
SECTION HEADING

BIOL 2100: Ecology

Description

Ecology introduces the student to the study of inter-relationships between organisms and their environment. Topics include fundamental principles of ecology at the levels of individual, population, community, and ecosystem, as well as flow of energy, organism-level interactions, and community ecology with an emphasis on applied ecology. Field and laboratory activities will support selected lecture topics.

Credits

3

Prerequisite

BIOL 1110

Corequisite

None

Topics to be Covered

1. Historic development and fundamental principles of ecology at the levels of individual, population, community, and ecosystem.
2. Flow of energy and materials, organism-level interactions.
3. Growth and evolution of populations
4. Community ecology

Learning Outcomes

1. Describe and contrast ecological principles.
2. Compare and contrast the inter-related functions of the biotic and abiotic components of an ecosystem.
3. Demonstrate and differentiate normal ecological functions.
4. Demonstrate and differentiate abnormal and or perturbed ecological functions.
5. Describe and properly use ecological terminology as it applies to the study of ecology.
6. Demonstrate the historical development of ecological principles.

Credit Details

Lecture: 2

Lab: 1

OJT: 0

MnTC Goal Area(s): Goal Area 03 - Natural Sciences

Minnesota Transfer Curriculum Goal Area(s) and Competencies

Goal Area 03: Natural Sciences

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.