# North Hennepin Community College

# BIOL 1610: Field Ecology

## A. COURSE DESCRIPTION

Credits: 1

Lecture Hours/Week: *.*

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

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

This course is a team-taught, field-based introduction to the flora, fauna and biological communities of the woodland, lake, and wetland ecosystems of northern Minnesota and Wisconsin. This course is a field experience including observations, hypothesis, predictions, and evaluation of scientific data and results. A three-day trip to a university biological field station provides the venue for this hands-on course which is open to all students.

## B. COURSE EFFECTIVE DATES: 10/26/1999 - Present

## C. OUTLINE OF MAJOR CONTENT AREAS

1. This course includes brief lectures followed by field work in a variety of different terrestrial and aquatic c\ecosystems. Students will learn the basic principles of communities and ecosystems, and apply the principles by making observation and performing experiments in the field.

## D. LEARNING OUTCOMES (General)

1. Demonstrate an understanding of major ecosystems in the region. (MnTC G3, comp. a; ELO 1)
2. Make observations, develop and test hypotheses using fundamental ecological techniques (MnTC G3, comps. a, b, c; ELO 1, 2)
3. Identify and recognize common plant and animal species in the region (MnTC G10, comp. a, b; ELO 1, 2)
4. Articulate an understanding of the natural history, conservation and environmental laws, and policy decisions in the region (MnTC G10, comps. d, e, f; ELO 1, 2, 3)

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

Goal 03 - Natural Science

1. Demonstrate understanding of scientific theories.
2. 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.
3. Communicate their experimental findings, analyses, and interpretations both orally and in writing.

Goal 10 - People/Environment

1. Explain the basic structure and function of various natural ecosystems and of human adaptive strategies within those systems.
2. Discern patterns and interrelationships of bio-physical and socio-cultural systems.
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.

## 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.