

# Bemidji State University

## BIOL 2620: Field and Laboratory Projects in Ecological Research

### A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

Introduction to the process of research in ecological science. The first part of the class consists of activities and lectures pertaining to basic issues of study design and execution. For the remainder of the class, students will design, carry out, and report on their own ecological study. Prerequisite or Corequisite BIOL 2610.

**B. COURSE EFFECTIVE DATES:** 08/26/2013 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Animal sign survey
2. Designing a study: initial considerations
3. Hypothesis testing: chi-squared analysis
4. Intro to data analysis: spreadsheet skills, fitting curves
5. Tree measuring

### D. LEARNING OUTCOMES (General)

1. demonstrate basic knowledge of the design and execution of an ecological study by analyzing the data
2. demonstrate basic knowledge of the design and execution of an ecological study by formulating an answerable question in the area of ecology,
3. demonstrate basic knowledge of the design and execution of an ecological study by communicating the outcome of the study by writing a report in scientific format, and presenting the study to the class
4. demonstrate basic knowledge of the design and execution of an ecological study by systematically collecting the relevant data
5. demonstrate basic knowledge of the design and execution of an ecological study by designing an experiment or field study to answer the question

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted