

BZ 340: Field Mammalogy Syllabus

How do you successfully complete BZ 340?

Your Instructor

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Course Objectives

BZ 340 provides an intensive introduction to the techniques used to study of wild mammals and the principles of field research design. This course provides a unique opportunity to conduct independent research on wild mammal populations using a variety of techniques. The skills gained with these experiences typically translate directly into future job and research opportunities. Results of independent research must be analyzed in an appropriate analytical framework, including statistical approaches, and must be prepared in a way consistent with professional publication requirements. Results will be presented at a symposium that may be attended by members of the CSU scientific community and student peers.

The focus of the course is the study of wild mammal populations of Colorado through study in natural habitats along a latitudinal gradient in Colorado, from shortgrass steppe to the foothills ecotone to mountain forests.

Learning Objectives - upon successful completion of this course, each student should be able to:

- Safely capture, handle, and obtain samples from a variety of small mammals with care for their welfare and comfort and the prevention of disease spread.
- Identify the important tools and resources necessary to capture, handle, identify, and report on occurrences of small mammals.
- Describe the role of licensing and regulatory agencies (such as animal care and use committees, state and federal wildlife agencies, private organizations, and others) in wild mammal research.
- Organize and coordinate, in collaboration with colleagues, a research project to answer a question regarding mammalian life history characteristics, demography, ecology, or conservation that is grounded in the literature.
- Analyze field data and existing data in the context of a research question under an appropriate analytical or statistical framework for the data.
- Synthesize all data and literature into a comprehensive poster presentation that is shared with colleagues.

Course Locations

The course is taught in a combination of the CSU Campus, the Mountain Campus, and occasionally other remote field sites.

Intensive Field Experience:

A portion of the course requires residence in field conditions, including the Mountain Campus and other field sites. Plan on substantial amounts of time in the field, especially in the second and third weeks of the class. This includes long hours in potentially adverse weather conditions and will include early morning or late-night hours. Be prepared to hike in a variety of terrains and help in carrying gear. Typically, students should plan on being in residence at field sites during the field portion of the course and there are no exceptions to this requirement.

Appropriate clothing and gear for working in a variety of conditions is strongly recommended. This includes rain gear, sturdy boots, long pants, a protective hat, sunglasses, insect repellent, sunscreen, a water bottle, daypack, a field notebook and pencils. However, please contact the instructor for assistance if these materials are not available to you.

Students begin the course by satisfying a brief exam on field and wild animal handling safety, including protecting themselves from disease and injury.

Course Materials

Textbook: The *recommended* text is Mammals of Colorado, D.M. Armstrong, J.P. Fitzgerald, and C.A. Meaney, 2nd Edition, Denver Museum of Nature & Science and University Press of Colorado. [This is only recommended, not required.](#)

Canvas Materials: Featured readings, videos, news articles, and podcasts will be placed on Canvas. Look for all required materials and assignments in the daily modules.

A field notebook: Plan on finding or purchasing a field notebook in which to keep notes on your research activities, field conditions, and data collection. Field notebooks are for use in field conditions, so typically include water resistant paper. The simplest thing to do, unless you have one already, is to purchase a "Rite-in-the-Rain" notebook, like this one, which are available in the CSU Bookstore or online: <https://www.amazon.com/Rite-Rain-All-Weather-Side-Spiral-Notebook/dp/B001PD28JM>

Your Grade

Grades will be assigned based on completion of

- A brief reflection on Licensing and Regulations (5%)
- An independent research project, including a review of relevant literature, alignment with similar, publicly available data, statistical analysis, and a final presentation of its results (45%)
- Participation in field research, including class efforts to obtain samples for long term ecological research on ground squirrel species and radio telemetry studies of bats at the Mountain Campus (30%)
- Careful documentation and sharing of all field data obtained throughout the course (10%)
- A carefully prepared field journal documenting the data included in the project (10%)

Academic Integrity

The foundation of a university is truth and knowledge, each of which relies in a fundamental manner upon academic integrity and is diminished significantly by academic misconduct. Academic integrity is conceptualized as doing and taking credit for one's own work. A pervasive attitude promoting academic integrity enhances the sense of community and adds value to the educational process. All within the University are affected by the cooperative commitment to academic integrity.

***For all work in this class, I expect that you have agreed to the following honor pledge:
I have not given, received, or used any unauthorized assistance.***

Class Schedule

- This is an intensive field course taught over a four-week period (16 class periods total). This means that every course meeting is approximately equivalent to one week of course time during a normal semester. Summer courses are an intense time commitment. This course requires an even greater time commitment because a portion is taught off campus and includes extra hours in the field designing, conducting, and analyzing research.
- The estimated schedule is available at [Course Schedule](#)