Biology 374 "Conservation Biology"
Website: All Course documents will be posted on the Canvas Course Website.

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GTF: Sierra Deutsch  sierrad@uoregon.edu
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BULAs: Nathan Campeau  campeau@uoregon.edu
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Course Description: Conservation Biology is a multidisciplinary, applied science devoted to preserving the remaining biological diversity of our planet. We will study the foundational concepts and principles of conservation biology and use case studies and examples to illustrate these principles in practice. We will examine the causes and consequences of diversity losses; the genetic and evolutionary consequences of small populations; population viability modeling and other tools; and approaches to conserving diversity including reserve design, corridors, captive breeding, species reintroductions and conservation laws. The prerequisite for this course is either Bi213 or Bi253.

Course Objectives
• Learn the fundamental principles and concepts of conservation biology.
• Apply these principles to conservation strategies for species and ecosystem management.
• Independently and collaboratively research and evaluate conservation issues and actions.
• Improve scientific literacy skills such as interpreting graphs and examining journal articles.
• Improve verbal and written communication skills.
• Examine how conservation biology relates to our own lives.
• Gain an appreciation for the diversity of the natural world!

Readings, mostly journal articles from the scientific literature, are required reading for this course. Readings will be available on Canvas. The readings will be announced in class and on Canvas. We will be actively engaged in discussing the readings during class so please read them before the due date. To get the most out of each of the assigned readings, you will be asked to bring to class a concept map that you have created, and to be able to answer and discuss the posted guided reading questions. Occasionally short TED talks will be assigned.

Course Format
Lectures. 2:00-3:20 MW in 101 Jacqua
You will be responsible for all material presented in lecture. The course schedule is tentative and subject to change; adjustments will be announced in class.
Lecture meetings will be a mix of lecture and discussion. Discussions will include questions on any assigned readings, so I have a strong expectation that you will have read the material before coming to class and arrive ready to participate. There are group and writing activities that occur during lecture. It is our expectation that you participate in these activities. Your active involvement promotes understanding of the material and preparation for exam questions. There is a strong positive correlation between attendance in lecture and class grades.
Lecture PowerPoint slides are available on Canvas. Please keep in mind that these are outlines for your convenience in organizing notes. They are not meant to serve as a complete set of lecture notes when studying for the exams.
Questions are welcome and encouraged during and after lecture, during office hours, and via e-mail.

Discussion Sections Wednesdays (9, 10, or 11:00) 111HUE. Please attend the section for which you are registered. Participation in discussion sections is a required part of this class and will count toward your final grade. Occasionally there will be short assignments associated with discussion section activities. These will be announced in class and on Canvas. Sections will provide an opportunity to explore some of the topics presented in the readings and lecture or to engage in participatory group activities. Project presentations will occur in section.

Grading Evaluation:

23% Midterm Exam
25% Final Exam
12% Endangered Species Group Poster Project
20% Term paper (+Abstract)
  2% Electronic discussion board comments, questions and answers on term paper abstracts
8% Discussion Section Participation and Assignments (includes paper draft and communication assignments)
10% Reading Quizzes/Concept Maps and Lecture Participation

Total = 100%

Exams: Exams will include material from the lectures, readings, in-class activities, discussion sections and the video clips shown in class.
Exams will be mixed format (short answer, multiple choice, short essay). Details will be announced in class.
Make-up Exam Policy: There will be NO make-up exams except in the case of a documented severe medical condition or other extreme documentable emergency. It is your responsibility to contact the instructor as soon as possible.

Poster Project
You will work in groups of three to create a poster focused on an endangered species listed on the IUCN Red List. We will use class time for a poster session where your posters will be evaluated to determine how well you have described the work done on your species and convinced the audience of the conservation needs of your focal species. You will be expected to answer questions about your own poster and to be an inquisitive audience toward other poster groups. Posters are due 4/20. Your group will be randomly assigned to one of the in-class poster sessions. You will receive more information about what your poster should include and how it will be evaluated in discussion section and on Canvas.
**Term Paper Project**

Each of you will independently research a topic in conservation biology that results in an individually written seven page term paper which will be handed in as a hard copy and submitted via Vericite Canvas on 5/18. You will also post an abstract of your paper electronically on Canvas and will be expected to comment on some of your colleagues’ abstracts and respond to comments from other students in the class. More details about the project requirements will be provided in class and on Canvas.

**Discussion Activities**

Your score for each week will be determined by attendance, participation, and completion of any assigned exercises.

**Homework assignments** will be due in discussion section. HW assignments include a draft of term paper, and a multi-part activity on communicating environmental issues. Other assignments will be discussed in class.

**Lecture Participation, Concept Mapping, and Reading Quiz Questions:** We will present a short quiz on the readings and/or collect concept maps based on the readings eleven times during the term. Ten of these will count toward your final grade. You can miss one without penalty. Make-ups will not be administered.

**Professional conduct**

Academic dishonesty is a serious offense. *Plagiarism will not be tolerated.* You are expected to do your own work on assignments, projects, and exams. When writing up your assignments and papers, you are expected to paraphrase (use your own words). When writing up your projects and assignments, give credit to the sources of your information. You are encouraged to discuss ideas with each other and to study together, but don’t copy someone else’s work, or allow them to copy yours.

Please refer to the University of Oregon Student Conduct Code by which all students are expected to abide.

**Classroom Etiquette:**

1. Please arrive on time.
2. Please don't leave early. This is very disruptive to everyone. In turn, I will not lecture beyond 3:20. If you have an unusual circumstance and must leave early, please sit near an exit and leave unobtrusively.
3. Please refrain from engaging in activities that could be distracting to your fellow students.
   - We ask that you not converse with your neighbors when someone else is talking (instructor or classmate) as this interferes with the ability of other students to learn.
   - Please turn your cell phones to silent/off during lecture.
   - Please use computers during lecture only to take notes. Other laptop activities have been reported to be distracting to your fellow students.
   - Please do not pack up your things early as this makes it difficult for students around you to hear the end of the lecture.

If you are having a problem that interferes with your ability to do the work in this class, please tell us about it as soon as you can. We may be able to refer you to someone for help or to make special arrangements if the need is real and if you have done your best to deal with the situation in a timely manner.

The University of Oregon is working to create inclusive learning environments. Please notify me if there are aspects of the instruction or design of this course that result in barriers to your participation. You may also wish to contact Disability Services in 164 Oregon Hall at 346-1155 or disabsrv@uoregon.edu

*The following tentative schedule is a work in progress and is subject to change.* Changes will be announced in class and on Canvas.
**This is a partial and tentative list of readings. Check Canvas for assigned readings. Most of the following topics are covered in the Primack textbook. Please ask if you need assistance locating readings.**

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<th>WK</th>
<th>LECTURE TOPICS and READINGS</th>
<th>DISCUSSION SECTION (Wednesdays)</th>
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<tr>
<td><strong>PART I: Identifying the Problems</strong></td>
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| 1 | 3/28 L: Introduction to Conservation Biology  
   Read the syllabus!  
   3/30 L: Biodiversity, Species concepts  
   Reading: What is Conservation Biology? Soule  
   Project description. Form project groups.  
   Activity: Measuring biodiversity |
|  | 4/4 L: Conservation values, Ecosystem Services  
   Reading: What to let go? Marris  
   Skim: Effect of Scientific Evidence on Conservation Practitioners’ Management Decisions  
   4/6 L: Extinction and Threats to Biodiversity  
   Reading: Ecosystem Decay of Amazonian Forest Fragments. Laurance et al. | 4/6 Measuring biodiversity activity continued.  
   Finalize focal species for poster. |
| 3 | 4/11 L: Threats to biodiversity I: Habitat loss & fragmentation  
   Reading: Human-induced evolution caused by unnatural selection. Allendorf and Hard.  
   4/13 L: Threats to biodiversity II: Overexploitation, Invasives, and Climate change  
   Check Canvas for information on Readings | 4/13 Work on poster presentations--Bring worksheet. |
| 4 | 4/18 L: Conservation genetics and the problems with small populations  
   Reading  
   4/20 L: More problems with small populations: Allee effect and inbreeding, Stochasticity and Ne  
   Reading | 4/20 All Posters Due.  
   Poster presentations Session 1  
   Choose individual term paper topics. |
| **PART II: Conserving Species** |
| 5 | 4/25 L: Modeling: MVPs, PVA, Protecting species, Establishment Programs  
   Reading  
   4/27 L: Conservation Behavior  
   Reading | 4/27 Poster presentation Session 2. |
| 6 | 5/2 L: Conserving Imperiled Species-- ESA and other laws protecting species  
   Reading  
### PART III: Conserving Ecosystems

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| 5/9  | Guest Lecture | Josh Laughlin of Cascadia Wildlands (wolves and trophic cascades.)  
Reading: Ripple and Beschta *Restoring Yellowstone's aspen with wolves*  
5/11 Assignment due: Bring a draft of your term paper to section for assignment credit.  
Peer review Term paper |
| 5/11 | | Protected Areas: Reserve Programs  
Reading |
| 5/16 | 5/16 L: | Protected areas and restoration  
Reading: *marine reserves*  
5/18 L Reserve planning, Corridors.  
Where to designate Protected Areas  
Readings |
| 5/18 | Term paper DUE. | Post abstracts.  
Activity: *corridors* |
| 5/23 | 5/23 L: | GAP analysis, Conservation in the Matrix  
Reading |
Reading |
| 5/30 | 5/30 Memorial Day | NO Meeting. Work on communications assignment  
6/1 L: Conclusions  
Readings |
| 6/1  | Due: Communication assignment Part 2. | See readings on Canvas for activity.  
Activity: Mock trial |

**FINAL EXAM** 14:45 Thur, June 9