

BIOLOGY 370/ES320 – SUMMER 2019 CONSERVATION BIOLOGY

Lectures: M,T and F 10:00- 12:30
Location: Cunningham 146

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 conservation biology centers on – 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 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 Text: Primack,R.B. 2014. Essentials of Conservation Biology, 6th Edition. Sinauer Associates, Inc.

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

BIOL370/ES 320 CourseSpaces Website:

I will post all course announcements, readings, and assignments on our course CourseSpaces website. I will also post lecture slides after lectures. 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 on the following:

Assignments:

1: Short essay: Conservation Issue –the case for ending the herring fishery.	10%
2: Essay: Conservation Biology Paper	10%
3: Conservation Biology In Class Presentation	15%
4: Conservation Biology Poster Evaluation	5%
Total	40%

Exams:

Midterm Exam, June 4	25%
Final Exam, June 28	35%
Total	60%

Overview of Evaluation Components

Assignments:

1. The case for ending the herring fishery essay: For this short essay (8 double-spaced pages), you will select and collate information pertaining to the herring/chinook salmon/killer whale conservation issue and then write an analysis of this conservation issue. This paper is due by in lecture on Friday, May 31st, submitted via a hard copy to me at the start of class.
2. Conservation Biology Literature Paper: This essay will consist of a succinct (max. 6 double-spaced pages) critical review of a recent peer-reviewed research article within the field of conservation biology. You will be given a choice of papers and must sign up for one. This essay is due in lecture on Friday June 7th, submitted via a hard copy to me at the start of class.
3. Presentation: In teams of two, students will select a question of interest and investigate this question using a variety of sources, including the primary literature, and media. Projects will be presented in class as formal scientific talks that will be 12 minutes in length, with a 3-minute question period. I will schedule these talks to be given in lecture, times to be determined!
4. Conservation Biology Poster Evaluation: For this evaluation you will critically review three Conservation biology posters and fill out evaluation forms that will be provided. These evaluations are due in June, time to be determined by you!

* Assignments that are late will receive a mark of 0.0. Details and instructions for assignments will be posted on our Course Spaces website.

Midterm and Final Exams

The midterm and final exams will consist of multiple-choice, short answer, and longer written questions. The midterm will be based upon all material covered up to and including May 31st. The final exam (June 28th) will be based on the full range of materials in this course, including lectures, assigned readings, and ideas shared by guest speakers, but will be weighted approximately 90% on material covered since 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

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

UVic Policies and Procedures

Evaluation Policies: UVic accepts three types of excuses for missed exams or late 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. When you are able to do so, you must request a Deferred Final Exam at Records Services on a Request for Academic Concession form.

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:

<http://web.uvic.ca/calendar2011/FACS/UnIn/UARe/PoAcI.html> and the library’s website on plagiarism: <http://library.uvic.ca/site/lib/instruction/cite/plagiarism.html> 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.