Botany/Zoology 459: Ecological Techniques for Field Monitoring

Daniel Levitis, levitis@wisc.edu

This course is intended for undergraduate students who have begun their study of ecology and wish to learn standard techniques for monitoring animals and plants in the field. Students will be introduced to techniques for finding, identifying, and recording ecologically important species, and then use one or more of these techniques for their own brief project on the grounds of the UC Arboretum. We will be in the field regardless of the weather.

Class Format: An intensive, five-day (August 21-25 2017) field course at the Arboretum. Five hours of classroom time, plus twenty hours of group field/lab activities. Class meets at 9AM each morning at the Arboretum CRE building. Some late evening and early morning meetings will be required.

Enrollment: Enrollment is limited to advanced undergraduates, or by permission of instructor.

Learning goals: Students will learn how to:

- maintain a proper field notebook
- take reliable data in the field
- find, identify and document animals and their sign in the field
- observe and take data on animal behavior
- make, preserve and document an insect collection
- identify and map invasive plants
- use transects and quadrants to quantify plant abundance

Prerequisite: An ecology course (e.g., Bot/Zool 450 or 460) or similar

Expectations:
Students will attend and participate actively for the full five days. Students will keep detailed field notes documenting their activities and observations. Students will turn in data and notebooks in a timely fashion.

Grading:
30% Participation. Each day's group activities will be worth 6% of the class total.
20% In class data gathering, to be reported in field notebooks.
20% Field notes, complete, detailed, and in the assigned format
20% Short write up of final monitoring projects
10% Map, constructed using student gathered data

100-92% is an A, 88-91% is an AB, 80-87% is a B, 76-79% is BC, 70-75% is C, 60-69% is D

Readings:
No Textbook
Sample of Aldo Leopold's field notes
Keeping a Naturalist's Field Journal by D. Long
A Field Guide to Terrestrial Invasive Plants in Wisconsin, Boos et al. 2009

Schedule (subject to change)

Monday Morning	Introductions, field notebooks, safety in the field, initial observations, data and metadata
Monday Afternoon	Plant keys, identifying invasive plants, taking GPS data
Tuesday Morning	Early start: bird watching and behavioral observation
Tuesday Afternoon	Transects and quadrats
Wednesday Morning	Mapping project
Wednesday Afternoon	Mapping project
Thursday Morning	Set pit fall traps, feedback on field notebooks
Thursday Afternoon	Insect collecting, keying, pinning and labelling
Friday Morning	Student projects
Friday Afternoon	Student projects and wrap up

Activities:
Turkey behavioral observation