

Castleton State College
Course Syllabus
Field Techniques and Current Topics in Wildlife Biology
2 Credits

Course Description

This course is targeted for undergraduate students majoring in wildlife biology, biology, zoology, forestry, or other natural resource programs in the Northeastern U.S., especially those from programs lacking intense field-based courses. The course is intended to provide students with practical, hands-on training in the tools and techniques of field biology and allow them to apply those skills in a variety of exercises. Students will summarize data from small group projects and present results to the large group and instructors. Practicing biologists from across the region will be engaged as guest instructors for certain workshops and will be invited to lead discussion sessions on current wildlife management issues and lead field trips to demonstrate wildlife and habitat management practices on the ground.

Course Goals

1. To provide undergraduate students with practical, field-based experience in basic sampling methods and theory employed in wildlife biology.
2. To provide undergraduate students with hands-on experience using a variety of field equipment, ranging from traps and nets to global positioning system (GPS) units.
3. To expose undergraduate students to current issues in wildlife conservation and encourage critical thinking and decision-making skills through field trips and interactions with practicing wildlife professionals.
4. To provide undergraduate students an opportunity to network with professionals in their field in an informal environment.

Readings and Materials

- Selected readings will be provided as handouts by instructors and workshop leaders.
- Equipment for field exercises will be provided.
- Students will be expected to complete the Internet-based hunter education program provided by the International Hunter Education Association (IHEA; www.ihea.com) prior to the start of the course.

Course Projects

1. Complete the IHEA course requirements and, optionally, obtain a Vermont hunter education certificate; this will allow participation in subsequent projects using dart guns. (5%)

2. Demonstrate proficiency using both map and compass and GPS devices in navigating to points, determining habitat boundaries, and locating survey transects. (20%)
3. Participate in small group exercises and demonstrate proficiency in capture and non-capture sampling of small mammals, birds, reptiles and amphibians, and fish under the guidance of expert instructors. (20%)
4. Demonstrate the ability to identify local plant species, especially woody plants, and demonstrate knowledge of their community associations and common management practices. (20%)
5. Demonstrate proficiency with radiotelemetry equipment, including homing and triangulation techniques. (5%)
6. Demonstrate proficiency with capture dart projection systems. (5%)
7. In small groups, synthesize data on a taxa or habitat type, collected by your own and other groups and present a summary to the class and instructors. (10%)

Course Schedule

There will be thirteen (13) consecutive class days beginning May 18th through May 30th, with a final wrapup day on May 31st. Most class days will morning and afternoon workshops or field exercises on different topics, though there may be 1 or 2 all-day trips to demonstrate wildlife habitat or population management practices as applied in the field. Exact scheduling of workshops will be weather and instructor dependent. There will also be several evening sessions with invited practicing biologists leading discussion on current wildlife conservation topics.

Grading

Grades for the various modules will be assigned by the instructors in collaboration with the guest instructors when appropriate. In addition to the points outlined in the Course Projects section, 5% of the grade will be based on peer evaluations of small group members on the amount of participation in the group project, and the remaining 10% of the grade will be based on individual participation in the course as a whole as determined by the instructors.

Course Overview¹

Date	AM	PM
Sunday May 18	Welcome, registration	Goals of the course, ground rules, who's who, why are you here?
Monday May 19	Visit field site, orienteering	Orienteering, plant identification
Tuesday May 20	Bird surveys	Introduction to radiotelemetry
Wednesday May 21	Mammal trapping	Trapping cont.
Thursday May 22	Habitat sampling, orienteering	Hunter education hands-on
Friday May 23	Reptile and amphibian sampling	Chemical immobilization
Saturday May 24	Bird sampling	Radiotelemetry practicum
Sunday May 25	Group discussions	Group project assignments
Monday May 26	Group project work ²	Plant ID practicum
Tuesday May 27	Group project work	Environmental education (Project Wild, etc.)
Wednesday May 28	Field trip to Dead Creek WMA (tentative)	Field trip
Thursday May 29	Group project work	Fish sampling (tentative)
Friday May 30	Group project preparation	Group presentations
Saturday May 31	Wrap-up, group discussions	Wrap-up, evaluation

¹ Exact scheduling of certain lessons and trips will be dependent on weather and availability of instructors.

² Group projects will consist of applying the techniques learned in the demonstrations of bird, mammal, reptile and amphibian, and habitat sampling to design and layout sampling schemes, collect and summarize data from their own group and others, and present those results.