renewable energy sources with the energy sources most commonly relied upon presently by society.
- 6.6** Evaluate the importance of moving toward a sustainable energy system.

Common Course Number:

Unit 7 - Pollution

General Outcome:

- 7.0 The students shall demonstrate understanding of the types and sources of pollution and the consequences of such environmental hazards.**

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 7.1 Demonstrate understanding of the environmental effects of pollution.**
- 7.2 Compare/contrast the processes of bio-concentration and biological magnification.**
- 7.3 Differentiate between the advantages and hazards of pesticide use.**
- 7.4 Explain the formation and control of photo chemical smog.**
- 7.5 Illustrate the pollution of food supplies using food additives or agricultural chemicals (i.e., pesticides, herbicides) as examples.**
- 7.6 Discuss the growing concern related to the disposal of solid waste and toxins.**
- 7.7 Appraise the dangers of indoor air pollution.**

Common Course Number:

Unit 8 – Environment and Society

General Outcome:

- 8.0** The students shall demonstrate understanding of the process of environmental improvement as related to ethics, economics, and government.

Specific Measurable Learning Outcomes:

Upon successful completion of this unit, the students shall be able to:

- 8.1** Explain the economic considerations related to resource management.
- 8.2** Demonstrate understanding of the role of government in environmental protection.
- 8.3** Assess the impact of environmental laws on jobs and employment.
- 8.4** Formulate examples of societal attitudinal changes related to environmental issues.
- 8.5** Explain the importance of resource conservation to future generations.