

BIOL 299 : Field Methods in Ecology

Credits 2

Quarter Offered Fall

This course will introduce students to common field methods used in ecological studies through field data collection in local areas. Students will learn how to measure and evaluate field studies data including vegetation/restoration studies, wildlife monitoring (invertebrates, birds, other), and water quality of aquatic systems (freshwater and marine). The course will cover the field research process, from question development to results. [BIOL& 100](#) or [BOT 101](#) recommended but not required. This class may include students from multiple sections. (Elective)

Prerequisites

[ENGL& 101](#) or concurrent enrollment; eligibility for [MATH 99](#)

Course Outcomes

Describe and critique the strengths and weaknesses of some basic scientific survey methodologies including:

Vegetation: cover class surveys, line-intercepts, frequency surveys, stem counts, measuring DBH and tree heights.

Wildlife: mark/recapture, plot studies, some invertebrate trapping, bird identification.

Aquatic systems: intertidal monitoring techniques, stream benthic invertebrates and water quality sampling.

Demonstrate a basic ability to use GPS field units to find a point on a map.

Identify/ suggest potential appropriate survey methods to novel scientific field research questions.

Enter data accurately into a spreadsheet, check for accuracy, and generate a table or graph from the data using common digital software programs.