

BIOLOGY 370–SUMMER 2025 CONSERVATION BIOLOGY

Lectures: Tues., Wed., and Frid., 10:30-12:30

Location: Cunningham 146

Note: Lectures, quizzes, and exams are F2F

Instructor: Dr. Neville Winchester

Email: winchest@uvic.ca

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, hard numbers and relentless devotion.

Our course will focus on species diversity relating ecological theory to conservation problems. We will use 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 figures 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.

BIOLOGY 370 BRS Website:

I will post all course announcements, readings, and assignments on the Biology 370 BRS website. I will post lecture slides after lectures have been delivered. Please be aware that these are overviews, not detailed notes, and are provided to help you organize and supplement your lecture notes. These lectures are not recorded. It is therefore your responsibility to attend lectures and check BRS regularly for updates. **I strongly suggest that you attend all lectures.**

Course Evaluation

Learning outcomes will be assessed based on the following:

Assignments:

1: Conservation Image Project –visual conservation	15%
2: Conservation Biology Quiz 1 (May 23)	10%
3: Conservation Biology Quiz 2 (June 6)	10%
4: Conservation Biology Quiz 3 (June 13)	10%
5: Conservation Biology Quiz 4 (June 20)	10%

NOTE: Only the top 3 quiz marks will count towards your total course mark. (e.g. 30%)
(You can miss counting one quiz, this is your choice)

Total	45%
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Exams:

Midterm Exam, June 4 th	20%
Final Exam, June 27 th	35%
Total	55%

Overview of Evaluation Components

1. Conservation Image Project: For this image-based project in **teams of two**, you will take a photo that illustrates a current conservation issue. You will then select and collate information pertaining to the conservation issue and use this information to write a synopsis of this conservation issue.

This project is due on Friday, June 13, submitted on your BRS site by 4:30 pm.

2. Quizzes 1-4. Each quiz will be written in lecture and will be based on an assigned paper reading. Papers will be posted on your BRS page and I will provide details concerning what issues/points in the paper you should concentrate on to prepare for each quiz. You must complete 3 quizzes. If you cannot complete 3 quizzes, then you should see Dr. Winchester to discuss alternatives.

Details and instructions for the image project and quizzes will be discussed in lecture and will be posted on our BRS site. All quizzes are written in person, are closed book and will consist of multiple-choice questions.

***The image project, please note, there are no late submissions.**

Late image project submissions 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 June 3rd. 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.

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

Failure to complete all evaluation components of this course will result in an N grade being assigned.

For full UVIC grading scale see:

<https://www.uvic.ca/calendar/future/undergrad/index.php#/policy/S1AAgoGuV?bc=true&bcCurrent=14%20-%20Grading&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies>

UVic Policies and Procedures

UVic Territory Acknowledgment: We acknowledge and respect the lək'wəŋən peoples on whose traditional territory the university stands, and the Songhees, Esquimalt and WSÁNEĆ peoples whose historical relationships with the land continue to this day.

Evaluation Policies (Lecture exams only): UVic accepts three types of excuses for missed exams: illness, emotional trauma, or UVic-sponsored sporting activities. If you must miss the Final Exam for any reason, you must notify Dr. Winchester as soon as possible. If a student misses the final exam, they are required to submit a request for academic concession, with associated documentation, as outlined in the UVic Calendar (<https://www.uvic.ca/registrar/students/appeals/acadconcession/index.php>).

Please note that the Final Exam cannot be written early under any circumstances.

If a student misses the lecture midterm, the marks will be distributed to the final exam.

Final exams will not be rescheduled for students who make travel plans that conflict with the officially scheduled final exam for this course.

Please note that no supplemental exams will be offered in this course.

Evaluation Policies (Lecture quizzes only):

Students are encouraged to complete any 3 of 4 quizzes. If a student misses a quiz that they wish to use towards their 3 completed quizzes they will receive a mark of 0 for that quiz.

Please note that no supplemental quizzes will be offered in this course.

NOTE:

If the lecture final exam is not completed, the student will automatically fail the course and receive a grade of “N” on their transcript. N is a failing grade and factors into the GPA as a value of 0.

Academic Integrity and Preventing Plagiarism and Cheating – Academic integrity matters are governed by UVic’s Policy on Academic Integrity

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 acknowledged. Plagiarism includes “recycling” work from other classes, and it includes copying from online sources. It is your responsibility to familiarize yourself with UVic’s Academic Integrity Policy:

https://www.uvic.ca/calendar/future/undergrad/index.php#/policy/Sk_0xsM_V?bc=true&bcCurrent=08%20-

[%20Policy%20on%20Academic%20Integrity&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies](https://www.uvic.ca/calendar/future/undergrad/index.php#/policy/Sk_0xsM_V?bc=true&bcCurrent=08%20-%20Policy%20on%20Academic%20Integrity&bcGroup=Undergraduate%20Academic%20Regulations&bcItemType=policies) and the library’s website on plagiarism:

<https://www.uvic.ca/library/research/citation/plagiarism/>

for the university policy on academic integrity and useful information on avoiding plagiarism. Any form of academic dishonesty will result in an automatic ‘F’ for that assignment or test and possibly the entire course for all individuals involved.

Positivity and Safety:

UVic is committed to promoting, providing and protecting a supportive and safe learning and working environment for all its members.

A note to remind you to take care of yourself:

Do your best to maintain a healthy lifestyle this semester by eating well, exercising, getting enough sleep and taking some time to relax. This will help you achieve your goals and cope with stress. All of us benefit from support during times of struggle. You are not alone.

- Counselling Services - Counselling Services can help you make the most of your university experience. They offer free professional, confidential, inclusive support to currently registered UVic students. <https://www.uvic.ca/services/counselling/>
- Health Services - University Health Services (UHS) provides a full service primary health clinic for students, and coordinates healthy student and campus initiatives. <http://www.uvic.ca/services/health/>
- Centre for Accessible Learning - The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <https://www.uvic.ca/accessible-learning/index.php>
- Elders' Voices - The Office of Indigenous Academic and Community Engagement (IACE) has the privilege of assembling a group of Elders from local communities to guide students, staff, faculty and administration in Indigenous ways of knowing and being.
<https://www.uvic.ca/services/indigenous/students/programming/elders/index.php>

The sooner you let me know your needs the quicker I can assist you in achieving your learning goals in this course.