

BIOLOGY 150A – MODERN BIOLOGY

Fall 2020

Department of Biology, University of Victoria

Welcome to the 2020 covid-19 edition of Biology 150A. We'll all get through this together.

Course Description

An introduction to biological science, discussing the diversity of organisms and the evolutionary and ecological principles underlying this diversity. Topics include the history of life, genetics, mechanisms of evolution, biological diversity, and the ecology of communities and ecosystems.

Lecture instructors

- Dr. Greg Beaulieu

Email gregoryb@uvic.ca.

If you send an email, please put “Biology 150A” in the message line.

Dr. Beaulieu will also be serving as **course coordinator**, so if you have any course business or other issues, apart from lab business, he is the person to see.

- Dr. David Punzalan

Email: davidpunzalan@uvic.ca

If you send an email, please put “Biology 150A” in the message line.

- Dr. Hugh MacIntosh

Email: fmacinto@uvic.ca

If you send an email, please put “Biology 150A” in the message line.

Required text

Campbell Biology – Concepts and Connections, Canadian edition, by Reece et al. Available through the bookstore.

This edition has been used for three years, so there will be used copies out there.

Biology 150B, in January, will also use the Canadian edition of this text.

New copies of the text come with access to the publisher’s website, Mastering Biology, plus the etext. Some students find this access useful, *but we do not require access in this course*.

If you buy a new book, or if you buy the etext + Mastering Biology, you will need a course ID and other information about accessing the Pearson website. Please see the sheet of instructions that we have posted for you on Brightspace.

Structure and scheduling of the course

The course has three elements:

Asynchronous Lectures – The lectures will be delivered in the form of narrated PowerPoint presentations that we will post on the course website on Brightspace. You will be able to watch them according to your own schedule. You will not need PowerPoint on your computer. We will convert the PowerPoints to mp4 files that you can watch just by clicking on the title of the lecture.

Our plan is to post three lectures every Friday, each approximately 30 minutes.

Q-and-A with the lecturers

There are three ways we will be able to answer your questions. Each lecturer will let you know which format they prefer.

- First, the Brightspace site has a forum allowing students to post questions that the lecturer can read and answer. Both the questions and the answers will be publicly available to the whole class at any time, a valuable feature, because several students might be wondering about the same issue.
- Second, we can have synchronous Zoom Q-and-A sessions. These sessions will take place on Zoom at times the university has scheduled for synchronous delivery:
Section A01: Tuesday, Wednesday* and Friday*, 9:30 – 10:20 AM
Section A02: Tuesday, Wednesday* and Friday*, 1:30 – 2:20 PM

We have chosen to use only the Tuesday time slots for live Q-and-A sessions. Attendance at these sessions will not be mandatory; if you have any questions, you may drop in and out as you wish. We have decided not to record these sessions, in the interest of student privacy, so the questions and answers will not be available to students who have not attended the session.

*The Wednesday and Friday lecture time slots will not be used in this course.

Please note that there will be no Zoom session on Tuesday, November 10, which is during the UVic reading Break.

- Third, you can email us directly with your questions or schedule a personal Zoom appointment. This would be appropriate if you have something personal or confidential to discuss.

Online Exams – see the information about the online exams, below.

Evaluation

The exams will be open on Brightspace for several hours on the days stated, but you will be timed when you make your attempt, and you must finish the exam in a certain specified time. If you must stop in the middle of your exam attempt, due to internet problems or for some other reason, your clock will stop, and you can continue later without incurring a time penalty.

The exams will be open book. However, you may not consult anyone else, either in the course or outside it, to help you with your attempt. We ask on the honours system that you observe this rule.

The exams will not be cumulative.

- Friday, October 16
Dr. Beaulieu's topics 33.3% of course grade
50 multiple choice questions; 2 hours
- Friday, November 20
Dr. Punzalan's topics 33.3% of course grade
50 multiple choice questions ; 2 hours
- December final exam period
Dr. MacIntosh's topics 33.3% of course grade
50 multiple choice questions; 2 hours

Exam and Grading Policy

If you must miss an exam due to illness, notify the course coordinator (Dr. Beaulieu, gregoryb@uvic.ca) to arrange a deferred writing.

In order to pass this course, you must score 50% or better in aggregate; you do not need to pass every exam.

Lecture topics, text readings, Zoom sessions, exams

These readings might be changed by the instructors during the course; you will be notified of any changes.

Dr. Beaulieu

Lectures posted September 11, 18, 25 ; October 2

Zoom sessions (if applicable) September 15, 22, 29; October 6

Exam October 16

<u>Topic</u>	<u>Reading</u>
Three things	none
History of life	Chapter 13, pp. 276-277, 283-286
Mitosis, meiosis, and sexual life cycles	Chapter 8, pp. 138-147, 151-159
Genetics	Chapter 9, pp. 168-176, 182-185, 188-192
Introduction to evolution	Chapter 13, pp. 270-275, 278-280
How evolution works	Chapter 14, pp. 289-300, 304-308; Chapter 15, pp. 311-329

Dr. Punzalan

Lectures posted October 9, 16, 23, 30

Zoom sessions (if applicable) October 20, 27; November 3, 17

Exam November 20

<u>Topic</u>	<u>Reading</u>
Prokaryotes	Chapter 16, pp.338-344; Chapter 17, pp. 359-366, 369-374
Protists	Chapter 18, pp. 376-386
Fungi	Chapter 18, pp. 387-393
Plants	Chapter 19, pp.396-413, 503
Invertebrates	Chapter 20, pp. 415-437
Vertebrates	Chapter 21, pp. 440-452

Dr. MacIntosh

Lectures posted November 6, 13, 20, 27

Zoom sessions (if applicable) November 24, December 1

Exam December final exam period

<u>Topic</u>	<u>Reading</u>
Introduction to ecology	Chapter 35, pp. 744-763
Behavioural ecology	Chapter 36, pp. 767-786
Population ecology	Chapter 37, pp. 790-803
Community interactions	Chapter 38, pp. 807-820
Ecosystem ecology	Chapter 40, pp. 846-853
Conservation	Chapter 41, pp. 858-876