BIOLOGY 370– SUMMER 2024
CONSERVATION BIOLOGY

Lectures: Tues., Wed., and Friday 10:30- 12:20
Location: CLE 207
Note: Lectures and exams are F2F

Instructor: Dr. Neville Winchester
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Office hours: By appointment

Course Rationale and Overview

We live on a human-dominated planet and daily there are major environmental challenges across all spatial scales that require action. Conservation Biology is a crisis discipline where applied science is used to focus on how to protect, manage, and restore natural ecosystems in the face of these challenges, while balancing the needs of people and nature. The main issues at the centre of conservation biology biodiversity loss and extinction, habitat degradation and loss, exploitation, invasive species, and climate change are large, complex, and challenging. They also are critically important for the future of the planet. Are there solutions? 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 to be conducted and scrutinized with clear eyes, scientific methodology, hard numbers and relentless devotion.

Our course will focus on species diversity relating ecological theory to conservation problems, using case studies highlighting current conservation issues to ground this theory. The course is divided into three themes: 1) The Foundations of Conservation Biology; 2) Scientific Approaches to Conservation Biology; and 3) Practical Applications, in which we will integrate and apply the knowledge gained in 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 tradeoffs 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;

Course Materials & Communication

Suggested Texts:

Primack, R.B. 2018. Essentials of Conservation Biology, 6th Edition. Sinauer Associates, Inc.

Sher, A.A. 2022. An Introduction to Conservation Biology, 3rd Edition, Oxford University Press/Sinauer Associates, Inc.
NOTE: Most lecture material will be from the primary literature.

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

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Details and instructions for assignments will be discussed in lecture and will be posted on our BRS site. *Assignments that are late will receive a mark of 0.0 (Please refer to UVic Policies and Procedures). E.g., there are no extensions or late marks.

Midterm and Final Exams

The midterm and final exams are written, in person, closed book exams that will consist of multiple-choice, short answer, and short essay questions. The midterm will be based upon all material covered up to and including May 31st. The final exam will be based on the full range of materials in this course, including lectures and assigned readings, but will be weighted towards material covered after the midterm. You are required to write both exams; the goal is to ensure that you have met the course learning outcomes.

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:

UVic Policies and Procedures

Evaluation Policies (Lecture exams only): UVic accepts three types of excuses for missed exams or late lecture assignments: illness, emotional trauma, or UVic-sponsored sporting activities. Requests for academic concession must be accompanied by valid written documentation from a medical doctor, UVic Counseling services, or a member of the UVic coaching staff. If you must miss the Final Exam for one of these reasons, you must notify me as soon as possible with valid documentation. Note that the Final Exam cannot be written early under any circumstances. However, it can be deferred if you are excused for one of the above reasons. You must request a Deferred Final Exam at Records Services on a Request for Academic Concession form, asap.

I expect that all work you produce for this course will be your own, and I have zero tolerance for plagiarism in any form. Any words or ideas that are not your own MUST be