

BIOLOGY 150A – MODERN BIOLOGY

Fall 2022

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 (CRN 10320): TWF 9:30 – 10:20 AM, MacLaurin A144 (David Lam Auditorium)

Section A02 (CRN 10321): TWF 1:30 – 2:20 PM, Engineering and Computer Science 123

Instructors

- Dr. Greg Beaulieu (September – October): history of life; cell cycle; genetics; evolution; diversity of prokaryotes, protists, plants, fungi
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 be serving as **course coordinator**, so if you have any course business or other issues, he is the person to see. If you have a question about Dr. Neal's content specifically, however, you should contact him.

- Dr. Benjamin Neal (October – December): animal diversity; ecology
office: 009 Petch
email: benjaminpneal@uvic.ca. Please put "Biology 150A" in the message line.
Office hours: Thursday 9:30-11:00, or by appointment.

Bear in mind that we each have our own way of teaching, and there might be differences in how each of us rolls out his material. But we have some important things in common: both of us love biology, both of us have had a lifelong involvement with it, and both of us hope to transmit to you the endless fascination and excitement of the scientific study of life.

Text

Campbell Biology – Concepts and Connections, Tenth edition.

The publisher of your text (Pearson) has gone almost entirely digital this year. Here are your choices:

Purchasing options through the UVic Bookstore –

- etext, 180-day access – isbn# 9780136538981, \$59.99.

Consider this option if you plan to take only Biology 150A, but not Biology 150B in January

- lifetime etext access - isbn# 9780136539391, \$89.99.

This would be for students who wish to take Biology 150B in January or at some later date.

- Mastering platform with e-text, access for 18 months – isbn#9780136538820, \$95.00.

Mastering Biology is a site containing online activities, problems, quizzes etc., maintained by the publisher, that is associated with our text.

We will **not** be using or referring to Mastering in the course, but you might want to purchase it anyway. The reason is, the publisher offers a print (looseleaf) version of the text that you can purchase directly from them, but only if you have purchased Mastering (see below).

The publisher says that they sometimes grant extensions to the Mastering platform in cases of students who are delayed in their progress through their program, such as students who take some time off from school, or students who have to repeat the course.

Purchasing options through the Pearson website –

- Pearson etext, 12 month access – \$49.99
- Loose leaf text version (if you are registered in the Mastering platform) – \$65.00

So if you want the looseleaf text version, this will cost $\$95.00 + \$65.00 = \$160$. The publisher says that your text will be shipped to you 3-5 days after you purchase it.

For instructions from the publisher about how to register, please see the pdf we have posted on the course website.

Students have been asking about using a print copy of an earlier edition of the text, or a different text altogether. It's okay to use any reasonably recent general biology university text. Used print copies are out there (some copies of an earlier Canadian edition are in SubText in the \$20-\$70 range). Three important points here:

- You will have to find relevant page numbers corresponding to the lecture topics in the book you have. This should not be too difficult.
- We have suggested back-of-the-chapter questions for you from the text; these might have different numbers, or might not appear at all, in the book you are using.
- When we make up exams, our questions will test what we have covered in class, or what can reasonably be inferred from what we have covered in class. We will not test material that appears only in the recommended edition of the text and cannot be reasonably inferred from what we cover in class. *It is important to read the text chapters, but do so to help you understand the lecture material, not to learn completely new information that we do not cover.*

Course Website

Biology 150A has a Brightspace website. There you will find lecture notes, notices, marks, links and items of business.

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 helpful 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.

Evaluation Summary – Dates and Numbers

Midterm 1 (Tuesday, October 4)	25% of course grade (Dr. Beaulieu's material only)
Midterm 2 (Friday, November 4)	25% of course grade (Dr. Beaulieu's and Dr. Neal's material; will not include material from the first part of the course that has already been tested)
Final Exam (December final exam period)	50% of course grade (cumulative, with emphasis on Dr. Neal's material presented since Midterm 2)

Midterms, Final Exam and Deferred Final Exam

The two midterms will be written **in person** during the regular class periods in the regular rooms. Please write at the time and in the room of the section for which you are officially registered.

The final exam will be written **in person** in the McKinnon gym in December.

The midterms and the final exam will be multiple choice format.

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 (eg. illness, accident, personal or family affliction, participation in an important cultural, community or sporting event), you must notify the course

coordinator (Dr. Beaulieu, gregoryb@uvic.ca) as soon as possible. If you have been sick, a medical note will **not** be necessary. Your course grade will be computed from the other components of the course, and you will not be penalized. You do not have to fill out a Request for Academic Concession (RAC) form if you miss a midterm, but you will have to justify your absence to Dr. Beaulieu. A midterm **cannot** be deferred (written later).

The final exam can be missed and deferred for the same reasons listed above for missing a midterm (illness, accident, personal or family affliction, participation in an important cultural, community or sporting event).

- 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 fill out a Request for Academic Concession (RAC) form, available from Undergraduate Admissions and Records in the University Center or online. The link below gives information on types of concessions and accommodations available to UVic students. For a link to the RAC form, scroll down to where it says “Able to complete the coursework . . .” and click on “After the end of term”.
<https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>
- The deferred final will be written on Saturday, January 7, 2023, 10:00 AM – 1:00 PM, in Bob Wright B150. *This constitutes your official notice of the time and place.*

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 by the date you leave.

This term, the final exam period ends for all faculties on Wednesday, December 21. The last exam will be in the evening of that day. Your own 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.

Course Grading

This course has one **required element**: you must write the final exam. If you must miss the final exam in December for an acceptable reason, you will be eligible to write a deferred final exam (see previous section). If you do not write the final exam at all, your course grade will be an N.

In order to pass this course, you must write the final exam, and your course grade must be 50% or better. You do not have to pass the final exam or the midterms individually to pass the course. You can fail both midterms but save yourself with a good final exam score (though we do not recommend this as a course strategy).

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

We cannot change your grade except if we have made an error in determining it, or if you are granted deferred status and write the final exam in January. There is no extra work that you can

do to raise your grade. *Please do not ask us to raise your grade just because you need or want a higher one.*

Useful page for students requiring accommodations and exam concessions, such as a RAC (Request for Academic Concession), in this and other courses

The page below gives information on types of concessions and accommodations available to UVic students. For example, if you cannot write the final exam at the normal time due to illness, you can go here and find a link to the RAC form (Request for Academic Concession) you have to fill out to be granted deferred status; this means you will be able to write the exam later, when you are healthy.

<https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>

You should briefly visit and bookmark this page to see what your options are and what we require in this and that circumstance.

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 (<https://www.uvic.ca/calendar/dates/>) you will find a fuller list of important dates, but the ones we have listed below are the ones that will matter most to students in Biology 150A and to students wishing to add the course this term.

Wednesday, September 7	First day of classes
Tuesday, September 20	Last day for 100% reduction of fees for dropped courses
Friday, September 23	Last day for adding classes
Friday, September 30	No classes; National day for truth and reconciliation
Tuesday, October 4	Midterm Exam 1; Dr. Beaulieu's material only
Monday, October 10	Thanksgiving Day; no classes
Tuesday, October 11	Last day for 50% reduction of fees for dropped courses
Monday, October 31	Last day for withdrawing from courses without penalty of failure
Friday, November 4	Midterm Exam 2; Dr. Beaulieu's and Dr. Neal's material
Wed-Fri, November 9-11	Reading Break; no classes or labs

Friday, November 11	Remembrance Day
Monday, December 5	Last day of classes
Wednesday, December 7	First day of final exam period
Wednesday, December 21	Last day of final exam period
Saturday, January 7, 2023	Deferred final exam, 10:00 AM – 1:00 PM, Bob Wright B150

Instructors, Lecture Topics and Readings

The topics listed for each instructor do not necessarily require that you read the entirety of the chapters mentioned. Specific sections from each text chapter will be given when we get to that topic in class.

Dr. Greg Beaulieu (September 7 – October 21): History of Life; Cell Cycle; Genetics; Evolution; Diversity of Prokaryotes, Protists, Plants and Fungi

- History of life Chapter 15
- Cell Cycle Chapter 8
- Genetics Chapter 9
- Introduction to Evolution Chapter 13
- Evolution of Populations Chapter 13
- Speciation & Systematics Chapters 14 and 15
- Prokaryotes Chapter 16
- Protists Chapter 16
- Plants Chapter 17
- Fungi Chapter 17

Dr. Benjamin Neal (October 25 – December 5): animal diversity; ecology

- Invertebrate Diversity Chapter 20
- Vertebrate Diversity Chapter 21
- Introduction to ecology Chapter 35
- Behavioural ecology Chapter 36
- Population ecology Chapter 37
- Community interactions Chapter 38
- Ecosystem ecology Chapter 40
- Conservation Chapter 41

Current Health and Safety Policies and Advice at UVic (as of August 22)

As we look forward to welcoming new and returning students for the fall term, UVic is continuing to manage the evolving impacts of COVID-19 on our community. We remain committed to maintaining a safe and healthy environment for all students, faculty and staff, and will be offering in-person learning for most courses - unless otherwise noted at the time of registration.

Here are a few reminders about the health and safety measures that continue to be in place on the UVic campus:

- Masks: We encourage you to wear a mask in indoor public spaces, particularly if you are close to others or feel more comfortable doing so. Masks are required in some healthcare settings, such

as the Student Wellness Centre.

- Vaccination: Vaccination remains the most effective means of protection against COVID-19. We encourage you to get your booster dose when you are eligible. In BC, booster doses are being offered to everyone 12+ in the fall: <https://www2.gov.bc.ca/gov/content/covid-19/vaccine/booster>
- Daily health assessment: Do a daily health assessment. If you're sick, stay home and follow public health guidelines. <https://www.uvic.ca/covid19/health-safety/index.php#ipn-if-you-re-sick>
- Rapid tests: Free rapid test kits are available at the UVic Bookstore and Campus Security Services for students, faculty and staff.

Additional campus safety measures

- Campus building ventilation meets WorkSafeBC requirements: <https://www.uvic.ca/ohse/covid19/building-ventilation/index.php>
- Hand sanitizer is available at all main building entrances.

UVic continues to follow all public health orders and the health and safety measures required by the Provincial Health Officer, including the public health guidance developed specifically for post-secondary institutions by the BC Centre for Disease Control. We continue to monitor and prepare for any changes that may occur as a result of COVID-19.

Please visit the COVID-19 website for more details and to learn about any updates on UVic's response to COVID-19: <https://www.uvic.ca/covid19/>

Thank you for supporting one another and for everything you do to keep our campus community healthy and safe.

Territorial Acknowledgement

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.