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

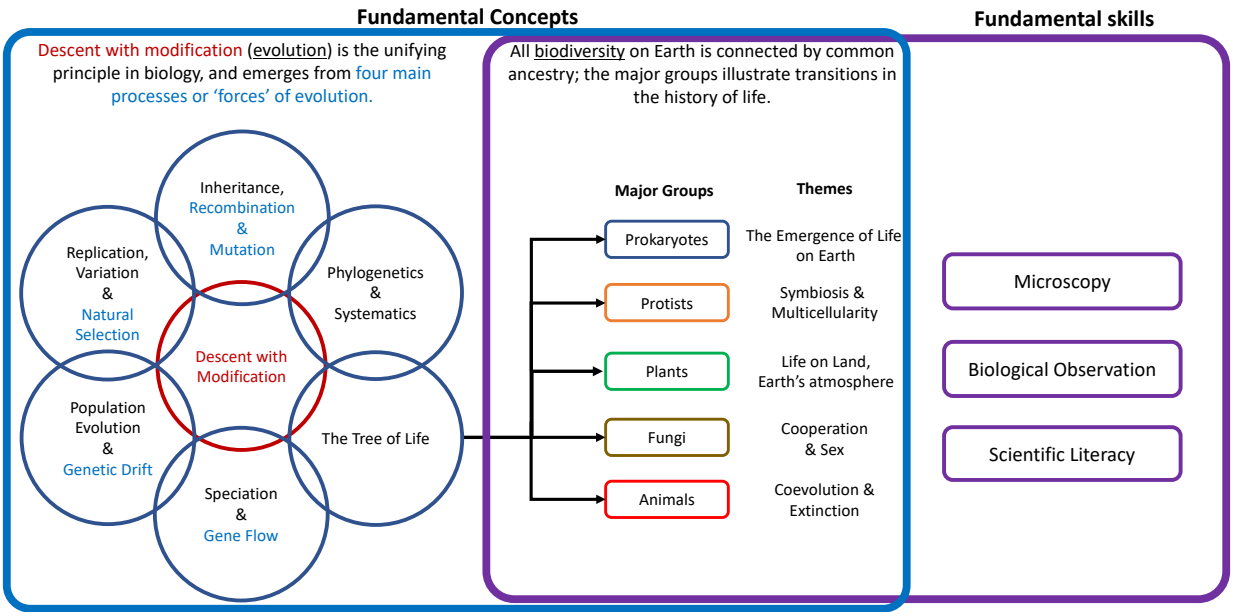
Mondays & Thursdays @
8:30am-9:50am (A01) in Bob Wright Centre B150, or
11:30am-12:50pm (A02) in Bob Wright Centre B150, or
3:30pm- 4:50pm (A03) in Fraser Building 192

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

Intended Learning Outcomes

After completion of this course, you will be able to demonstrate a solid understanding of the evolutionary process, and the logical and quantitative basis of its study. You will be able to classify the major groups of organisms based on hypothesized evolutionary relationships. You will be able to demonstrate fundamental 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.

BIOL 184 COURSE CONCEPT MAP & LECTURE & LAB LEARNING OUTCOMES



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 (Songhees and Xʷsepsəm/Esquimalt) Peoples on whose territory the university stands, and the Lək̓ʷəŋən and W̱SÁNEĆ Peoples whose historical relationships with the land continue to this day.

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, developing resilience, and fostering a healthy mind, as well as healthy relationships. We also believe in having fun.

Inclusivity Statement:
We consider our classroom to be a place where you will be treated with respect, and we welcome individuals of all ages, backgrounds, beliefs, ethnicities, genders, gender identities, gender expressions, national origins, religious affiliations, sexual orientations, ability and other visible and non-visible differences. All members of this class are expected to be a part of a respectful, welcoming and inclusive environment for every member of the class. We will gladly honour your request to address you by an alternate name or gender pronoun. Please advise us of this early in the semester, if applicable to you, so that we may make appropriate changes to our records.

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. Doug Briant (dbriant@uvic.ca)
Dr. Colin MacLeod (biologylabs@uvic.ca)
Dr. Dylan Ziegler (biologylabs@uvic.ca)

About the Instructors
This course is co-taught by Dr. David Punzalan (Lectures and Course Coordination), Dr. Doug Briant (Lectures), Dr. Colin MacLeod (Laboratory Coordination), and Dr. Dylan Ziegler (Laboratory Coordination). Dave originally hails from Ontario and specializes in insect ecology and evolutionary biology; he spends most of his free time learning about local biodiversity by chasing bugs, paddleboarding, and snorkelling. Doug has split his life between Ontario and British Columbia; he is especially interested in microbes and metabolism. Colin is passionate about parasites, marine invertebrates, and experimental design; he has studied in Scotland, Canada, and New Zealand. Dylan is originally from mainland BC but did his doctoral research in Manitoba; he specializes in plant developmental genetics and loves all things botany.
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/student/index.php
2. Brightspace (BRS) will serve as the primary means of sharing learning resources, so please check 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: slides + audio will be recorded and will be posted on Brightspace (BRS) along with electronic (.pdf) versions of the lecture slides. Lecture documents will be posted on BRS (https://bright.uvic.ca/d2l/home/447230)
5. Lab materials: Hardcopy lab manual available from the bookstore (https://www.uvicbookstore.ca/text/book/40064019309) and a lab coat, which can be purchased from the UVic Bookstore. Lab documents will be posted on BRS (https://bright.uvic.ca/d2l/home/436742)

Assessment

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

Lecture Component (60%)

Pre-Lecture Online Quizzes or Surveys (10 x 0.5%)	5%
Lecture Test 1 (see below)	12%
Lecture Test 2 (see below)	18%
Lecture Final Exam	25%

Laboratory Component (40%)

*Out-of-Lab Assignment I	2%
*Out-of-Lab Assignment II	3%
*Out-of-Lab Assignment II	3%
*Organismal Design Project	3%
In-Lab Assignments	15%
Lab Exam **(course requirement)**	14%

*To access these assignments, you must first complete the Integrity in Practice quiz on Brightspace

To pass the course, students must:

1) Write the **Lecture Final Exam**
2) Write the **Lab Exam** – **a course requirement**
3) Meet the minimum **lab** attendance requirement (attend at least 4 of the 5 **in-person** labs)
4) Score a grade of 20.0, or greater, points out of a possible 40 (50%) in the **Laboratory** component; scores lower than 50% will not be permitted to write the lecture final exam
5) Score a grade of 50.0 points, or greater, combined across **Lecture** and **Laboratory** components

If any of 1 through 3 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 3, but is not successful in either 4 or 5, 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/447230/discussions/topics/210339/View
Additional inquiries, including appointments to meet can be made via e-mail to the appropriate instructor.

Laboratory content: You are always welcome to make an appointment with your teaching assistant (TA) to review lab material or post a question on the lab discussion forum (https://bright.uvic.ca/d2l/le/content/436742/viewContent/3437267/View). Inquiries about lab registration should be emailed to biology.reghelp@uvic.ca. For all other inquires, email biologylabs@uvic.ca.

Please start by checking the FAQs on page 6, and be sure to include "BIOL 184" in the subject line of all e-mail correspondence

We try to get back to you within 48h

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. For Lecture Test 1 and Lecture Test 2, students have the option of writing either on the originally scheduled date (during lecture time), or the deferred (on the following Saturday). Students do NOT need special permission or documentation (e.g., doctor's note) to write the deferred; access to the deferred is automated (so long as a student does not open/enter the original test). If students do not write one or both Lecture Tests during the dates provided, points for the respective missed test will be added to the value of the Lecture Final Exam. The **Lab** assessments will be administered either in-person during lab or through Brightspace under Course Tools > Assignments.
The dates/times of each assessment, and their mode of examination, are summarized below.

Major Assessments	Date/Time	Mode
Lecture Test 1	September 29th, during scheduled lecture time OR October 4th, at 9am (deferred)	Online, open book, individual
Lecture Test 2	October 30th, during scheduled lecture time OR November 1st, at 9am (deferred)	Online, open book, individual
Lab Exam	November 17th – 20th, during scheduled lab times	Paper exam, closed book, individual
Lecture Final Exam	During University Exam Period, TBD	Online, open book, individual
TBD = to be determined		

Tentative Schedule of Lecture Topics

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.

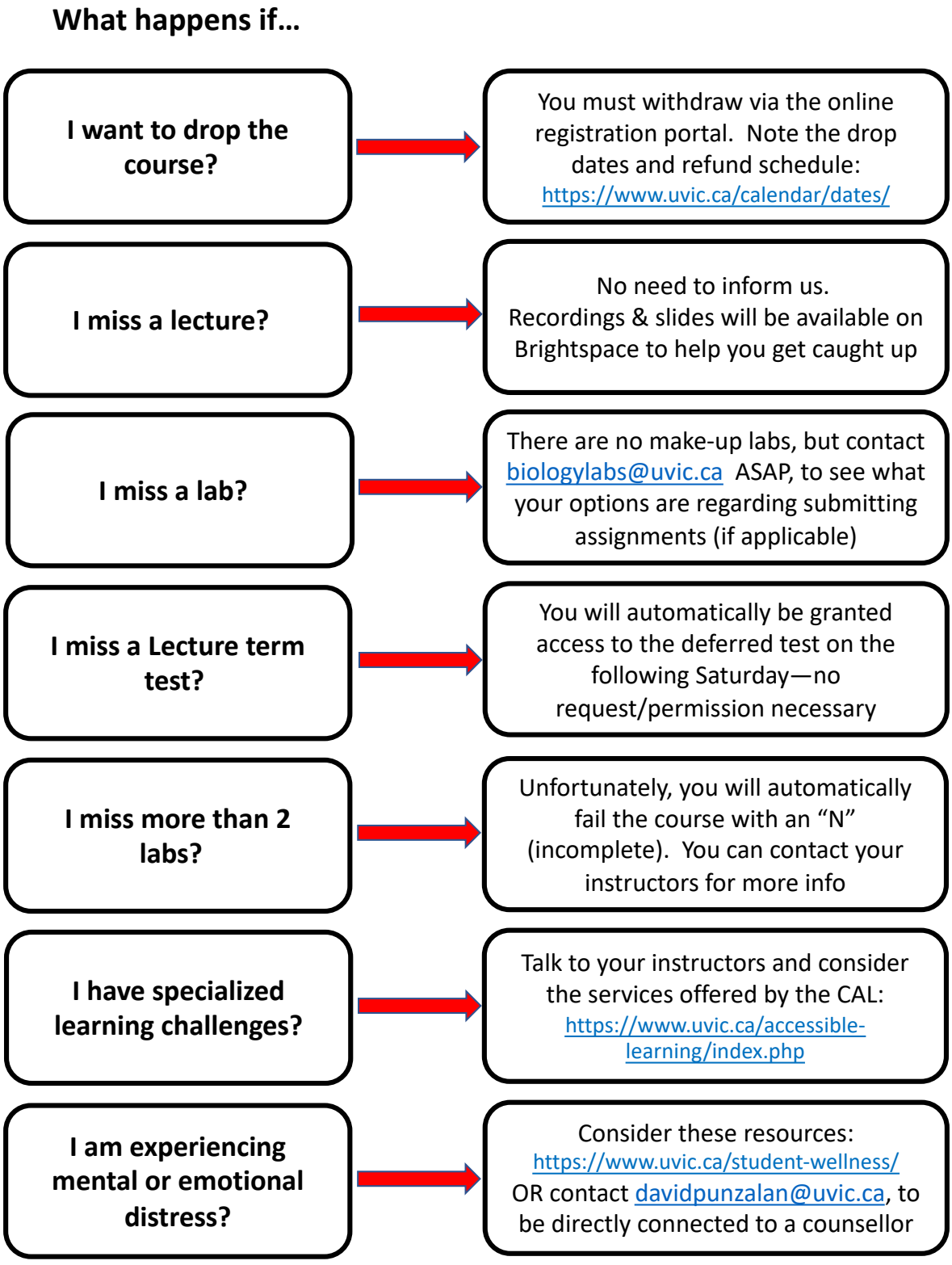
Week	Monday	Thursday	Optional Readings
1	*Sep 1* Labour day *(no classes)*	*Sep 4* Descent with Modification, Phenotypic variation	18.1
2	*Sep 8* Replication, Growth, Fitness	*Sep 11* Phenotypes, Variation, Selection	10.1 – 10.2
3	*Sep 15* Inheritance, Mutation and Recombination	*Sep 18* Phylogenetics I	11.1 – 11.2 20.1 – 20.3
4	*Sep 22* Phylogenetics II & TOL	*Sep 25* Prokaryotes I	21.1 22.1 – 22.3
5	*Sep 29* **LECTURE TEST 1**	*Oct 2* Prokaryotes II	22.1 – 22.3
6	*Oct 6* Protists I	*Oct 9* Protists II	23.1 – 23.4
7	*Oct 13* Thanksgiving *(no classes)*	*Oct 16* Plants I	25.1 - 25.3
8	*Oct 20* Plants II	*Oct 23* Plants III	25.4 26.1 – 26.4
9	*Oct 27* Fungi	*Oct 30* **LECTURE TEST 2**	24.1 – 24.3
10	*Nov 3* Animals I	*Nov 6* Animals II	27.1 – 27.4 28.1 – 28.2
11	*Nov 10* Reading Break *(no classes)*	*Nov 13* Animals III	28.4 – 28.7 29.1
12	*Nov 17* Measuring Genetic Variability	*Nov 20* Detecting Evolution	12.1 – 12.3, 19.1
13	*Nov 24* Adaptive Evolution	*Nov 27* Nonadaptive Evolution	19.2 – 19.3
14	*Dec 1* Speciation	*Dec 4* Study Break begins	18.2 – 18.3

Other Important Dates (check BRS for lab assignment due dates)

September 4th – First lecture
September 8th – In-Person Labs begin and will be held on alternating weeks
September 19th – Last day for adding courses – **you must be registered in a lab by this date** to remain in the course
September 30th – Observance of National Day of Truth and Reconciliation (university closed)
October 13th – Thanksgiving Day (university closed)
November 10th –12th – Reading Break
December 1st – Last lecture
December 6th – 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.



Syllabus Note: Study in Progress

Exam completion times and grading outcomes of this course are the subject of a study being conducted by Dr. Mark Laidlaw and Dr. Travis Martin (Department of Physics and Astronomy). The purpose of this research is to characterize student exam submission behaviours, and examine how they correlate with student performance. One of the factors that will be tested includes the maximum duration assigned, which may imply status as a student with extended time accommodations. The anticipated benefit of this is to provide guidance data for academic administrators in determining policies on universal design.*

The data on completion times and durations will be kept separate from performance data until after the course has ended and final grades have been submitted. Furthermore, the analysis of the exam completion times and grades for students in this course will be performed using anonymized data, free of student names and student ID numbers, after the completion of the course and submission of final grades. The use of the data, and any collected timing data, will not affect your grade in any way.

Students may opt out of having their data analyzed for this study by sending an email to Dr. Mark Laidlaw or Dr. Travis Martin. Opting out of the analysis will in no way affect performance in the course.

If you have any questions about how your data will be used, or details about the study, you may contact the Data Steward, Dr. Doug Briant (biochair@uvic.ca), or you may contact the researchers, Dr. Travis Martin (travismartin@uvic.ca) and Dr. Mark Laidlaw (laidlaw@uvic.ca). You may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

*Note: Universal Design is a modern pedagogical approach to address accessibility in courses. The approach argues that courses should be designed such that the environment and course policies should be equally usable by all people, regardless of ability or disability, as much as possible. There are many approaches for implementing Universal Design in courses, and these methods vary across disciplines.

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 Lecture Test is missed, you will have the option of writing a deferred Lecture Test (scheduled for 9am on the Saturday following the original test date). If neither the original or deferred test is written, points for a missed Lecture Test will be reallocated to (combined with) the Final Lecture Exam. If the Final Lecture Exam and/or Lab Exam 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%

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