

# North Hennepin Community College

## BIOL 1200: Current Environmental Issues

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science, Goal 10 - People/Environment, Goal 03 - Natural Science, Goal 10 - People/Environment

Using an interdisciplinary approach, this course examines various aspects of natural and human-made ecosystems, human's intervention, and the subsequent impact on society and nature. It emphasizes current problems, values, and projection for the future. The lab involves internet exercises, videos, group discussion, individual and group projects, field trips and other outdoor activities. (3 hours lecture, 4 hours lab)

**B. COURSE EFFECTIVE DATES:** 08/25/1997 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Definition of environmental science and sustainability; principles of population, community and ecosystem ecology; biodiversity; problems of overpopulation and excessive consumption of resources; nonrenewable and renewable energy; water resources; air and water pollution; global atmospheric change; solid and hazardous waste.

### D. LEARNING OUTCOMES (General)

1. Articulate the social, historical, ethical, governmental, and economic underpinnings of environmental science (MnTC G10, comp. c, d, f; ELO 1, 2, 3)
2. Use the scientific method and describe its strengths and limitations as a method of inquiry. (MnTC G3, comp.a; ELO 1, 2)
3. Practice developing hypotheses and predictions for laboratory and field observations and experiments (MnTC G3, comp.b; ELO 1, 2)
4. Explain and differentiate among predictions, observations, and interpretation of qualitative and quantitative data from comparative and experimental studies. (MnTC G3, comp. c; ELO 1, 2)
5. Convey an appreciation of the complexity of natural ecosystems and ecosystems modified by human activity. (MnTC G10, comps. a, b, d; ELO 1, 2, 3)
6. Take an active, positive role in environmental issues. (MnTC G10, comps. e, f; ELO 3)
7. Describe how the multidisciplinary field of environmental science uses biology, geology, chemistry, geography, physics, economics, sociology, natural resources management, law, and politics to address issues and solve problems in environmental science. (MnTC G3, comps. b, c, d; 1, 2, 3, 4)

## **E. Minnesota Transfer Curriculum Goal Area(s) and Competencies**

### Goal 03 - Natural Science

1. Formulate and test hypotheses by performing laboratory, simulation, or field experiments in at least two of the natural science disciplines. One of these experimental components should develop, in greater depth, students' laboratory experience in the collection of data, its statistical and graphical analysis, and an appreciation of its sources of error and uncertainty.
2. Communicate their experimental findings, analyses, and interpretations both orally and in writing.
3. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

### Goal 10 - People/Environment

1. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
2. Describe the basic institutional arrangements (social, legal, political, economic, religious) that are evolving to deal with environmental and natural resource challenges.
3. Evaluate critically environmental and natural resource issues in light of understandings about interrelationships, ecosystems, and institutions.
4. Propose and assess alternative solutions to environmental problems.
5. Articulate and defend the actions they would take on various environmental issues.

### Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.

### Goal 10 - People/Environment

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

1. Knowledge of Human Cultures and the Physical and Natural World - Through study in the sciences, mathematics, social sciences, humanities, histories, languages, the arts, technology and professions.
2. Intellectual and Practical Skills - Including: Inquiry and analysis; Critical and creative thinking; Written and oral communication; Quantitative literacy; Information literacy; Teamwork and problem solving.
3. Personal and Social Responsibility and Engagement - Including: Civic knowledge and involvement - campus, local and global; Intercultural knowledge and competence; Ethical reasoning and action; Foundations and skills for lifelong learning.
4. Integrative and Applied Learning - Including: Synthesis and advanced accomplishment across general education, liberal studies, specialized studies and activities in the broader campus community.