WINTER ECOLOGY
EBIO 4100 & 5100, Section 570
Spring 2027— Syllabus

Dr. Timothy Kittel & Prof. 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 out of the CU Mountain Research Station's 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. Instructors

Dr. Timothy Kittel, INSTAAR
email: kittel@colorado.edu
webpage: https://www.colorado.edu/instaar/timothy-kittel

Prof. Derek Sweeny, MS Biology
Assistant Teaching Professor, EBIO
email: derek.sweeney@colorado.edu

IV. Outside of Class Assignments

Outside work will consist of:

- Weekly assigned readings
- Individual research projects – independent field research conducted outside of course meetings

V. Evaluation

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%

VI. Course Schedule

Start date: 13 January 2027
End date: 27 February 2027

Wednesdays 13 Jan - 24 Feb 27 – Boulder campus.
13 Jan: Course Orientation. 6 Lectures: 20 Jan – 24 Feb 2027
Times: 5:00-6:00p
Saturdays 23 Jan – 27 Feb– Mountain Research Station
Times: 8:30a-1:00p, 1:30-5:00p, 7:30-8.30p
Sundays 24 Jan - 21 Feb – Mountain Research Station
Times: 8:30a-1:00p, 1:30-5:00p

Daily schedule of activities will be on Canvas.

VII. Course Policies –

General Course Policy on Absences

Missing a class can be detrimental to your grade, this is especially so given that there are only 15 class days for a 3-credit course. Each day contributes directly both to your participation grade and any graded activity for the day and cannot be excused or made up unless you have a documented legitimate reason (such as those noted below). Each day works out to be enough points to change your letter grade. In addition, there is an indirect impact from missing skills or other information related to take-home assignments or individual projects covered on any given day. *- 7/2018*

Conditional Gen AI Use

You may conditionally use gen AI tools in this course on any assignment. Any information (subject matter, references) you gain from AI use must be carefully fact checked as AI is not a reliable source. You must give clear attribution and explanation of AI's role in the completion of the assignment. If you use gen AI tools on assignments in this class, document your usage in a section following your references. Include how AI content was fact checked and cite it as a source following citation guidelines for this course. *- 8/2026*

Classroom Behavior

Students and faculty are responsible for maintaining an appropriate learning environment in all instructional settings, whether in person, remote, or online. Failure to adhere to such behavioral standards may be subject to discipline. Professional courtesy and sensitivity are especially important with respect to individuals and topics dealing with race, color, national origin, sex, pregnancy, age, disability, creed, religion, sexual orientation, gender identity, gender expression, veteran status, marital status, political affiliation, or political philosophy. For more information, see the classroom behavior policy, the Student Code of Conduct, and the Office of Institutional Equity and Compliance. *- 9/2024*

Accommodation for Disabilities, Temporary Medical Conditions, and Medical Isolation

If you qualify for accommodations because of a disability, please submit your accommodation letter from Disability Services to your Instructor in a timely manner so that your needs can be addressed. Disability Services determines accommodations based on documented disabilities in the academic environment. Information on requesting accommodations is located on the Disability Services website. Contact Disability Services at 303-492-8671 or DSinfo@colorado.edu for further assistance. If you have a temporary medical condition, see Temporary Medical Conditions on the Disability Services website. If you have a temporary illness, injury or required medical isolation for which you require adjustment, contact the Instructor in a timely manner. *- 9/2024*

Preferred Student Names and Pronouns

CU Boulder recognizes that students' legal information doesn't always align with how they identify. Students may update their preferred names and pronouns via the student portal; those preferred names and pronouns are listed on instructors' class rosters. In the absence of such updates, the name that appears on the class roster is the student's legal name. *- 9/2024*

In the case that these records do not reflect your preferences, instructors will gladly honor your request to address you by an alternate name or gender pronouns. Please advise your Instructor of this preference early in the course so that we may make appropriate changes to our records. *- 4/2021*

Academic Integrity / Honor Code

All students enrolled in a University of Colorado Boulder course are responsible for knowing and adhering to the Honor Code. Violations of the Honor Code may include but are not limited to: plagiarism (including use of paper writing services or technology [such as essay bots]), cheating, fabrication, lying, bribery, threat, unauthorized access to academic materials, clicker fraud, submitting the same or similar work in more than one course without permission from all course instructors involved, and aiding academic dishonesty. Understanding the course's syllabus is a vital part in adhering to the Honor Code.

All incidents of academic misconduct will be reported to Student Conduct & Conflict Resolution: StudentConduct@colorado.edu. Students found responsible for violating the Honor Code will be assigned resolution outcomes from the Student Conduct & Conflict Resolution as well as be subject to academic sanctions from the faculty member. Visit Honor Code for more information on the academic integrity policy. *- 9/2024*

Students should note that their work may be evaluated with a plagiarism detection service; and that this service retains a copy of the submitted work for future comparisons. *- 12/2018*

Sexual Misconduct, Discrimination, Harassment and/or Related Retaliation

CU Boulder is committed to fostering an inclusive and welcoming learning, working, and living environment. University policy prohibits protected-class discrimination and harassment, sexual misconduct (harassment, exploitation, and assault), intimate partner abuse (dating or domestic violence), stalking, and related retaliation by or against members of our community on- and off-campus. The Office of Institutional Equity and Compliance (OIEC) addresses these concerns, and individuals who have been subjected to misconduct can contact OIEC at 303-492-2127 or email CUreport@colorado.edu. Information about university policies, reporting options, and support resources including confidential services can be found on the OIEC website.

Please know that faculty and graduate instructors must inform OIEC when they are made aware of incidents related to these policies regardless of when or where something occurred. This is to ensure that individuals impacted receive outreach from OIEC about resolution options and support resources. To learn more about reporting and support for a variety of concerns, visit the Don't Ignore It page. *- 9/2024*

Religious Holidays

Campus policy requires faculty to provide reasonable accommodations for students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Please communicate the need for a religious accommodation in a timely manner. See the campus policy regarding religious observances for full details. *- 9/2024*

In this class, it is your responsibility to make such requests to your professor at the start of the course. *- 7/2018*

Mental Health and Wellness

The University of Colorado Boulder is committed to the well-being of all students. If you are struggling with personal stressors, mental health or substance use concerns that are impacting academic or daily life, please contact Counseling and Psychiatric Services (CAPS) located in C4C or call (303) 492-2277, 24/7. Free and unlimited telehealth is also available through Academic Live Care. The Academic Live Care site also provides information about additional wellness services on campus that are available to students. *- 9/2024*