A. Course Description

Credits: 5

Prerequisites:

BIOL 111 General Biology I AND
BIOL 112 General Biology II AND
CHEM 111 General Chemistry I AND
CHEM 112 General Chemistry II AND
MATH 208 Applied Calculus

OR

BIOL 111 General Biology I AND
BIOL 112 General Biology II AND
CHEM 111 General Chemistry I AND
CHEM 112 General Chemistry II AND
MATH 210 Calculus I

OR

BIOL 111 General Biology I AND
BIOL 112 General Biology II AND
CHEM 111 General Chemistry I AND
CHEM 112 General Chemistry II AND
MATH 115 College Algebra AND
STAT 201 Statistics I

Lab Hours/ Weeks: Corequisites: None

Lecture Hours/ Week :

MnTC Goals: Goal LS - Upper Division Liberal Studies , Goal EL - General Education/Liberal Studies Elect.

This course covers the science of ecology, focusing on population and community ecology, the investigation of patterns in the distribution and abundance of organisms and the processes responsible. The content and methods of modern ecological research are emphasized. Students read ecological research papers and do field investigations, experiments and computer modeling. Most of the weekly labs take place outdoors. Intended for biology, environmental science and life sciences teaching majors.


C. Outline of Major Content Areas:

See Course Description for major content areas.

D. Learning Outcomes (General)

1. Apply this experience with research methods in ecology at the level necessary for success in senior undergraduate research.
2. Demonstrate quantitative reasoning skills and competency with algebra, statistics and calculus at a level appropriate for graduates of a bachelor's degree program in biology.
3. Design, propose, conduct, interpret, and present the results of an independent laboratory or field experiment in this subject area.
4. Explain and apply scientific knowledge in ecology, both theoretical and experimental, at the upper division level.
5. Read and interpret primary scientific literature in ecology.
6. Recall, explain and apply the concepts, knowledge and vocabulary of ecology at the level necessary for success in graduate study in this field.
E. Learning Outcomes (MN Transfer Curriculum)

Goal LS - Upper Division Liberal Studies
None

Goal EL - General Education/Liberal Studies Elect.
None

G. Special Information

Note: Enrollment limited to Biology, Environmental Science and Life Science Teaching majors only, except by instructor permission. First day attendance required except by instructor permission.