WINTER ECOLOGY
EBIO 4100 & 5100, Section 570
Spring 2019— Syllabus

Dr. Timothy Kittel & Derek Sweeney, Instructors

I. Course Description

Winter Field Ecology is a survey of physical and biological processes and their interaction in wintertime snow-covered environments. Through classwork, fieldwork, and individual projects, we will focus on the dynamics of high-elevation ecosystems in the western US. Based from the CU Mountain Research Station's new year-round Science Lodge, we will spend 6 weekends exploring the ecology of upper montane, subalpine, and alpine landscapes in winter. We will study plant, vertebrate, and microbial adaptations to winter and the dynamics of terrestrial, aquatic, and snowpack environments. We will consider how winter processes play a role in “growing season” dynamics and are important factors in conservation and management of natural resources of the Rocky Mountains.

II. Course Objectives

Students will gain a basic understanding of physical and ecological dynamics of temperate-latitude mountain systems during winter and how what happens in winter affects processes at other times of the year. Students will develop an appreciation of what these environments are like during the cold and snow season and how organisms are adapted (physiologically or behaviorally) to these conditions. Lastly, students will recognize how changing wintertime regional conditions (e.g., climate change, atmospheric deposition) are changing these systems.

III. Outside Assignments

Outside work will consist of:
- Weekly assigned readings
- Individual research projects – independent field research conducted outside of course meetings

IV. Expectations

Grades will be based on:
- Field exercises 30%
- Exams 30%
- Individual project 30%
- Participation 10%

Final grades will be assigned as follows:
A 90-100%, B 80-89%, C 70-79%, D 50-69%, F <50%

V. Evaluation

CU’s standard FCQ will be used for course evaluation.
VI. Course Schedule

Start date: 16 January 2019
End date: 2 March 2019

Times:
  Weds – 5:00-6:00p
  Sat & Sun – 8:30a-1:00p, 1:30-5:00p
  Sat – 7:30-8.30p

The previous year’s schedule and additional course details are online at: http://culter.colorado.edu/~kittel/WinterEcology.html