



BIOL 184

Evolution and Biodiversity University of Victoria Syllabus (Fall 2023)

General Course Information

Welcome! This course will survey biological diversity – prokaryotes, protists, plants, fungi and animals – and will use a fundamental fact of the living world, evolution, to tie together this diversity. We will introduce you to population genetics and evolution. The course will be taught synchronously and ‘face-to-face’ and will be complemented by online tools.

Lecture Contact Hours and Locations

Mondays & Thursdays @

8:30am-9:50am (A01) in Bob Wright Centre B150, or

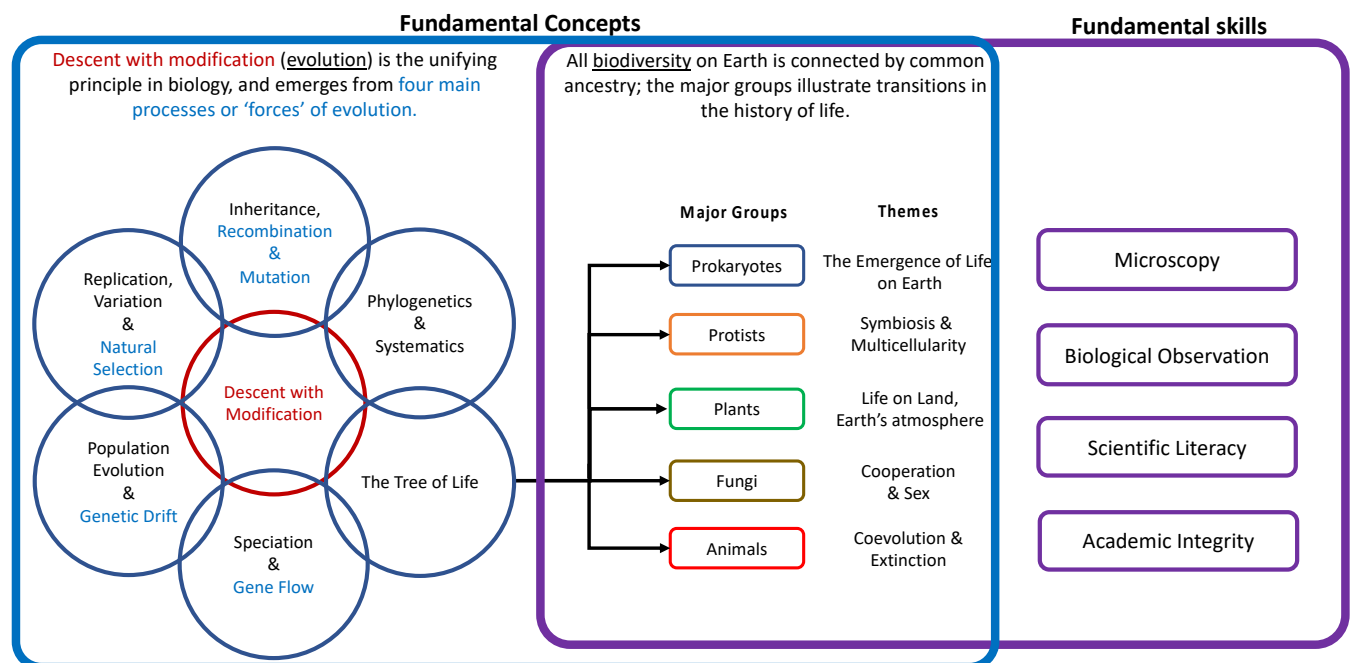
11:30am-12:50pm (A02) in Bob Wright Centre B150, or

3:30pm- 4:50pm (A03) in ECS 123

NOTE: *Enrolment/attendance in a laboratory section is mandatory*

Intended Learning Outcomes

After completion of this course, you will be able to distinguish the major groups of living organisms, and you will demonstrate a solid understanding of the evolutionary process (including natural selection and inheritance). You will be able to demonstrate fundamental laboratory skills including microscopy, biological observations, and interpreting phylogenetic trees. Identifying different types of scientific literature and understanding of/adherence to academic integrity standards are also essential learning outcomes. A graphical representation of the intended learning outcomes also appears below.



Guiding Philosophy and Practices

Students and instructors share the responsibility of cultivating of a **safe, inclusive, and kind** learning environment. We think that the keys to student success (in the course, and beyond) lies in practicing strong learning habits, and fostering a healthy mind, and healthy relationships. We also believe in having fun.

Prerequisites

Any one of: Biology 11, Biology 12, Biology 150A, Biology 150B, Biology 186. You may also take this course if you have a high school biology course from outside British Columbia, or a post-secondary biology course from another institution. A course in chemistry at either the high school or university level is strongly recommended. If in doubt, contact davidpunzalan@uvic.ca.

Instructors:

Dr. David Punzalan (davidpunzalan@uvic.ca)
Dr. Patrick von Aderkas (pvonader@uvic.ca)
Dr. Lan Tran (biologylabs@uvic.ca)

About the Instructors

This course is co-taught by Dr. David Punzalan (Lectures and Course Coordination), Dr. Patrick von Aderkas (Lectures), and Dr. Lan Tran (Laboratory Coordination). Dave originally hails from Ontario and specializes in insect ecology and evolutionary biology. As a new (2019) transplant to Victoria, he spends most of his free time learning about Pacific Northwest biodiversity by beachcombing, staring into tidepools, and bug-chasing. Patrick is also originally from Ontario and does research on embryology and sexual fluids of plants, such as nectar and pollination drops. He has been a professor at UVic since 1989. His main interest is the evolution of reproduction in gymnosperms. Lan is a local and is a plant biologist with research interests in how plants produce natural chemicals and pollinator interactions. She previously studied at UVic and at UBC. You can find out more about the instructors under 'Course Information' on Brightspace.

Required Materials and Technology

1. This course will require students to meet the UVic minimum technology requirements: <https://www.uvic.ca/systems/status/features/min-tech-requirements.php>
2. The Brightspace (BRS) course website: <https://bright.uvic.ca/d2l/home/313344> will serve as the primary means of sharing learning resources, so please check this page regularly for important information and announcements.
3. Textbook: OpenStax Biology 2e (<https://openstax.org/details/books/biology-2e>); this textbook can be downloaded for free and accessed electronically using a laptop, desktop, tablet, or smartphone; if you want a printed version, you must purchase one directly from OpenStax.
4. Lecture materials: live lectures will be recorded and will be posted on Brightspace along with electronic (.pdf) versions of the lecture slides.
5. Lab materials: You are required to have a lab coat and a hard copy lab manual both of which can be purchased from the UVic bookstore (<https://www.uvicbookstore.ca/text/>).
6. In case instructors have to deliver lectures remotely via Zoom, be sure to login first using your UVic Single Sign On (SSO) and then use the link provided by the instructor in BRS; You can install Zoom using this link: <https://www.uvic.ca/systems/support/avmultimedia/zoomvideoconferencing/installzoom.php>

Assessment

You will have the opportunity to demonstrate your progress and proficiency through various forms of evaluation, including:

Lecture Component (55%)

Pre-Lecture Online Preparation Quizzes (8 x 0.5%)	4%
Lecture Test 1	12%
Lecture Test 2	15%
Lecture Final Exam	24%

Laboratory Component (45%)

Integrity Matters! Course Completion	2%
Reading, Researching and Referencing Assignment	2%
Topic of the Week Literature Assignments	5%
Weekly In-Lab Questions and Assignments	16%
Pre-Lab Quizzes	6%
Lab Test 1	4%
Lab Test 2	10%

To pass the course, students must:

- 1) Write the final **Lecture Final** exam
- 2) Write **Lab Test 2 – a course requirement**
- 3) Complete the Integrity Matters **lab** assignment – **a course requirement** that must be completed by Nov 24th (no deferral will be offered after this date)
- 4) Meet the minimum **lab** attendance requirement (attend at least 6 of the 8 labs)
- 5) Score a grade of 22.5, or greater, points out of a possible 45 (50%) in the **Laboratory** component. Scores lower than 50% will not be permitted to write the lecture final exam
- 6) Score a grade of 50.0 points, or greater, combined across **Lecture** and **Laboratory** components

If any of 1 through 4 are not completed, the student will automatically fail the course and receive an “N” (‘Incomplete’) on their transcript.

If a student successfully completes 1 through 4, but is not successful in either 5 or 6, they will receive an “F” on their transcript.

Additional inquiries and Contact Hours

Lecture content: There are no scheduled office hours to review lecture content, but any questions should be made using the appropriate discussion forum on Brightspace:

<https://bright.uvic.ca/d2l/le/content/313344/viewContent/2389412/View>

additional inquiries, including appointments to meet can be made via e-mail to the appropriate instructor.

Laboratory content: There will be numerous opportunities to review lab material via the Biology Undergraduate Drop-in Centre (Cunn 005). Inquiries about lab registration should be emailed to biology.reghelp@uvic.ca. For all other inquiries, email biologylabs@uvic.ca.

Please include “BIOL 184” in the subject line of all e-mail correspondence
We try to get back to you within 48h



NOTES: the assigned readings are subject to change, and at the discretion of instructors. Readings refer to chapters/sections in OpenStax Biology 2e. For information regarding Labs, check the lab manual.

Week	Monday	Thursday	Readings
1	Sep 4 Labour day (no classes)	Sep 7 Descent with Modification	18.1
2	Sep 11 Replication, Variation, and Natural Selection	Sep 14 Inheritance, Mutation and Recombination	10.1 – 10.2 11.1 – 11.2
3	Sep 18 Phylogenetics I	Sep 21 Phylogenetics II and the Domains of Life	20.1 – 20.3
4	Sep 25 Prokaryotes	Sep 28 LECTURE TEST 1	22.1 – 22.3
5	Oct 2 Truth & Reconciliation (no classes)	Oct 5 Protists I	23.1 – 23.4
6	Oct 9 Thanksgiving (no classes)	Oct 12 Protists II	
7	Oct 16 Plants I	Oct 19 Plants II	25.1 – 25.4
8	Oct 23 Plants III	Oct 26 Plants IV	26.1 – 26.4
9	Oct 30 LECTURE TEST 2	Nov 2 Fungi	24.1 – 24.3
10	Nov 6 Animals I	Nov 9 Animals II	27.1 – 27.4 28.1 – 28.2
11	Nov 13 Reading Break (no classes)	Nov 16 Animals III	28.4 – 28.6
12	Nov 20 Animals IV	Nov 23 Mendelian Genetics + Population Evolution I	28.7, 29.1 12.1 – 12.3, 19.1
13	Nov 27 Population Evolution II & Genetic Drift	Nov 30 Gene Flow & Speciation	19.2 – 19.3 18.2 – 18.3
14	Dec 5 Day of Recognition of Violence Against Women (no classes)		

Schedule of Major Assessments and Modes of Examination

The **Lecture** assessments (quizzes, tests and exams) will be administered online using Brightspace (BRS). These assessments will be open book and must be written individually, using a student's own mobile device or home computer, or on computer on campus (a limited number will be reserved for this purpose). The **Lab** assessments will be administered using a combination of BRS and paper. Lab Test 2 will be administered in person, closed book and written individually. In all cases, students who need to write the deferred assessment should contact the course coordinator (davidpunzalan@uvic.ca). The dates/times of each assessment, and their mode of examination, are summarized below.

Major Assessments	Date/Time	Mode
Lecture Test 1	September 28 th , during scheduled lecture time OR September 30 th , at 9am (deferred)	Online, BRS
Lab Test 1	October 11 th , at 5pm OR October 14 th , at 9am (deferred)	Online, BRS
Lecture Test 2	October 30 th , during scheduled lecture time OR November 4 th , at 9am (deferred)	Online, BRS
Lab Test 2	Week of Nov 27 th during scheduled lab section OR December 4 th , at 1pm (deferred)	In person, paper or online (TBD) exam
Lecture Final Exam	During University Exam Period, TBD	Online, BRS
<i>TBD = to be determined</i>		

Other Important Dates (check your lab manual for assignment due dates)

September 7th – First Lecture

September 11th – Labs begin – you must attend your first lab in order to hold your place in the course.

September 22nd – last day for adding courses – **you must be registered in a lab by this date** to remain in the course

October 2nd – observance of National Day of Truth and Reconciliation (university closed)

October 9th – Thanksgiving Day (university closed)

November 13th -15th – Reading Break

December 4th – Last day of classes (officially, but no classes b/c of observance of Day of Recognition of Violence Against Women)

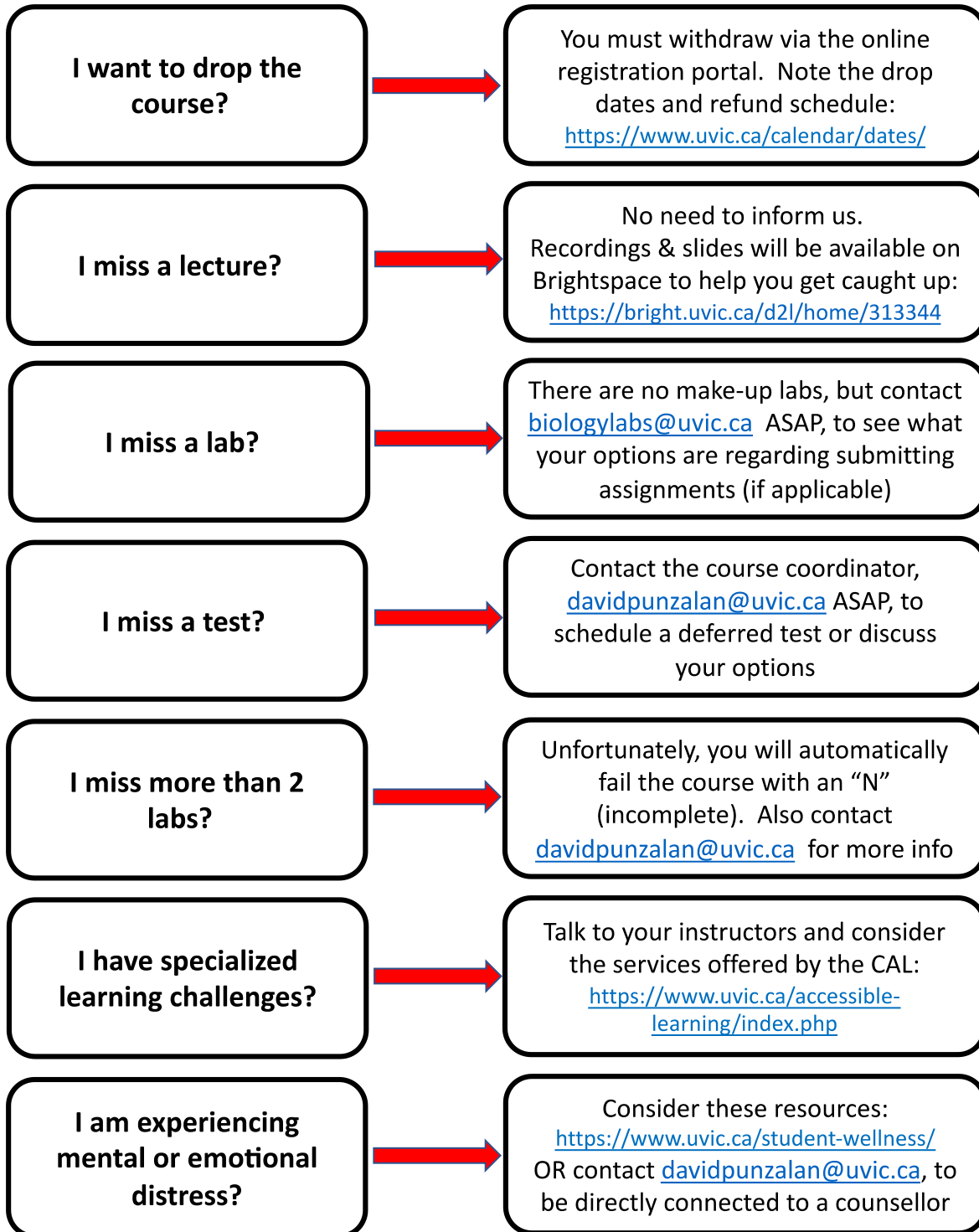
December 5th – Exam period begins



Frequently Asked Questions

Detailed policies are outlined in this syllabus, as well as the lab manual—please read those carefully. For ease, a selection of questions and answers are depicted in the graphic, below.

What happens if...



Appendix & Resources

Territory Acknowledgment

The instructors of BIOL184 are grateful to live and work in the unceded territories of the Lekwungen speaking First Nations, and we support the University of Victoria's official territory acknowledgment:

"We acknowledge and respect the lək̓ʷəŋən peoples on whose traditional territory the university stands and the Songhees, Esquimalt and W̱SÁNEĆ peoples whose historical relationships with the land continue to this day."

Code of Conduct, and Commitment to Equity, Diversity and Inclusion (EDI)

All participants of BIOL184 are expected to treat each other with mutual respect. The course team welcomes students of all backgrounds, regardless of nationality, ethnicity, gender, sexual orientation, religion, age, etc.

Wellness, Safety, and Support

We encourage students to use the support services to address their needs, including Mental Health and Wellness (<https://www.uvic.ca/student-wellness/>), and Sexualized Violence Prevention and Education (<https://www.uvic.ca/sexualizedviolence/get-support/on-campus/index.php>).

Accessibility and Special Needs

Students with special needs will be welcomed and accommodated, provided those needs are registered through the Centre for Accessible Learning (<https://uvic.ca/services/cal>; phone: 250-472-4947)



University and Course Policies

Public Health Policies

All staff and students are expected to abide by the guidelines provided by the University of Victoria <https://www.uvic.ca/covid19/>).

Academic Integrity

The University of Victoria and the Department of Biology take academic integrity (including plagiarism) as a serious matter. Please read this:

https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V

Missed examinations and assignments

You are NOT required to provide a medical note. If a test is missed (with valid reason, including Varsity sports), contact your instructor immediately. Your instructor may opt to have you write a deferred test (scheduled for 9am on the Saturday following the original test date), or have those grades reallocated to another assessment. If the Final Lecture Exam and/or Lab Test 2 are missed, arrangements must be made to: 1) Write a deferred exam before the end of the exam period, or 2) Request an Academic Concession to write the exam at a later date

(<https://www.uvic.ca/students/academics/academic-concessions-accommodations/request-for-academic-concession/index.php>). For missed laboratory assignments, refer to the Laboratory Manual and contact your TA/Senior Laboratory Instructor as soon as possible.

Course Grade and Academic Transcript

Grades for all UVic courses are submitted as percentiles. A student's academic transcript will include the percentile grade and a letter grade plus the class average and the number of students registered in the course at the time of the final exam. Percentiles will be rounded to the nearest whole number; a grade of xx.5 will be rounded up. Percentile grades will be converted to letter grades on the student's academic transcript according to the table given below.

A+	90 – 100%	B+	77 – 79%	C+	65 – 69%
A	85 – 89%	B	73 – 76%	C	60 – 64%
A-	80 – 84%	B-	70 – 72%	D	50 – 59%

<p>A grade less than 50% is a failing grade and results in an “F” on your transcript. Failure to complete lab requirements, including missing more than 2 labs will result in an incomplete grade and an “N” on your transcript</p>
