

## **COURSE OUTLINE**

**Evolution – 20417 – Biology 355 – A01 Second Term, Jan-Apr 2023**

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## Evolution – 20417 – Biology 355 – A01

### Instructor:

Steve Perlman

Email: [stevep@uvic.ca](mailto:stevep@uvic.ca)

Office hours: Monday 1-2 pm, Cunn 160F (enter through 160D)

### When and where:

David Turpin Building A120

Mondays and Thursdays, 11:30 am-12:50 pm

Course content and information will be posted regularly on our course's Brightspace site.

**UVic Territory 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.*

### Course description:

This course aims to provide a foundation for the study and understanding of modern biological evolution, which is the framework that underlies the study of the diversity of all living organisms, with the goal of understanding how and why this diversity has come about. This course will provide an overview to the study of how and why organisms and genes change, and will cover a broad array of topics, including population genetics, phylogenetics, speciation, species interactions, molecular evolution and genomics. There will be two mid-terms, one final exam, and one research project assignment. Details on the assignment will be provided in lecture.

### Textbook:

There is no required text. There may be required readings consisting of journal articles (uploaded onto Brightspace).

### Copyright Statement:

All course content and materials are made available by instructors for educational purposes and for the exclusive use of students registered in their class. The material is protected under copyright law, even if not marked with a ©. **Any further use or distribution of materials to others requires the written permission of the instructor, except under fair dealing or another exception in the Copyright Act.** Violations may result in disciplinary action under the Resolution of Non-Academic Misconduct Allegations policy (AC1300).

Students may not distribute lecture notes or any exams or quizzes from the course without permission of the instructor, and to do so, through note-sharing sites or other means, violates the Policy on Academic Integrity.

## **Biol 355 Spring 2022, Grade Distribution and Important Dates:**

Midterm test 1 (Thu. Feb. 9)	25%
Midterm test 2 (Thu. Mar. 16)	25%
Final (exam period, TBA)	30%
Scientific Literature project (TBA)	20%

Penalty for research project late submission: 5% per day.

Note these important dates:

Last day for 100% reduction of tuition fees for standard courses – Sun. Jan. 22

Last day for adding second term courses – Wed. Jan 25

Last day for 50% reduction of tuition fees for standard courses – Sun. Feb. 12

Last day for withdrawing from 2<sup>nd</sup> term courses without penalty of failure – Tue. Feb. 28

Reading Break – Mon. Feb. 20 until Fri. Feb. 24

Last day of classes – Thu. Apr.6

Exam period – Apr. 11-26

Medical documentation for short-term absences is not required for the Spring 2023 term (approved by Senate). Attendance is important. Students who miss more than 1 consecutive lecture are asked to notify the instructor. If you miss (or know beforehand that you will be missing) a test because of illness, accident, family affliction, you are required to contact the appropriate instructor in a timely manner after the test (normally within 7 calendar days).

Please note that supplemental or deferred midterms are not offered in this course. If a student misses the midterm, the marks for that midterm will be distributed to the lecture final exam. If a student misses two midterms, they will receive a grade of “N”. If illness, accident, or family affliction causes a student to miss the final exam, students are required to submit a request for academic concession, with associated documentation, as outlined in the UVic Calendar (<https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>).

Students are reminded that final exams in the Faculty of Science run from April 11 through April 26. Final exams will not be rescheduled for students who make travel plans that conflict with the officially scheduled final exam for this course.

Students who have completed at least two of the following elements, in addition to the final exam, will be considered to have completed the course: midterm 1, midterm 2, scientific literature project. Failure to complete two of the elements, in addition to the final exam, will result in a grade of “N”. N is a failing grade and factors into GPA as a value of 0.

Policies regarding undergraduate student academic concessions and deferrals are also detailed here: <https://www.uvic.ca/registrar/students/appeals/acad-concession/index.php>

Please be sure to consult the UVic calendar for more information on UVic policies and procedures: <https://www.uvic.ca/calendar/future/undergrad/index.php#/home>

**Important UVic links:**

**Academic important dates:** <https://www.uvic.ca/calendar/dates/>

**Academic calendar:** <https://www.uvic.ca/calendar/undergrad/>

**Academic concession guidelines:**

<https://www.uvic.ca/calendar/undergrad/index.php#/policy/BymcP73U9>

**Academic accommodations:** <https://www.uvic.ca/accessible-learning/index.php>

**Academic integrity:**

[https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk\\_0xsM\\_V](https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V)

The convention used for assigning letter grades is as follows:

A+ (90-100), A (85-89), A- (80-84), B+ (77-79), B (73-76), B- (70-72), C+ (65-69), C (60-64), D (50-59), F (0-49)

**An important message from your instructor on academic integrity:**

As a teacher, mentor, scientist, researcher, and member of the University of Victoria community, academic integrity is of the highest importance to me.

Students are required to abide by all academic regulations set as set out in the University calendar, including standards of academic integrity. Violations of academic integrity (e.g. cheating and plagiarism) are considered serious and may result in significant penalties.

It is absolutely essential that you understand and uphold academic integrity. To this end, I ask you to please read UVic's framework on academic integrity, which you can find here:

<https://www.uvic.ca/students/academics/academic-integrity/index.php>

You can also find UVic's Policy on Academic Integrity in the UVic calendar:

[https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk\\_0xsM\\_V](https://www.uvic.ca/calendar/undergrad/index.php#/policy/Sk_0xsM_V)

To help avoid plagiarism and cheating, please read the UVic Libraries' plagiarism guide: <https://www.uvic.ca/library/research/citation/plagiarism/>

I reserve the right to use plagiarism detection software or other platforms to assess the integrity of student work.

Before handing in coursework for evaluation, you will need to complete the Integrity Matters module that is available in Brightspace:

<https://bright.uvic.ca/d2l/le/discovery/view/course/132610>

## BIOL 355 Tentative Lecture Schedule

Mon. Jan. 9	1. Introduction
Thu. Jan. 12	2. Population genetics I – Genetic variation
Mon. Jan. 16	3. Population genetics II – Mutation
Thu. Jan. 19	4. Population genetics III – Selection
Mon. Jan. 23	5. Population genetics IV – Selection
Thu. Jan. 26	6. Population genetics V – Genetic drift
Mon. Jan. 30	7. Population genetics VI – Genetic drift vs selection
Thu. Feb. 2	8. Population genetics VII – Gene flow
Mon. Feb. 6	9. Population genetics VII – Finishing population genetics
Thu. Feb. 9	**Midterm 1**
Mon. Feb. 13	10. Speciation
Thu. Feb. 16	11. Sexual selection / sex / mating systems
Feb. 20 – 23	Reading Week
Mon. Feb. 27	12. Life history evolution
Thu. Mar. 2	13. Species interactions – conflict
Mon. Mar. 6	14. Species interactions – mutualisms
Thu. Mar. 9	15. Phylogeny
Mon. Mar. 13	16. Evolution of genes
Thu. Mar. 16	**Midterm 2**
Mon. Mar. 20	17. Evolution of genomes
Thu. Mar. 23	18. Selfish genes
Mon. Mar. 27	19. Origin of life & deep evolution
Thu. Mar. 30	20. Mitochondria
Mon. Apr. 3	21. Paleontology
Thu. Apr. 6	22. Human evolution

**Online conduct:** The University of Victoria is committed to promoting critical academic discourse while providing a respectful and supportive learning environment. All members of the university community have the right to this experience and the responsibility to help create such an environment. The University will not tolerate racism, sexualized violence, or any form of discrimination, bullying or harassment.

Please be advised that, by logging into UVic's learning systems or interacting with online resources, and course-related communication platforms, you are engaging in a university activity.

All interactions within this environment are subject to the university expectations and policies. Any concerns about student conduct may be reviewed and responded to in accordance with the appropriate university policy.

To report concerns about online student conduct: [onlineconduct@uvic.ca](mailto:onlineconduct@uvic.ca)

**Class recording:** To accommodate short-term absences due to illness, lectures or parts of lectures may be recorded, and these recordings will be posted temporarily in Brightspace. Students who have privacy concerns can contact me and will have the option to limit their personal information shared in the recording. If you have other questions or concerns regarding class recording and privacy please contact [privacyinfo@uvic.ca](mailto:privacyinfo@uvic.ca)

**Mental health:** A note to remind you to take care of yourself. Diminished mental health can interfere with optimal academic performance. 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. All of us benefit from support during times of struggle. You are not alone. Here are some UVic web sites with links to many useful resources that are available to you:

<https://www.uvic.ca/student-wellness/index.php>

<https://onlineacademiccommunity.uvic.ca/LearnAnywhere/>

**Course Experience Survey (CES):**

I value your feedback on this course. Towards the end of term you will have the opportunity to complete a confidential course experience survey (CES) regarding your learning experience. The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. When it is time for you to complete the survey, you will receive an email inviting you to do so. If you do not receive an email invitation, you can go directly to <http://ces.uvic.ca>. You will need to use your UVic NetLink ID to access the survey, which can be done on your laptop, tablet or mobile device.