

# Welcome to BIOL 370 / ES 320 – Spring 2019

## Conservation Biology

Instructor: Dr. Amanda Edworthy

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Office hours: Th/F 11:30 AM–12:30 PM, Cunningham 126A or by appointment

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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, in which we will integrate and apply the knowledge gained from the first two sections to real-world conservation problems.

### 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 critically evaluate the scientific and lay literature related to conservation biology, and to place individual studies within the broader context of the discipline;
- To develop questions, identify sources, and communicate findings in conservation biology.

### Instructor Expectations & Student Responsibilities

This course will only fulfill the learning outcomes outlined above if you commit:

1. **To reading 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 at least three days prior to the lecture in which they will be discussed.
2. **To attending class, and being prepared for and engaged in class.** Both you (the student) and I (the instructor) have a responsibility to come to class, to be on time, to be prepared to discuss the subject area, and to create a positive, constructive and respectful learning environment for others in the class. This includes turning cell phones off, not using electronic devices for activities unrelated to the class, and not leaving lecture early. This course will include lectures, as well as individual, pair, and small group activities, and discussions of assigned readings, all of which will be most successful if we all meet these responsibilities. You should also take notes throughout class, and later use the lecture overview slides to supplement your notes.
3. **To being an active participant in your learning.** Learning requires effort on both your and my parts. For you to succeed in this course, you must apply yourself to the best of your ability: think logically and critically, challenge yourself, and try to synthesize seemingly disparate concepts and facts. Finally, consult with me when additional help is required. I am here to facilitate your learning.

### Course Materials & Communication

Suggested Text: Primack, R. B. (2014). *Essentials of Conservation Biology* (6<sup>th</sup> Ed). Sunderland: Sinauer Associates.

Required Readings: We also will read a variety of articles including ones from the primary and secondary literature, and the media.

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 Conduct: Talking in class, texting, etc., is disruptive and disrespectful to students sitting nearby and to the instructor. Please refrain from such activities or leave the lecture hall if you cannot.

### Course Evaluation

Learning outcomes will be assessed based upon the following:

#### Assignment (3 parts build on one another):

1. Developing questions and sources	10%	Thursday, 24 Jan 2019
2. Inquiry poster project	25 %	Thursday, 28 Feb 2019
3. Conservation solutions podcast	15%	Thursday, 18 Mar 2019
<b>Midterm exam</b>	20%	Monday, 14 Feb 2019
<b>Final Exam</b>	30%	TBA (8–27 April 2019)

## Overview of Evaluation Components

### Assignments

1. *Developing questions and sources.* Students will generate eight 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, short answer, and longer written 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. The aim is to examine whether you have met the course learning outcomes and prepare you for the types of questions to expect on the final exam.

### Final Exam

The final exam will consist of multiple-choice, short answer, and longer written questions, and will be based upon the full range of materials in this course. The aim is to ensure that you have met the course learning outcomes.

### Grading Scale:

Letter grade	Percentage
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.**