

Anoka-Ramsey Community College

BIOL 1100: Unifying Concepts in Biology

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 3

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: Goal 03 - Natural Science

(MnTC Goal 3)

Recommended Skills, Abilities, or Coursework: MATH 0240 with a grade of C or better, or the appropriate score on math placement test. Ability to do college level reading and writing as demonstrated by meeting enrollment requirements for ENGL 1121.

This is an introductory course designed to teach the process of science as it applies to biology today. Topics in biology that will be covered include heredity, evolution, and ecosystems. This course is not intended for science or allied health majors.

B. COURSE EFFECTIVE DATES: 08/22/2002 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Science as a process:
 - a. Experimental design
 - b. Collecting, analyzing and presenting data
 - c. Critical thinking
2. Heredity:
 - a. Cell cycles
 - b. Life cycles
 - c. Genes and proteins
 - d. Inheritance of traits
3. Evolution:
 - a. Natural selection
 - b. Speciation and extinction
4. Ecosystems:
 - a. Structure and interactions
 - b. Energy flow
 - c. Nutrient cycling

D. LEARNING OUTCOMES (General)

1. Demonstrate a comprehension of science as a process.
2. Formulate a hypothesis, conduct and analyze an experiment and disseminate the results.
3. Explain fundamental concepts related to biological processes.
4. Use critical thinking skills to understand, evaluate, and analyze real-life scenarios presenting major biological topics (e.g. case studies).
5. Evaluate current examples of hereditary, evolutionary, and ecological processes.

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.
4. Evaluate societal issues from a natural science perspective, ask questions about the evidence presented, and make informed judgments about science-related topics and policies.

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted