

## Syllabus: Mountain Ecology & Conservation (EBIO 3170)

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**Description:** This is a lecture course with the goal of providing a foundational understanding of the ecology of mountain environments around the world, including climatic gradients, plant and animal diversity & distributions, habitat zonation, evolutionary processes, and various aspects of montane conservation from habitat change to climate change.

**Instructor:** Dr. Christy M. McCain  
Assistant Professor in EBIO & Curator of Vertebrates  
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Phone: 1-303-735-1016  
Office: MCOL E190C  
Office Hours: Tuesday & Wednesday 11-12:30pm or by appointment

**Lecture:** Tuesday/Thursday 9:30-10:45am  
**Lecture Location:** University Club 4

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**No Required Texts, but various journal articles will be assigned.**

**Course Schedule:** A preliminary schedule of lectures is attached. Lecture topics and dates are subject to change.

**Exams:** There will be 2 mid-term exams and a final exam. None of the exams will be cumulative, but each does build upon the previous sections. Each exam is worth 100 pts. There will be NO make-up exams given during the semester or for the final, so plan on attending during scheduled exam times.  
**\*\*\*The final exam is scheduled on Wednesday, May 7<sup>th</sup> at 4:30-7pm\*\*\***

**Clickers:** During each class there will be 3-5 clicker questions to be answered. These are to encourage in-class engagement, discussion, and learning. All questions must be answered each day to receive the participation points (5 points/class). **Remember to bring and register your clicker!**

**Grading:** As a rule-of-thumb, grades will be awarded as follows: 90-100% = A; 80-89% = B; 70-79% = C; 60-69% = D; below 60% = F. Borderline cases = "+" & "-".

<u>Activity:</u>	<u>Undergrad Level (3170):</u>
Lecture Exams (100 pts each)	200 points
Final Exam	100 points
Participation (5 Clicker pts/ day)	125 points
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Total	425 points

DAY	EBIO 3170: MOUNTAIN ECOLOGY & CONSERVATION
1/14	Introduction to Mountains
1/16	How do we define a Mountain? What do we want to know about them?
1/21	What is the distribution of mountains around the world?
1/23	How are mountains built? What is their evolutionary history? <i>[Peter Molnar*]</i>
1/28	Why are mountains the most excellent places on earth?
1/30	How do researchers study mountains?
2/4	Mountain climate I: temperature & precipitation
2/6	Mountain climate II: clouds, mountain mass effects, seasonality
2/11	Mountain climate III: climate change
2/13	<b>EXAM I</b>
2/18	Mountain climate IV: snow & ice <i>[Mark Williams*]</i>
2/20	Mountains & conservation of our water supply
2/25	Mountain climate V: oxygen, atmospheric pressure, solar radiation
2/27	Mountain habitats I: habitat zonation from the tropics to the arctic
3/4	Mountain deforestation & agriculture
3/6	Mountain habitats II: treelines
3/11	Mountain habitats II: alpine <i>[Tim Seastedt*]</i>
3/13	Mountain glaciers & their future
3/18	Ski resorts & conservation
3/20	<b>EXAM II</b>
3/25	<b>NO CLASS—Spring Break</b>
3/27	<b>NO CLASS—Spring Break</b>

DAY	EBIO 3170: MOUNTAIN ECOLOGY & CONSERVATION
4/1	Mountain biodiversity I: what mountains harbor the most diversity?
4/3	Mountain biodiversity II: tropics versus islands
4/8	Mountain biodiversity III: vertebrates, plants, insects
4/10	Mountain biodiversity IV: microbes [ <i>Steve Schmidt*</i> ]
4/15	What drives mountain biodiversity? Is it climate?
4/17	Is it evolutionary history? Is it biotic interactions?
4/22	Are parks & conservation areas protecting mountain biodiversity?
4/24	Studying mountain biodiversity: Alpine plants & climate change [ <i>Dan Doak*</i> ]
4/29	Studying mountain biodiversity: Mammals
5/1	What can we do to protect mountain ecosystems?
5/7	<b>FINAL EXAM: 430-7pm</b>

\* Guest lectures: tentative as dates may change

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### **Administrative Reminders:**

1. If you qualify for accommodations because of a disability, please submit to Dr. McCain a letter from Disability Services in a timely manner (by end of second week of classes) so that your needs may be addressed. Disability Services determines accommodations based on documented disabilities. Contact Disability Services at 303-492-8671 or by e-mail at [dsinfo@colorado.edu](mailto:dsinfo@colorado.edu).

If you have a temporary medical condition or injury, see Temporary Medical Conditions: Injuries, Surgeries, and Illnesses guidelines under Quick Links at Disability Services website and discuss your needs with Dr. McCain.

2. Campus policy regarding religious observances requires that faculty make every effort to deal reasonably and fairly with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. In this class, there will be one opportunity for make-up exams: lecture exams outside of class within two days of the exam, and lab exams in the other Thursday section during exam week. For additional absences please talk to me in advance, so we can work out additional accommodations. See full details at [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html)

3. Students and faculty each have responsibility for maintaining an appropriate learning environment. Those who fail 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 differences of race, color, culture, religion, creed, politics, veteran's status, sexual orientation, gender, gender identity and gender expression, age, disability, and nationalities. Class rosters are provided to the instructor with the student's legal name. I will gladly honor your request to address you by an alternate name or gender pronoun. Please advise me of this preference early in the semester so that I may make appropriate changes to my records. See policies at <http://www.colorado.edu/policies/classbehavior.html> and at [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code)

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5. All students of the University of Colorado at Boulder are responsible for knowing and adhering to the academic integrity policy of this institution. Violations of this policy may include: cheating, plagiarism, aid of academic dishonesty, fabrication, lying, bribery, and threatening behavior. All incidents of academic misconduct shall be reported to the Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). Other information on the Honor Code can be found at <http://www.colorado.edu/policies/honor.html> and at <http://www.colorado.edu/academics/honorcode/>