

**BIO 210T, Alpine Ecosystems Department of Environmental Sciences, Fall 2018**

W: 13:00 – 15:45

**COURSE INFORMATION**

Instructor: Professor Brack W. Hale

bhale@fus.edu

Office hours: Monday/Thursday 2:30 p.m.-4:30 p.m. or by appointment

Class meeting location: LAC Classroom 5

Class meeting times: Wednesday 1 p.m.-3:45 p.m.

**COURSE DESCRIPTION AND GOALS**

This course examines the ecology and the management of the European Alps. It introduces students to the natural history and functions of these important ecosystems. It examines how the climate, fauna, flora, and landscapes have interacted and evolved over time. Further, it provides students an overview of threats facing these systems today, such as climate change, human use, and non-native species. It introduces students to research methods used to study mountain environments and impacts of management activities. The travel portion will visit sites in the Central and Western Alps to study natural environments in situ and connect students with local researchers and organizations active in the field. Students will spend significant time outdoors in the field in a variety of weather. Access to some sites will require moderate amounts of hiking in mountainous terrain.

This is a special topics course designed for students in the Environmental Sciences and Studies program, intended for students who have already had coursework in the environmental sciences. It is open to students in any major wishing to obtain a better understanding the Alps; it counts as a course in the Social Responsibility core for all students. It fulfils an upper-level science requirement in the ENV majors and minor as well as is credit towards the T course requirement.

**STUDENT LEARNING GOALS**

By the end of the semester, students should:

- be able to explain the influences of altitude on the Alpine environment and its flora and fauna;
- describe the different habitat types encountered in the Swiss and French Alps;
- explain the role, natural history, and current status of major, iconic plant and animal species and be able to identify them;
- discuss multiple examples of interspecific interactions;
- discuss how different natural disturbances shape Alpine ecosystems;
- describe how historic and modern human land uses have shaped and continue to shape the Alpine landscape;
- explain how anthropogenic climate change is affecting species, ecological communities, and human communities in the Alps;
- discuss the role of the Alpine Convention in managing conservation of Alpine ecological and cultural landscapes;
- critique different approaches to conservation and restoration of Alpine species and landscapes
- collect field data using basic field techniques and summarize collected data in written and graphical forms;
- synthesize information from class, fieldwork, and scholarly literature to assess environmental issues facing the Alps.

**REQUIRED TEXTS AND MATERIALS**

- Price, M. 2015. *Mountains: A Very Short Introduction*. Oxford University Press. eText is available from Amazon.
- Other readings posted to Moodle.

## MAJOR ASSIGNMENTS AND GRADING

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Student grades will derive from a variety of class activities. Students can expect regular homework assignments, field reports, short papers, presentations, and exams. The final project will require students to examine one of the major human-environment conflicts in the Alps, assess affected ecosystems and land uses, and propose solutions, integrating class material, travel experiences, and outside research. The final project will be presented in both written and oral formats.

I grade course activities on a letter scale (A- F). I use intermediate grades for coursework instead of +/- (e.g. AB, BC, CD). Final grades calculate according to rubric (Table 2). Due to the special nature of a travel course, the following stipulations apply:

- Students missing two full classes before travel are subject to automatic withdrawal from the course.
- Students failing the first exam may be withdrawn from the course.
- Course withdrawals after return from travel will only be allowed in exceptional cases and after a joint meeting of the student, the student's advisor, the Academic Dean, and the course instructor.
- Late assignments receive a 50% grade penalty.
- Exceptions will be made for students with properly documented health issues or other extraordinary circumstances.

**Table 2: Final grade rubric** (+/- given for intermediate situations)

| Grade level | Classroom    | Homework completed | Graded activities* |
|-------------|--------------|--------------------|--------------------|
| A           | Excellent    | 90+ %              | A-average          |
| B           | Good         | 80+ %              | B-average          |
| C           | Satisfactory | 70+ %              | C-average          |
| D           | Satisfactory | 60+ %              | D-average          |
| F           | Poor         | < 60 %             | F-average          |

\*iconic species project 15%, final project 35%, tests 50%

## COURSE EXPECTATIONS AND THINGS TO KNOW BEFORE YOU GO

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- Students come prepared to class and on travel and actively participate. This class involves discussions and activities, which promote success; class time builds upon, rather than reviews material from readings. NB: Class will often begin with a short reading quiz.
  - Since this class meets only once a week, students need to plan readings and assignments well. Proper time management will be essential for success.
- Students are on time, every day. Frequent tardiness counts as absences. Students are responsible to seek out materials from missed classes. During travel, being late is grounds for being left behind and counted absent.
- The travel experience is an integral part of this course where students can expect to do readings, have assignments, and complement their learning in the classroom.
- You may not use any electronic devices (e.g. smartphones, cameras, laptops) during any course activities on-campus or during travel without express permission of professor.
  - When such permission is allowed, photography or videography must follow ethical guidelines, including receiving permission from any human subject and not placing yourself or anyone else in danger for a photo or video. **Drones are, however, prohibited on this course.**
- Students need to have the appropriate kind of clothing and gear with them (especially appropriate shoes). The weather in the Alps in fall can be variable ranging from pleasantly warm to very cold. Windy, rainy, or snowy conditions may occur. Nonetheless we will be outside often and for long periods of time, hiking and being physically-active.
- Except in extraordinary circumstances, course withdrawals after the travel portion has occurred are not permitted. Students wishing to withdraw will receive a failing grade.
- On travel, you are expected to behave as a professional adult who is a representative of Franklin and a guest of our ProNatura and CREA hosts. Any behavior that reflects poorly on Franklin or your professor will result in a failing grade and possibly expulsion from Franklin (see below). Students who are studying abroad or transferring will have letters sent to their future institutions describing the problems they created or were involved with.

### ***Proper travel behavior***

Academic Travel is not a student's vacation. During the travel, any violation of Franklin's code of conduct carries a heavier weight (one level higher). Any behavior which is disruptive for the group, whether or not it is listed in Franklin's code of conduct, is grounds for disciplinary actions on the travel and back on campus. Use common sense. Please note the following:

- **The consumption of alcohol during bus rides and formal academic activities is prohibited.** Furthermore, being visibly intoxicated during any course activities is grounds for disciplinary action and course expulsion. ***You must be of legal age to purchase and consume alcohol and must carry ID to prove so.***
- Students may not play music (either from their own devices or using musical instruments) on bus rides ever or in sleeping or common areas of our lodging facilities after 10 pm at night.
- Students are also prohibited from free climbing, bouldering, going off trail, or engaging in similar risky behavior (to themselves, the class, and the local environment).
- As stated earlier, drones are not permitted on this travel.

In general, problematic behaviors will result in a reduction of one full grade the first occurrence; a second infraction will result in failure of course and the student returning to campus for disciplinary action at his/her own expense. Certain behaviors will not be tolerated at all, these include but are not limited to, violent behavior, sexual harassment/assault, destruction of property and/or illegal drug use. Students engaging in these behaviors will automatically fail the course, be removed from the travel portion at their expense, and must return to campus to face disciplinary action and likely expulsion

### **ACADEMIC INTEGRITY**

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Please refer to Franklin's *Statement on Cheating and Plagiarism* in the *Academic Catalog* for the full version, but to summarize here: **you are to do your own work.** Behaviors such as copying the work of others, using third-party services, or any other circumvention of doing your own work are dishonest and not acceptable in this class or at this institution. **For testing situations, this includes the use of unpermitted materials or copying off a classmate; for papers and presentations, this includes improper use of references and citations. Copying text without the use of quotations or paraphrasing the ideas of others without proper citations are both examples of plagiarism and thus unacceptable.**

The first case of academic dishonesty will result in an automatic grade of a zero on the assignment and a report to the Dean. The second case will result in immediate failure of the course and recommendation to the Dean for expulsion from the University.

See the Academic Catalog for full statement (page 199):

[https://www.fus.edu/images/pdf/FUS\\_ACADEMIC\\_CATALOG\\_2018\\_2020\\_web.pdf](https://www.fus.edu/images/pdf/FUS_ACADEMIC_CATALOG_2018_2020_web.pdf)

**TENTATIVE SCHEDULE** (see Moodle for eventual changes)

| Date              | Topic  | Readings (to be done before class)  |
|-------------------|--|---|
| 29-Aug            | Introduction—life at altitude  |   |
| 5-Sep             | Mountain and alpine communities  | <i>Mountains Chap. 1 &amp; 4</i><br>Moodle readings   |
| 12-Sep            | Community and ecosystem concepts and applications I  | <i>Mountains Chap. 2</i><br>Moodle readings   |
| 19-Sep            | Community and ecosystem concepts and applications II   | <i>Mountains Chap. 5</i><br>Moodle readings   |
| 26-Sep            | NO CLASS*  |   |
| 3-Oct             | Human land use and impacts   | <i>Mountains Ch.6 (start at Centres of Tourism)</i><br>Moodle readings<br><b>Iconic species presentations/reports due</b> |
| 10-Oct            | <b>Test</b>  |   |
| 17-Oct            | Travel prep<br>Climate change impacts  | <i>Mountains Ch. 7</i><br>Moodle readings   |
| 21 Oct –<br>1 Nov | <b>Academic Travel: Lucomagno (CH) and Mont Blanc (FR) regions</b><br><i>NB: Students should be sure to download necessary readings before departure</i><br><i>Site visits, talks, activities will focus on:</i> <ul style="list-style-type: none"> <li style="width: 45%;">• forest and alpine communities</li> <li style="width: 45%;">• birds</li> <li style="width: 45%;">• species interactions</li> <li style="width: 45%;">• use of remote sensing</li> <li style="width: 45%;">• large carnivores</li> <li style="width: 45%;">• conservation</li> <li style="width: 45%;">• insects</li> <li style="width: 45%;">• tourism</li> </ul> |   |
| 7-Nov             | NO CLASS*  |   |
| 14-Nov            | <b>Test</b><br>Post-travel discussion  | Moodle readings   |
| 21-Nov            | NO CLASS*  |   |
| 28-Nov            | Conservation approaches  | <i>Mountains Ch. 6 (up to Centres of Tourism)</i><br>Moodle readings<br><i>Rough draft of final paper due</i>             |
| 5-Dec             | Student presentations  | <b>In class project presentations</b><br><b>Final paper due 8 December (23:55)</b>  |
|                   | <b>Final exam week</b>   |   |

*NB: a more detailed itinerary of the travel portion will be distributed in the weeks before departure.*

*\* as travel courses have “extra” contact hours due to the travel component, some hours on campus will be reduced.*

