

# Inver Hills Community College

## **BIOL 2306: General Ecology**

### **A. COURSE DESCRIPTION**

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 3

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

BIOL 1154 - Principles of Biology I (Minimum grade: 1.67 GPA Equivalent)

Corequisites: None

MnTC Goals: Goal 02 - Critical Thinking, Goal 03 - Natural Science

Introduces students to the fundamentals of ecology, focusing on the study of organisms in relation to their physical and biological environment. The course includes a survey of individual, population, community, and ecosystem level ecology. Theoretical, empirical and applied ecology will be discussed. Activities may include discussion, group activities, guest speakers, films and field trips. Labs will reinforce lecture content and provide students with research skills including use of primary literature, experimental design, data analysis and interpretation. Prereq: BIOL 1154 (required) MATH 1103 (recommended).

**B. COURSE EFFECTIVE DATES:** 08/24/2009 - Present

### **C. OUTLINE OF MAJOR CONTENT AREAS**

1. Energy and matter transfers: 25%
2. Evolutionary, community, and applied ecology: 25%
3. History and background of ecology: 5%
4. Organisms and their environments: 20%
5. Population ecology and interactions: 25%

### **D. LEARNING OUTCOMES (General)**

1. 1.) Explain ecological principles.  
2.) Apply ecological principles to diverse fields (such as conservation biology, biogeography, environmental science, public health, medicine).  
3.) Demonstrate problem solving skills through application of the scientific method.
2. 4.) Communicate ecological principles through writing and oral presentation.  
5.) Interpret primary literature  
6.) Demonstrate current standard lab safety practices and procedures

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

### Goal 02 - Critical Thinking

1. Gather factual information and apply it to a given problem in a manner that is relevant, clear, comprehensive, and conscious of possible bias in the information selected.
2. Imagine and seek out a variety of possible goals, assumptions, interpretations, or perspectives which can give alternative meanings or solutions to given situations or problems.
3. Analyze the logical connections among the facts, goals, and implicit assumptions relevant to a problem or claim; generate and evaluate implications that follow from them.
4. Recognize and articulate the value assumptions which underlie and affect decisions, interpretations, analyses, and evaluations made by ourselves and others.

### 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.

## **F. LEARNER OUTCOMES ASSESSMENT**

As noted on course syllabus

## **G. SPECIAL INFORMATION**

None noted