

COURSE SYLLABUS



COURSE TITLE: BIOL-124: Evolution and Diversity

CLASS SECTION: 001A, 001B, 002A, 002B

TERM: FALL 2023

COURSE CREDITS: 3

DELIVERY METHOD(S):

Camosun College campuses are located on the traditional territories of the Lək̓ʷəŋən and W̱SÁNEĆ peoples. We acknowledge their welcome and graciousness to the students who seek knowledge here.

Learn more about Camosun's [Territorial Acknowledgement](#).

INSTRUCTOR DETAILS

NAME: DAVID RAJU

EMAIL: raju@camosun.ca

OFFICE: F 342A

HOURS: Monday and Thursday online from 12:30-2:30 PM

As your course instructor, I endeavour to provide an inclusive learning environment. However, if you experience barriers to learning in this course, do not hesitate to discuss them with me. Camosun College is committed to identifying and removing institutional and social barriers that prevent access and impede success.

CALENDAR DESCRIPTION

This course consists of studies in the general areas of evolution and organism diversity. Topics include natural selection, the genetic basis of evolution, speciation and evolutionary change and the adaptive radiation of organisms.

PREREQUISITE(S):

One of:

C in English 12

C in Camosun Alternative

And one of:

C+ in Anatomy and Physiology 12

C+ in Biology 11

C+ in Camosun Alternative

CO-REQUISITE(S):

Not Applicable

EXCLUSION(S):

Not Applicable

COURSE LEARNING OUTCOMES / OBJECTIVES

Upon completion of this course a student will be able to:

1. Identify and classify living organisms to their major taxonomic groupings, and list their defining characteristics.
2. Describe the major lines of evidence for evolution.
3. Explain major topics in evolutionary theory.
4. Discuss the nature of scientific knowledge in biology, its limits and strengths, and how it is documented.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

All materials will be provided, including an electronic Biology textbook.

SCHEDULE FOR STUDENTS IN Biology 124-001:

Monday Lecture from 2:30-3:50 PM in Fisher 268

Thursday Lecture from 2:30-3:50 PM in Fisher 268

Lab 001A Wednesday from 9:30-12:20 PM or Lab 001B Tuesday from 1:30-4:20 PM in Fisher 244

Week, Day, Date, Lecture or Lab,	Lab #, Lecture #, or Exam #, Topical Heading	Due Day and Due Date
W1, M, Sep 4	NO CLASS	
W1, T/W, Sep 5, 6 Lab	Course Introduction	Same Day
W1, Th, Sep 7, Lec	Lec#1 Prokaryote Review	Fri, Sep 8 before 5PM
W2, M, Sep 11, Lec	Lec#2 Classification Dilemma	Tues, Sep 12 before 5PM
W2, T/W, Sep 12, 13 Lab	Lab#1 Insect Taxonomy	Same Day
W2, Th, Sep 14, Lec	Lec#3 Freshwater Diversity	Fri, Sep 15 before 5PM
W3, M, Sep 18, Lec	Lec#4 Organismal Change	Tues, Sep 19 before 5PM
W3, T/W, Sep 19, 20 Lab	Lab#2 Tree Taxonomy	Same Day
W3, Th, Sep 21, Lec	Lec#5 Plant Review	Fri, Sep 22 before 5PM
W4, M, Sep 25, Lec	Lec#6 Scientific Inquiry	Tues, Sep 26 before 5PM
W4, T/W, Sep 26, 27 Lab	Lab#3 Plant Diversity	Same Day
W4, Th, Sep 28, Lec	Lec#7 Experimental Research	Fri, Sep 29 before 5PM
W5, M, Oct 2	NO CLASS	
W5, T/W, Oct 3, 4 Lab	Lab#4 <i>Daphnia</i> Study	Same Day
W5, Th, Oct 5, Lec	Lec#8 Migrating Organisms	Fri, Oct 6 before 5PM
W6, M, Oct 9	NO CLASS	
W6, T/W, Oct 10, 11 Lab	Lab#5 <i>Planaria</i> Study	Same Day
W6, Th, Oct 12, Lec	Lec#9 Protozoan Review	Fri, Oct 13 before 5PM
W7, M, Oct 16, Lec	Lec#10 Protozoan Diversity	Tues, Oct 17 before 5PM
W7, T/W, Oct 17, 18 Lab	Lab#6 Microorganisms	Same Day
W7, Th, Oct 19, Lec	Lec#11 Altruism	Fri, Oct 20 before 5PM
W8, M, Oct 23, Lec	Lec#12 Feeding Habits	Tues, Oct 24 before 5PM
W8, T/W, Oct 24, 25 Lab	Lab#7 Owl Pellet Study	Same Day
W8, Th, Oct 26, Lec	Lec#13 Fungi Review	Fri, Oct 27 before 5PM
W9, M, Oct 30, Lec	Lec#14 Fungi Diversity	Tues, Oct 31 before 5PM
W9, T/W, Oct 31, Nov 1 Lab	Lab#8 Mushroom Morphology	Same Day
W9, Th, Nov 2, Lec	Lec#15 Sexual Selection	Fri, Nov 3 before 5PM
W10, M, Nov 6, Lec	Lec#16 Natural Selection	Tues, Nov 7 before 5PM
W10, T/W, Nov 7, 8 Lab	Lab#9 Sowbug Selection	Same Day
W10, Th, Nov 9, Lec	Lec#17 Invertebrate Review	Fri, Nov 10 before 5PM
W11, M, Nov 13	NO CLASS	
W11, T/W, Nov 14, 15 Lab	Lab#10 Invertebrate Taxonomy	Same Day
W11, Th, Nov 16, Lec	Lec#18 Genetics and Evolution	Fri, Nov 17 before 5PM
W12, M, Nov 20, Lec	Lec#19 Speciation	Tues, Nov 21 before 5PM
W12, T/W, Nov 21, 22 Lab	Lab#11 Evolution of Seeds	Same Day
W12, Th, Nov 23, Lec	Lec#20 Chordate Review	Fri, Nov 24 before 5PM
W13, M, Nov 27, Lec	Lec#21 Chordate Diversity	Tues, Nov 28 before 5PM
W13, T/W, Nov 28, 29 Lab	Lab#12 Chordate Taxonomy	Same Day
W13, Th, Nov 30, Lec	Lec#22 Conservation	Fri, Dec 1 before 5PM
W14, M, Dec 4, Lec	Lec#23 Threats to Biodiversity	Tues, Dec 5 before 5PM
W14, T/W, Dec 5, 6 Lab	Lab#13 Evolution and Plasticity	Same Day
W14, Th, Dec 7, Lec	EXAM	Fri, Dec 8 before 5PM

SCHEDULE FOR STUDENTS IN Biology 124-002:

Monday Lecture from 11:00-12:20 PM in Fisher 268

Thursday Lecture from 11:00-12:20 PM in Fisher 200

Lab 002A Tuesday from 9:30-12:20 PM or Lab 002B Wednesday from 1:30-4:20PM in Fisher 244

Week, Day, Date, Lecture or Lab,	Lab #, Lecture #, or Exam #, Topical Heading	Due Day and Due Date
W1, M, Sep 4	NO CLASS	
W1, T/W, Sep 5, 6 Lab	Course Introduction	Same Day
W1, Th, Sep 7, Lec	Lec#1 Prokaryote Review	Fri, Sep 8 before 5PM
W2, M, Sep 11, Lec	Lec#2 Classification Dilemma	Tues, Sep 12 before 5PM
W2, T/W, Sep 12, 13 Lab	Lab#1 Insect Taxonomy	Same Day
W2, Th, Sep 14, Lec	Lec#3 Freshwater Diversity	Fri, Sep 15 before 5PM
W3, M, Sep 18, Lec	Lec#4 Organismal Change	Tues, Sep 19 before 5PM
W3, T/W, Sep 19, 20 Lab	Lab#2 Tree Taxonomy	Same Day
W3, Th, Sep 21, Lec	Lec#5 Plant Review	Fri, Sep 22 before 5PM
W4, M, Sep 25, Lec	Lec#6 Scientific Inquiry	Tues, Sep 26 before 5PM
W4, T/W, Sep 26, 27 Lab	Lab#3 Plant Diversity	Same Day
W4, Th, Sep 28, Lec	Lec#7 Experimental Research	Fri, Sep 29 before 5PM
W5, M, Oct 2	NO CLASS	
W5, T/W, Oct 3, 4 Lab	Lab#4 <i>Daphnia</i> Study	Same Day
W5, Th, Oct 5, Lec	Lec#8 Migrating Organisms	Fri, Oct 6 before 5PM
W6, M, Oct 9	NO CLASS	
W6, T/W, Oct 10, 11 Lab	Lab#5 <i>Planaria</i> Study	Same Day
W6, Th, Oct 12, Lec	Lec#9 Protozoan Review	Fri, Oct 13 before 5PM
W7, M, Oct 16, Lec	Lec#10 Protozoan Diversity	Tues, Oct 17 before 5PM
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Students registered with the Centre for Accessible Learning (CAL) who complete quizzes, tests, and exams with academic accommodations have booking procedures and deadlines with CAL where advanced noticed is required. Deadlines can be reviewed on the [CAL exams page](http://camosun.ca/services/accessible-learning/exams.html). <http://camosun.ca/services/accessible-learning/exams.html>

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
13 Labs (13 X 4)	52
23 Lecture Assignments and 1 exam (24 X 2)	48
TOTAL	100%

If you have a concern about a grade you have received for an evaluation, please come and see me as soon as possible. Refer to the [Grade Review and Appeals](http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf) policy for more information. <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf>

COURSE GUIDELINES & EXPECTATIONS

On the first day of class you will email the instructor raju@camosun.bc.ca the following information:

- 1) Subject line of email: "Your Full Name"
- 2) In the body of the email:
 - a) Once again your full name
 - b) Your student number
 - c) Your section (001A, 001B, 002A, or 002B)
 - d) What day and time is your lab? What room is it in?
 - e) What days and times are your two lectures? What room(s) are they in?
 - f) The email address you are using to send this email.
 - g) Any Questions you may have about the Course outline thus far that wasn't answered on the first day of classes, would like repeated, or feel more comfortable asking by email.

This course has been carefully designed so that the only stress there is will be the stress you create for yourself. I am well aware that proper learning can't take place if stress is present and so I will do my part to provide a proper learning environment but this can't be accomplished without you doing your part. And so complete assignments ahead of time so that you have time to ask questions before the due date, show up to lab early, follow all directions carefully, and most of all have fun. The course is not based on memorization and regurgitation teaching methods but rather is based on learning through student centered processes such as active learning and discovery to achieve the learning outcomes of the course. The learning is in the

search. In other words those that do the doing do the learning. For meaningful and long lasting learning it is my belief that you can not be a passive participant in the process but rather must be the investigator in an investigation and the investigation you have been assigned is Biology 124. I hope you enjoy the course and make the most of it. After all, you get out of life what you put into it). 😊

SCHOOL OR DEPARTMENTAL INFORMATION

STUDENT RESPONSIBILITY

Enrolment at Camosun assumes that the student will become a responsible member of the College community. As such, each student will display a positive work ethic, assist in the preservation of College property, and assume responsibility for their education by researching academic requirements and policies; demonstrating courtesy and respect toward others; and respecting expectations concerning attendance, assignments, deadlines, and appointments.

SUPPORTS AND SERVICES FOR STUDENTS

Camosun College offers a number of services to help you succeed in and out of the classroom. For a detailed overview of the supports and services visit <http://camosun.ca/students/>.

Academic Advising	http://camosun.ca/advising
Accessible Learning	http://camosun.ca/accessible-learning
Counselling	http://camosun.ca/counselling
Career Services	http://camosun.ca/coop
Financial Aid and Awards	http://camosun.ca/financialaid
Help Centres (Math/English/Science)	http://camosun.ca/help-centres
Indigenous Student Support	http://camosun.ca/indigenous
International Student Support	http://camosun.ca/international/
Learning Skills	http://camosun.ca/learningskills
Library	http://camosun.ca/services/library/

Office of Student Support	http://camosun.ca/oss
Ombudsperson	http://camosun.ca/ombuds
Registration	http://camosun.ca/registration
Technology Support	http://camosun.ca/its
Writing Centre	http://camosun.ca/writing-centre

If you have a mental health concern, please contact Counselling to arrange an appointment as soon as possible. Counselling sessions are available at both campuses during business hours. If you need urgent support after-hours, please contact the Vancouver Island Crisis Line at 1-888-494-3888 or call 911.

COLLEGE-WIDE POLICIES, PROCEDURES, REQUIREMENTS, AND STANDARDS

Academic Accommodations for Students with Disabilities

The College is committed to providing appropriate and reasonable academic accommodations to students with disabilities (i.e. physical, depression, learning, etc). If you have a disability, the [Centre for Accessible Learning](#) (CAL) can help you document your needs, and where disability-related barriers to access in your courses exist, create an accommodation plan. By making a plan through CAL, you can ensure you have the appropriate academic accommodations you need without disclosing your diagnosis or condition to course instructors. Please visit the CAL website for contacts and to learn how to get started:

<http://camosun.ca/services/accessible-learning/>

Academic Integrity

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.13.pdf> for policy regarding academic expectations and details for addressing and resolving matters of academic misconduct.

Academic Progress

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.1.pdf> for further details on how Camosun College monitors students' academic progress and what steps can be taken if a student is at risk of not meeting the College's academic progress standards.

Course Withdrawals Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <http://camosun.ca/learn/fees/#deadlines>.

Grading Policy

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

Mandatory Attendance for First Class Meeting of Each Course

Camosun College requires mandatory attendance for the first class meeting of each course. If you do not attend, and do not provide your instructor with a reasonable reason in advance, you will be removed from the course and the space offered to the next waitlisted student. For more information, please see the “Attendance” section under “Registration Policies and Procedures” (<http://camosun.ca/learn/calendar/current/procedures.html>) and the Grading Policy at <http://camosun.ca/about/policies/education-academic/e-1-programming-and-instruction/e-1.5.pdf>.

Medical / Compassionate Withdrawals

Students who are incapacitated and unable to complete or succeed in their studies by virtue of serious and demonstrated exceptional circumstances may be eligible for a medical/compassionate withdrawal. Please visit <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.8.pdf> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence and Misconduct

Camosun is committed to creating a campus culture of safety, respect, and consent. Camosun’s Office of Student Support is responsible for offering support to students impacted by sexual violence. Regardless of when or where the sexual violence or misconduct occurred, students can access support at Camosun. The Office of Student Support will make sure students have a safe and private place to talk and will help them understand what supports are available and their options for next steps. The Office of Student Support respects a student’s right to choose what is right for them. For more information see Camosun’s Sexualized Violence and Misconduct Policy: <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.9.pdf> and camosun.ca/sexual-violence. To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-3703841

Student Misconduct (Non-Academic)

Camosun College is committed to building the academic competency of all students, seeks to empower students to become agents of their own learning, and promotes academic belonging for everyone. Camosun also expects that all students to conduct themselves in a manner that contributes to a positive, supportive, and safe learning environment. Please review Camosun College’s Student Misconduct Policy at <http://camosun.ca/about/policies/education-academic/e-2-student-services-and-support/e-2.5.pdf> to understand the College’s expectations of academic integrity and student behavioural conduct.

Changes to this syllabus: Every effort has been made to ensure that information in this syllabus is accurate at the time of publication. The College reserves the right to change courses if it becomes necessary so that course content remains relevant. In such cases, the instructor will give the students clear and timely notice of the changes.