

BIOL 370 / ES 320 – Spring 2020

Conservation Biology

Instructor: Dr. Amanda Edworthy

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Office hours: Tuesday/Friday 12:30–1:30 PM, by appointment, or drop by

Lectures: M and Th 10:00 AM to 11:20 AM

Location: ECS 116

Course Background and Overview

We live on a human-dominated planet and face major environmental challenges. Conservation Biology is an applied science that focuses on how to protect, manage, and restore nature in the face of these challenges, while balancing the needs of people and nature. The issues conservation biology centers on—biodiversity loss and extinction, habitat degradation and loss, exploitation, invasive species, climate change—are big, complex, and challenging. They also are critically important for the future of humanity. Solving these problems requires applying the principles and tools of ecology (including population biology, community ecology, and biogeography), population genetics, economics, political science and other natural and social sciences. Like medical science, conservation biology is a value-laden discipline directed by a particular worldview. It is, nonetheless, a science—and to be conducted and scrutinized with clear eyes and hard numbers.

Our course will focus on relating ecological theory to conservation problems, using case studies highlighting current conservation issues to ground this theory. The course has three themes: 1) the rationale and foundations of conservation biology, 2) science to inform conservation strategy, and 3) conservation challenges and solutions.

Course Learning Outcomes

By the end of this course you should be able:

- To understand, analyze and communicate the historical context, scientific basis, and goals of conservation, as well as the fundamental ecological concepts and tools of conservation biology;
- To understand and communicate the diversity of perspectives on conservation issues, the trade-offs involved in conservation decisions, as well as your own philosophy and perspective on conservation issues;
- To understand, analyze and interpret ecological models, graphs, and scientific results pertaining to conservation biology;
- To develop questions, identify sources, and communicate findings in conservation biology.

To do well in this course:

1. **Read the assigned materials prior to class.** The assigned readings will provide us with the common ground for lectures and discussions. Therefore, you will have to have read, comprehended, and absorbed the assigned readings to really get the most out of this class. A general rule of thumb is to plan to spend at least 3–5 hours a week reading and

reviewing lecture notes. All readings will be assigned and posted on CourseSpaces prior to the lecture in which they will be discussed.

2. **Attend class, and be prepared for and engaged in class.** Many classes will involve activities that build toward the major project; thus, attendance is critical. This course will include lectures, as well as individual, pair, and small group activities, and discussions of assigned readings. You should also take notes throughout class, and later use the lecture overview slides to supplement your notes.

Course Materials & Communication

Required Text: Primack, R. B. (2014). *Essentials of Conservation Biology* (6th Ed or other). Sunderland: Sinauer Associates. Chapters from this text will be listed as required reading.

BIOL370/ES 320 CourseSpaces Website: I will post all course announcements, readings, assignments, and the weekly lecture schedule on our course CourseSpaces website. I will also post lecture slides. Please be aware that these are overviews, not detailed notes, and are provided to help you organize and supplement your lecture notes. It is therefore **your responsibility to check our course website regularly for updates**. See: <http://elearning.uvic.ca> if you have questions about how to use Course Spaces.

Course Evaluation

Learning outcomes will be assessed based upon the following:

Assignment (3 parts build on one another):

1. Developing questions and sources	5%	Monday, 20 Jan 2020
2. Inquiry poster project	25 %	Thursday, 27 Feb 2020
3. Conservation solutions podcast	15%	Monday, 23 Mar 2020
Midterm exam	20%	Thursday, 13 Feb 2020
Final Exam	35%	TBA (6–24 April 2020)

Overview of Evaluation Components

Assignments

1. *Developing questions and sources.* Students will generate ten potential inquiry questions. For three of these questions, students will identify potential sources of information, including one primary literature, one media, and one expert source for each.
2. *Inquiry poster project.* Students will select a question of interest (likely one of the questions generated in the previous assignment) and investigate this question using a variety of sources, including primary literature, media, and communication with experts. Projects will be presented as posters.
3. *Conservation solutions podcast.* Students will identify conservation solutions for the question addressed in their inquiry project. Presented in audio format (5 min).

*Full details and instructions for each assignment will be posted on CourseSpaces. Assignments that are handed in late will be penalized 15% per day.

Midterm exam

The mid-term exam will consist of multiple-choice and short answer questions, and will be based upon the materials presented up to that point of the course, including lectures, assigned readings, and ideas shared by guest speakers.

Final Exam

The final exam will consist of multiple-choice and short answer questions, and will be based upon the full range of materials in this course.

Grading Scale:

<u>Letter grade</u>	<u>Percentage</u>
A+	90 – 100
A	85 – 89
A-	80 – 84
B+	77 – 79
B	73 – 76
B-	70 – 72
C+	65 – 69
C	60 – 64
D	50 – 59

For full UVIC grading scale see: <https://web.uvic.ca/calendar2019-01/undergrad/info/regulations/grading.html>

UVic Policies and Procedures

Policy on missing an exam: If you miss (or know beforehand that you will be missing) an exam because of illness, accident, family affliction, or commitments as an UVic athlete, you are required to contact the instructor in a timely manner. No other excuses other than the above are allowed. You are required to provide supporting documentation i.e. from a medical doctor, UVic counseling services, or a member of the UVic coaching staff.

Academic Integrity: It is your responsibility to familiarize yourself with UVic's Academic Integrity Policy regarding what constitutes plagiarism, how to avoid it, and the potential consequences.

Accessibility: Students with diverse learning styles and needs are welcome in this course. If you have a disability/health consideration that may require accommodation to ensure that you succeed in this course, please talk to me or the staff at the UVic Resource Centre for Students with a Disability as soon as possible. The RCSD staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <http://rcsd.uvic.ca/>. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

A finalized schedule and required readings for each lecture will be posted on our CourseSpaces website. You are responsible for checking it regularly.