

BIOLOGY 150A – MODERN BIOLOGY

Fall 2019

Department of Biology, University of Victoria

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.

Meetings

Section A01: TWF 9:30 – 10:20 AM, MacLaurin A144 (David Lam Auditorium)

Section A02: TWF 1:30 – 2:20 PM, MacLaurin A144 (David Lam Auditorium)

Instructors

- Dr. Greg Beaulieu (history of life, genetics, evolution; September)
office: 006 Petch
phone: 250-721-7140
email: gregoryb@uvic.ca. If you send an email, put "Biology 150A" in the message line.
Office hours: Wednesday, 10:30 AM – 12:00 noon, or by appointment, or drop by.

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

- Dr. David Punzalan (biological diversity; October)
office: Petch 007
phone 250-721-7109
email: davidpunzalan@uvic.ca. If you send an email, put "Biology 150A" in the message line.
Office hours: TBA / by appointment
- Dr. Barbara Ehling (ecology; November)
office: Petch 005
phone: 250-472-4066
email: behlting@uvic.ca. If you send an email, put "Biology 150A" in the message line.
Office hours: TBA / by appointment

The three of us love biology, have had a lifelong involvement with it, and hope to transmit to you the endless fascination and excitement of the scientific study of life.

Required Text

Campbell Biology – Concepts and Connections, Canadian edition. Available in the bookstore. This is the same text that was used in Biology 150A/B last year, so used copies are available.

The text prices of various formats are as follows (as of August 27; this list of prices is not official):

UVic Bookstore –

- new book \$166.75 (includes access to the publisher's website, Mastering Biology, and the etext)
- used book \$125.25 (does not include Mastering Biology or etext access)
- etext + Mastering Biology \$99.50 (access for 180 days only)

SubText –

- used book \$75-\$100, depending on condition

As you see above, 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, so a used book will do fine.

If you buy a new book, or if you buy the etext + Mastering Biology, you will need a course ID to get into the Pearson website. The course ID is BIOL150AF2019.

If you buy a used book and would like access to Mastering Biology (without the etext), you can buy access directly from the Pearson website.

If you decide to use some other edition of the book or some other biology text, for budgetary reasons or reasons of convenience, you will have to find the relevant pages in the book you have, based on the lecture material.

Course Website

Biology 150A has a CourseSpaces website. There you will find lecture notes, notices, marks and links. You should look on the website before each class and bring the lecture notes posted there. The lecture notes we post are skeletal notes only, and you should expand upon them during class.

Please be aware that the lecture notes we post are for personal use only and must not be published, distributed, sold or posted anywhere else.

Class Conduct

We ask you to be mindful of where you are, and to treat the people around you with respect and courtesy. Talking in class, texting and surfing are all irksome to students sitting nearby and to the instructor. Please turn your cell phones and all social media sites OFF during class time.

Focusing on the lecture instead of being distracted by the internet will help you to be successful in this course and in all your other courses.

Make friends

It can be useful to you if you know someone in the class, because you can arrange to get expanded notes in case you miss a class, and you can lend that person your notes when needed.

Even better, the friendships you make in your undergrad years can last a lifetime.

Evaluation

Midterm 1 (Friday, October 4)	25% (Dr. Beaulieu's material only)
Midterm 2 (Tuesday, November 5)	25% (Dr. Punzalan's material only)
Final Exam (December final exam period)	50% (cumulative, with emphasis on Dr. Ehltling's material)

The two midterms will be written during the regular class periods.

All exams will be multiple choice format.

Midterms, Final Exam and Grading Policy

No electronic devices will be permitted during the midterms and final exam.

During the midterms and the final exam, invigilators cannot answer any clarification questions about the exam. However, if you believe a question is bad (no correct answer, more than one equally correct answer), please bring your concerns to the attention of an invigilator as soon as possible after the exam.

If you must miss a midterm for a valid reason (illness, accident, family affliction, or competition as a UVic athlete), you must notify the course coordinator (Dr. Beaulieu, gregoryb@uvic.ca) as soon as possible and provide suitable documentation for your absence. Your course grade will be computed from the other components of the course, and you will not be penalized.

The final exam can be deferred in cases of illness, accident, family affliction, or commitments as a UVic athlete. If you expect to miss the final exam in December, please notify the course coordinator (Dr. Beaulieu, gregoryb@uvic.ca) as soon as possible, either by phone, email or in person. To make your deferred status official in the eyes of the university, you must also fill out a Request for Academic Concession (RAC) form, available from Undergraduate Admissions and Records in the University Center or online (<http://www.uvic.ca/registrar/assets/docs/record-forms/rac.pdf>).

In order to pass this course, you must write the final exam and at least one of the midterms, and your course grade must be 50% or better.

Travel plans are not a valid reason for missing a midterm or the final exam, even Christmas travel plans, and even if a plane ticket has been purchased for you by someone else without your knowledge. Please do not make plans to leave Victoria in December without being sure that your final exams in all your courses will be over.

This term, the final exam period ends for all faculties on Saturday, December 21; the last exam will be in the evening of that day. Your last exam might be on this date, or it might be sooner – you won't know until the final exam schedule is posted in October.

Deferred final exam

For those students who need to defer the final exam for any of the reasons listed above (illness, accident, family affliction, or commitments as a UVic athlete), the deferred final will be written on Saturday, January 11, 2020, 10:00 AM – 12:00 noon, in Bob Wright A104.

This constitutes your official notice of the time and place.

Grading Policy

In determining your final grade for the course, our spreadsheet will round your course score to the nearest whole percent. That is the official course grade that will be submitted for you.

We cannot change your grade, except if we have made an error in determining it. There is no extra work that you can do to raise your grade. *Please do not ask us to raise your grade because you need or want a higher one.*

Special Resources

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.

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. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.*

<https://www.uvic.ca/services/cal/>

Important dates

On the UVic website you will find a fuller list of important dates, but the ones we have listed below are the ones that will matter to students in Biology 150A and to students wishing to add the course this term.

Wednesday, September 4	First day of classes
Friday, September 20	Last day for adding classes
Friday, October 4	Midterm Exam 1; Dr. Beaulieu's material only
Monday, October 14	Thanksgiving holiday
Thursday, October 31	Last day for withdrawing from courses without penalty of failure
Tuesday, November 5	Midterm Exam 2; Dr. Punzalan's material only
Mon-Wed, November 11-13	Reading break; no classes or labs
Wednesday, December 4	Last day of classes
Saturday, December 7	First day of final exam period
Saturday, December 21	Last day of final exam period
Saturday, January 11, 2019	Deferred final exam, 10:00 AM – 1:00 PM, Bob Wright A104

Instructors, Lecture Topics and Readings

These topics and readings are tentative. The instructors may change them or drop them as each topic comes up in class.

History of Life, Genetics and Evolution (Dr. Greg Beaulieu, September 6 – October 1)

History of life	Chapter 13, pp. 276-277, 283-286
Cell Cycle	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
Evolution of Populations	Chapter 14, pp. 289-300
Speciation and Systematics	Chapter 14, pp. 304-308; Chapter 15, pp. 311-329

Diversity of life (Dr. David Punzalan, October 2 – October 30)

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

Ecology (Dr. Barbara Ehling, November 1 – December 4)

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