

BIOLOGY 184 – Evolution and Biodiversity

Fall 2017

Department of Biology, University of Victoria

Course description

This course will survey all of biological diversity – prokaryotes, protists, plants, fungi and animals – and will use one of the fundamental facts of the living world, evolution, to tie together this diversity. It will also introduce genetics.

Lecture meetings

A01 – Monday and Thursday, 8:30 – 9:50 AM, Bob Wright B150

A02 – Monday and Thursday, 11:30 AM – 12:50 PM, Bob Wright B150

A03 – Monday and Thursday, 3:30 – 4:50 PM, Bob Wright B150

Lecture instructors

- Dr. Greg Beaulieu, Petch 006, phone 250-721-7140. Email gregoryb@uvic.ca.

If you send an email, please put “Biology 184” in the message line.

Office hours: Tuesday, 10:30 AM – 12:00 noon; or by appointment; or just drop by.

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. Patrick von Aderkas, Petch 009, phone 250-721-8925.

Email: BIOL190B@uvic.ca. Office hours: please make an appointment.

- Dr. Rossi Marx, Petch 105, phone 250-721-7089.

Email: zoology@uvic.ca. Office hours: please make an appointment.

Lab coordinator

Dr. Katy Hind, Senior Lab Instructor, Cunningham 010, phone 250-721-8713.

Email: biologylabs@uvic.ca

Prerequisite

Any one of: Biology 11, Biology 12, Biology 150A, Biology 150B, Biology 186. A course in chemistry at either the high school or university level is strongly recommended.

Required text

Campbell Biology, second Canadian edition, by Reece, Urry, Cain, Wasserman, Minorsky and Jackson. Available in the bookstore. This is the same book that will be used in Biology 186.

Your text format alternatives are as follows:

hardcover text (plus etext plus Mastering Biology) – \$166.75

loose leaf text (plus etext plus Mastering Biology) – \$104.00

etext plus Mastering Biology – \$115.00

We will not require you to use the text website (Mastering Biology) maintained by the publisher, even though access is bundled with the text.

Labs

Labs begin on Monday, September 11. Please purchase a lab manual from the bookstore and bring it to the first lab. **You must come to your first lab to hold your place in the course.**

Students sometimes have challenges and queries pertaining to lab assignments and exams. If you have such an issue, your TA and the senior lab instructor will be happy to discuss it with you, but please raise the issue with them within one week after receiving the marked assignment or exam. We cannot consider appeals after that.

Course website

Biology 184 has a CourseSpaces website, where you will find lecture and lab notices, test results, practice questions, exam information, links and lecture notes. Please check the site before each class and lab.

Class conduct

We would like to remind students that talking in class, texting, surfing, reading a newspaper and eating three-course dinners are all irksome to students sitting nearby and to the instructor. We ask that you be mindful of this and treat the people around you with respect and courtesy.

Remember where you are and what you are doing here.

Evaluation

Midterm lecture exam	15%
Final lecture exam	45%
Lab	40%

You must pass the lab in order to pass the course. If you fail the lab, your course grade will be F. We will determine if you passed the lab by rounding your lab grade out of 40 to the nearest whole number; 20/40 is the pass line. So 19.51 would round up to 20, and you would pass, but 19.49 would round down to 19, and you would not pass.

Biology 184 has nine lab sessions (not including exams). If you miss three or more of these, you will receive a course grade of F, even if you have a medical excuse for the missed sessions.

In the lab, the Academic Integrity assignment is an official requirement of the course. That means that you must pass this assignment, or you will get an N (incomplete) in the course (see **Grading**, below).

You will also get an N if you do not write the final exam in December without a valid reason.

It is not necessary to pass the lecture exams (midterm and final), either together or individually, to pass the course. It is possible to fail the lecture exams and still be saved by a good lab mark.

Exams

Midterm Exam (Thursday, October 12, 7:00 – 9:00 PM)

- The exam will involve some questions from the lecture (all multiple choice), and some from the lab (written answer).
- The lecture questions will count 15% of your course grade; the lab questions will be part of your overall lab grade.
- See the table below, on this page, for the room where you will write your midterm exam.
- Some students will have a commitment elsewhere on the evening of October 12. See below, on this page, for alternative midterm exam arrangements if you have a conflict.

Final Exam (December final exam period)

- The final exam will involve some questions from the lecture (all multiple choice), and some from the lab (written answer). The lecture material will be cumulative, meaning that the exam will test all lecture topics of the course, but with an emphasis on material covered in class since the midterm. The lab exam will not be cumulative. The lecture questions will count 45% of your course grade; the lab questions will be part of your overall lab grade.
- The final exam will be written in the McKinnon Gym at a time that will be scheduled by the university. The final exam schedule will be posted on the UVic website in early October.

Rooms for the midterm on Thursday, October 12, 7:00 – 9:00 PM

First letter of

<u><i>last name</i></u>	<u><i>Exam room</i></u>
A – C	Bob Wright B150
D – I	David Lam Auditorium (MacLaurin A144)
J – K	Bob Wright A104
L – N	Engineering and Computer Science 123
O – R	David Turpin A120
S	Harry Hickman 105
T – V	Human and Social Development A240
W – Z	David Turpin A110

Students who have a commitment in another course (class, lab, tutorial) are eligible to write a deferred midterm exam. This will take place on Saturday, October 14, 10:00 AM – 12:00 noon, in Bob Wright B150. Please notify the course coordinator (Dr. Beaulieu, gregoryb@uvic.ca) before the exam if you have such a commitment.

Exam policy

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

During the midterm exam and the final exam, the invigilators cannot answer any clarification questions. 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 the invigilator who is collecting the exams.

If you must miss the midterm exam 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. You will be excused from the midterm, and your course grade will be calculated from the other components of the course. You will not incur any penalty.

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 for any of these reasons, please notify the course coordinator (Dr. Beaulieu, gregoryb@uvic.ca) as soon as possible, either by phone, email or in person. 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>).

Travel plans are not a valid reason for missing the midterm exam 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. Do not make plans to leave Victoria in December until all your exams are finished.

This term, the final exam period ends for all faculties on Monday, December 18; 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 6, 2017, 10:00 AM – 1:00 PM, in Bob Wright B150.

This constitutes your official notice of the time and place.

Grading

At the University of Victoria, grades are submitted by instructors as percentages. These will be converted to letter grades by administration, according to the grading scale given in the university calendar.

Please do not ask us to raise your percent grade in order to qualify you for a higher letter grade. We turn down all such requests.

No supplemental final exam (second-chance final exam) will be given in this course, although, as described above, you may defer the final exam for any of the reasons given.

You will receive a grade of N (a failing grade which indicates that an essential course requirement was not completed) in either of these cases:

- you do not complete the academic integrity assignment in the lab
- you miss the final exam without a valid reason

You will receive an F in the course in any of these cases:

- you miss three or more labs, even with medical or other documentation
- you do not pass the lab (20/40)
- you pass the lab but have an aggregate course grade less than 50%.

Cheating and Plagiarism

The University and the Biology Department deal with cheating and plagiarism as a serious matter, since ignoring it could be interpreted as endorsing dishonest practice in one's later professional career. To claim ignorance of the University's policy on academic integrity is, therefore, not excused.

Please read the policy carefully to avoid unpleasant misunderstandings. The policy can be found on the online UVic calendar:

<http://web.uvic.ca/calendar2017-09/undergrad/info/regulations/academic-integrity.html>

The University of Victoria Department of Biology reserves the right to use plagiarism detection software or other platforms to assess the integrity of student work.

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 184 and to students wishing to add the course this term.

Wednesday, September 6	First day of classes
Monday, September 11	First day of labs in Biology 184
Tuesday, September 19	Last day for 100% reduction of tuition fees for standard first-term and full-year courses
Friday, September 22	Last day for adding classes
Monday, October 9	Thanksgiving holiday
Tuesday, October 10	Last day for 50% reduction in tuition fees for standard courses; 100% of tuition fees will be assessed for courses dropped after this date.
Thursday, October 12	Biology 184 Midterm Exam, 7:00 – 9:00 PM
Saturday, October 14	Midterm exam for students with a prior obligation on October 12
Tuesday, October 31	Last day for withdrawing from courses without penalty of failure
Mon-Wed, November 13-15	Reading break, no classes or labs
Friday, December 1	Last day of classes
Monday, December 4	First day of final exam period
Monday, December 18	Last day of final exam period
Saturday, January 6, 2018	Deferred final exam, 10:00 AM – 1:00 PM, Bob Wright B150

Lecture topics and text readings (tentative)

Lecture notes for each topic will be posted on the CourseSpaces site; please bring them to class.

Dr. Beaulieu

Evolution and systematics Chapter 26
The cell cycle & sexual life cycles Chapter 12, pp. 243-253; Chapter 13
Prokaryotes Chapter 27, pp. 603-613

Dr. von Aderkas

Protists Chapter 25, p. 560, The First Eukaryotes; p. 561, fig.25.10
Chapter 28

- pp. 625-632, to the end of diplomonads; *omit parabasalids and euglenozoans on pp. 632-633*
- pp. 634-638, the SAR clade: Stramenopiles, including diatoms and brown algae; Alveolates, including dinoflagellates and apicomplexans; *omit golden algae (p. 635) and rhizarians, radiolarians, forams & cercozoans (pp. 639-642)*
- pp. 642-643, red algae and green algae; *omit unikonts, pp. 643-647*
- pp. 647-649, including Concept Check 28.6

Seedless plants Chapter 29
Seed plants Chapter 30

Dr. Marx

Fungi Chapter 31, pp. 692-711
Introduction to animal diversity Chapter 32, pp. 712-724
Invertebrates Chapter 33, pp. 726-758
Chordates Chapter 34, pp. 759-785, 797

Dr. Beaulieu

Genetics Chapter 14, pp. 281 – 296; Chapter 15, pp. 307 – 309
Introduction to evolution Chapter 22
Evolution of populations Chapter 23
Speciation Chapter 24, pp. 530-540