

# BUTTE COLLEGE

## COURSE OUTLINE

### I. CATALOG DESCRIPTION

**NR 28 - Environmental Management**

**3 Unit(s)**

**Prerequisite(s):** NONE

**Recommended Prep:** Reading Level IV, English Level III

**Transfer Status:** CSU/UC

34 hours Lecture

51 hours Lab

This course is an introduction to the conservation and management of natural resources. Students will learn about the diverse agencies that manage our resources along with their history and philosophies. The major natural resources including water, air, energy, forests, wildlife, agriculture, and soils will be covered and students will learn about the environmental policy and laws that govern use of these resources. An emphasis is placed on the practical components of Environmental Science as it relates to social and economic aspects of conservation.

### II. OBJECTIVES

Upon successful completion of this course, the student will be able to:

- A. Describe and apply the basic elements of the scientific method to problems in the field.
- B. Distinguish among the various types of natural resources and how they are used.
- C. Evaluate the effects of our human population upon the earth's resources.
- D. Assess the various reasons for protecting and maintaining biodiversity.
- E. Evaluate different management practices used to maintain forest ecosystems and wildlife resources.
- F. Evaluate the various resource agencies and their management philosophies.
- G. Assess the role of parks, national forests, and wilderness play in our society.
- H. Distinguish among the various causes of soil erosion.
- I. Evaluate and discuss the sources of air and water pollution along with some of the solutions to those problems.
- J. Investigate how alternative energy sources can be used to meet future demand.
- K. Evaluate environmental policies and their effectiveness in resources conservation.

### III. COURSE CONTENT

#### **A. Unit Titles/Suggested Time Schedule**

Lecture	
<u>Topics</u>	<u>Hours</u>
1. Environmental Interrelationships	2.00
2. Environmental Ethics	2.00
3. Environmental Risk	4.00
4. Kinds of Ecosystems and Communities	4.00
5. Energy and Civilization: Pattern of Consumption	2.00
6. Nuclear Energy	2.00
7. Biodiversity Issues	4.00
8. Land-Use Planning	4.00
9. Agricultural Methods and Pest Management	2.00
10. Air Quality Issues	4.00
11. Solid Waste Management and Disposal	2.00

12. Environmental Regulations: Hazardous Substances and Wastes	2.00
Total Hours	34.00

#### Lab

<u>Topics</u>	<u>Hours</u>
1. Scientific Investigation and study of Ecosystems	3.00
2. Environmental Interrelationships	3.00
3. Environmental Ethics	3.00
4. Environmental Risk	3.00
5. Kinds of Ecosystems and Communities	6.00
6. Energy and Civilization: Pattern of Consumption	3.00
7. Nuclear Energy	3.00
8. Biodiversity Issues	6.00
9. Land-Use Planning	6.00
10. Agricultural Methods and Pest Management	3.00
11. Air Quality Issues	6.00
12. Solid Waste Management and Disposal	3.00
13. Environmental Regulations: Hazardous Substances and Wastes	3.00
Total Hours	51.00

#### IV. METHODS OF INSTRUCTION

- A. Lecture
- B. Instructor Demonstrations
- C. Guest Speakers
- D. Collaborative Group Work
- E. Field Trips
- F. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- G. Problem-Solving Sessions
- H. Multimedia Presentations

#### V. METHODS OF EVALUATION

- A. Exams/Tests
- B. Quizzes
- C. Research Projects
- D. Oral Presentation
- E. Journal
- F. Lab Projects
- G. Written Assignments

#### VI. EXAMPLES OF ASSIGNMENTS

- A. Reading Assignments
  - 1. Read the article, "Most Wars Occur In Earth's Richest Biological Regions," posted online and discuss the reading assignment with other students and the instructor.
  - 2. Read the chapter on Land-Use Issues from the textbook and bring in a local land-use issue facing us today. Be prepared to discuss these issues with the class and instructor.
- B. Writing Assignments

1. Pick a recent and political hotbed environmental issue. Prepare a three page report on the subject and be sure to cite your sources.
  2. Read a journal article about biodiversity and write a one page synopsis about the article.
- C. Out-of-Class Assignments
1. Find a National Environmental Policy Act (NEPA) required environmental impact report and present a brief synopsis of its contents to the class.
  2. Evaluate species diversity in and around where you live. Report your findings to the class.

## VII. **RECOMMENDED MATERIALS OF INSTRUCTION**

### Textbooks:

- A. Enger, E.D., and Smith, B.F. Environmental Science: A Study of Interrelationships. 13th Edition. McGraw Hill, 2013.

### Materials Other Than Textbooks:

- A. Journal articles, environmental impact reports, and news articles provided by the instructor.

**Created/Revised by:** Ricky Wittsell

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