

COURSE SYLLABUS



COURSE TITLE: BIOL-228-Ecology

CLASS SECTION: 001AB

TERM: 2024F

COURSE CREDITS: 3

DELIVERY METHOD(S): In person lectures and labs

Camosun College respectfully acknowledges that our campuses are situated on the territories of the Ləkʷəŋən (Songhees and Kosapsum) and WSÁNEĆ peoples. We honour their knowledge and welcome to all students who seek education here.

INSTRUCTOR DETAILS

NAME: Sarah Cockburn

EMAIL: Cockburns@camosun.ca

OFFICE: Fisher 352, Lansdowne Campus

HOURS: Tuesday 11:30am-12:20pm, Tuesday 3:30pm-4pm, Thursday 3pm-3:30pm

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

An introduction to the factors controlling the distribution and abundance of organisms. Topics include: physiological ecology, population dynamics, competition, predation, herbivory, mutualism, conservation biology, community structure and function, succession, nutrient cycles and biogeoclimatic zones.

PREREQUISITE(S):

All of:

C in BIOL 124

CO-REQUISITE(S):

EQUIVALENCIES:

COURSE LEARNING OUTCOMES / OBJECTIVES

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

Define Ecology and employ the scientific method by applying appropriate sampling techniques and data analyses to appraise suitable ecological questions.

Differentiate between autecology, population, community and ecosystem. Explain and criticize key concepts and models appropriate to these levels of inquiry.

Integrate and synthesize ecological concepts predicting organism abundance and distribution, recommending strategies for management and conservation and evaluating the long-term stability of ecological systems.

REQUIRED MATERIALS & RECOMMENDED PREPARATION / INFORMATION

(a) Optional Textbook:

Bowman, W.D., & Hacker S.D. (2021). *Ecology*, 5th Ed.* New York, USA: Oxford University Press.**

*Note: This textbook is optional and not required. The publisher has recently released a 6th Edition of this textbook, which would also be suitable for this course. The Camosun College bookstore is selling a limited number of hard copies of the 5th Edition only, and an E-text version of the 5th Edition is available through Vital Source: <https://www.vitalsource.com/en-ca/products/ecology-william-d-bowman-sally-d-v9781605359236?term=978-1-60535-921-2>

**Other Note: Other general ecology textbooks may also be suitable for this course. Please speak with the instructor if you are unsure of what to purchase.

(b) Lab Resources:

- i. There will be two SimBio online labs in this course (see lab schedule on next page). These labs can be purchased at the Camosun Bookstore (\$23.50 for both).
<https://www.campusbookstore.com/link/?id=9e1aae66-6858-4a52-a96b-430856a74ed7>
- ii. Lab procedures and related assignments will be posted on D2L prior to each scheduled lab. Please read each lab procedure in advance and bring a print or electronic copy to each lab period.
- iii. Please bring a scientific calculator to each lab period.
- iv. Microsoft Word and Excel are required for completing lab assignments. A FREE version of Microsoft 365 is available for all students, go to: <https://camosun.ca/services/its/software-other-services>.
- v. Access to a computer is necessary for completing lab assignments. The library at Camosun offers hourly or semester-long laptop loans: <https://camosun.ca/services/library/borrow>. It is recommended to bring a laptop to each lab period, but this is not required.

(c) Lecture Resources:

Lectures are based on PowerPoint slides and will be delivered in person. The slides will be posted on the course D2L website, along with additional resources for review and activities to complete. Slides may be downloaded or printed to help follow the lectures.

COURSE SCHEDULE, TOPICS, AND ASSOCIATED PREPARATION / ACTIVITY / EVALUATION

The following schedule and course components are subject to change with reasonable advance notice, as deemed appropriate by the instructor.

Lectures: 001AB Tuesdays 2:00pm-3:20pm F200
 001AB Thursdays 1:30pm-2:50pm F268

Labs: 001B Mondays 9:30am-12:20pm F224
 001A Mondays 1:30pm-4:20pm F224

WEEK #	DATES	LECTURE TOPICS	LAB TOPICS
1	Sept. 3-6	Course Introduction Module 1. The Web of Life (Ch.1)	NO LAB – LABOUR DAY
2	Sept. 9-13	Module 2. Organisms and Their Environment (Ch.2 & 3) Module 3. Evolution and Ecology (Ch.6)	Lab & Excel Introduction Set up Population Growth Lab SimBio Lab – Experimental Design
3	Sept. 16-20	Module 4. Life History (Ch.7) Module 5. Behavioural Ecology (Ch.8)	Statistical Analyses Lab and Lemna Count
4	Sept. 23-27	Module 5. cont'd Module 6. Population Distribution and Abundance (Ch.9)	Ecological Sampling Lab and Lemna Count
5	Sept 30-Oct 4	LECTURE MIDTERM #1 (Tues Oct 1) Module 6. cont'd	NO LAB – NATIONAL TRUTH AND RECONCILIATION DAY (Lemna Count in class on Oct 1)
6	Oct. 7-11	Module 7. Population Dynamics (Ch.10) Module 8. Population Growth and Regulation (Ch.11)	NO LAB – THANKSGIVING Lab Project Draft Due (Lemna Count in class on Oct 8)
7	Oct. 14-18	Module 8. cont'd Module 9. Predation (Ch.12)	Scientific Article Activity Start Germination Lab and Lemna Count
8	Oct. 21-25	Module 9. cont'd Module 10. Parasitism (Ch.13)	Mark-Recapture Lab and Lemna Count
9	Oct. 28-Nov. 1	Module 10. cont'd Module 11. Competition (Ch.14)	Niche Lab and Lemna Count
10	Nov. 4-8	LECTURE MIDTERM #2 (Tues Nov 5) Module 12. Mutualism and Commensalism (Ch.15)	Finish Germination Lab Finish Population Growth Lab and Lemna Count Lab Project Draft Check-in
11	Nov. 11-15	Module 12. cont'd Module 13. The Nature of Communities and Change in Communities (Ch.16 & 17)	NO LAB – REMEMBRANCE DAY
12	Nov. 18-22	Module 13. cont'd Module 14. Energy Flow&Food Webs(Ch.21)	SimBio Lab – Nutrient Pollution
13	Nov. 25-29	Module 14. cont'd Module 15. Conservation Biology (Ch.23)	Lab Project Due Lab Project Presentations
14	Dec. 2-6	Module 16. Ecosystem Management (Ch.24) Course Wrap-Up and Review	LAB FINAL TEST (DEC 2)
	Dec. 9 - 17	LECTURE FINAL EXAM (Date and time scheduled by College Registrar)	

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 notice is required. Deadlines can be reviewed on the [CAL exams page. https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams](https://camosun.ca/services/academic-supports/accessible-learning/academic-accommodations-exams)

EVALUATION OF LEARNING

DESCRIPTION	WEIGHTING
Lecture Assignments on D2L (x 16)	15%
Lab Assignments (x 8)	20%
Lab Project	10%
Lecture Midterm Exam #1 – Tuesday October 1	10%
Lecture Midterm Exam #2 – Tuesday November 5	10%
Lab Final Test – Monday December 2	15%
Lecture Final Exam (Date TBD)	20%
	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](#) policy for more information.

Notes about evaluation methods:

- Lecture Assignments on D2L are open-book and use of the PowerPoint slides is encouraged. Assignments are due on the day prior to each lecture exam at 11:59pm (**no late submissions accepted**). The assignments are set up as D2L “quizzes” and you will be given 2 attempts and an average of the 2 scores will be recorded. A missed submission will result in a grade of zero for that assignment.

- Lab Assignments will be posted on D2L prior to each lab period and will be due the following Sunday at 11:59pm, unless otherwise specified by the instructor. Lab Assignments are completed in groups, with one copy submitted per group. These assignments must be uploaded to D2L in the appropriate dropbox. Late assignments will be graded but marks equivalent to **10%** of the total value of the assignment will be deducted for each day past the deadline, including weekends. Late assignments will not be accepted once marked assignments have been returned to the class.

- The requirements and timeline for the Lab Project will be explained during the first lab period. This project must be typed and submitted to D2L in the appropriate dropbox, with the same late penalty as the Lab Assignments (**10%** per day, as described above). The Lab Project will also be presented during the lab.

- Lecture Midterms take place during regular lecture hours and are NOT cumulative, whereas the Final Exam takes place during the final exam period (as scheduled by the College Registrar) and IS cumulative. These exams are strictly based on lecture content and are all closed-book exams. The use of phones, smart watches, or other electronic devices during exams is NOT permitted and will result in a grade of zero.

- The Lab Final Test will take place during regular lab hours. This test is strictly based on lab content and is closed-book, although a formula sheet will be provided. The use of phones, smart watches, or other electronic devices during the test is NOT permitted and will result in a grade of zero. Please bring a **scientific calculator**.

COURSE GUIDELINES & EXPECTATIONS

Lecture Attendance

Attendance will not be required for lectures (EXAMS are the only exception to this). However, attending and participating in lectures will be an important part of succeeding in this course, as there will be additional explanations and examples to support learning. If a lecture is missed, the student is responsible for obtaining information such as notes, handouts, assignments, and announcements.

Laboratory Attendance

In order to pass the course, students are required to meet the minimum lab attendance, participation, and completion requirements:

- Laboratory activities involve practical application of your knowledge as well as development of lab techniques and manual skills. Development of these skills is a requirement to meet the Course Learning Outcomes. Meeting Course Learning Outcomes is a requirement for gaining credit in the course, as well as ensuring pre-requisite and transferability standards are met.
- Laboratory activities are in-person activities; attendance and participation is **mandatory**. Online alternatives are NOT available.
- Laboratory attendance will be monitored by a sign-in sheet in the lab. It is the student's responsibility to record their attendance using this sheet. Attendance from the sign-in sheet will be transferred to D2L by your instructor. It is the student's responsibility to monitor their attendance progress.
- Arriving late to the lab may result in a missed opportunity to sign in.

Guidelines for missed labs:

- Students who miss a laboratory session have an obligation to seek out concessions directly from their instructor in a timely manner, BEFORE the lab period begins. If notification is provided AFTER the lab period begins, concessions may not be available.
- If a student misses up to three (3) laboratory sessions, they are still eligible to meeting the Learning Outcomes for the course. Concessions offered for the first three (3) missed laboratory sessions will depend on the reason for the laboratory absence and is at the instructor's discretion. Concessions may include writing up the laboratory report with provided data or omitting the lab.
- **If a student misses a total of four (4) or more laboratory sessions for ANY reason** (including but not limited to: life circumstances, significant illness or family/pet emergency, planned vacations, family events, work commitments, childcare or eldercare commitments, competitive athletic events), they will be unable to meet the Course Learning Outcomes and will receive a **failing grade (F) in the course**, regardless of marks received on graded lecture and lab components.

- This guideline applies to laboratory activities only; for missing the Lab Final Test please see the “Missed Exams” section on the following page.
- Please note that if you are suffering from a serious medical illness that prevents you from fully participating in the course, Camosun College has a Compassionate Medical Withdrawal Policy (<https://camosun.ca/services/forms#medical>).

Assignments

There will be many lecture and lab assignments throughout the course. It is the student’s responsibility to be informed of any work expected and the dates the work is due. Some course assignments will be group work, while others will be individual work. When submitting your own individual assignment, be sure that it is your own work (keeping in mind student conduct requirements). This applies even if you are working with a study group – I do encourage you to study and work with other students, but the work you submit must still be your own. For group assignments, each person in a group will receive the same mark on any group work. The only exception to this is when a group member fails to contribute, resulting in a grade of zero for that individual on that particular assignment.

Please submit assignments in the format requested by the instructor. Incorrect formatting will result in late penalties and delayed grading.

All assignments are due at the date and time specified by the instructor. As described on the previous page, late Lab Assignments will be accepted with a penalty of **10% per day**, including weekends. Late assignments will not be accepted once marked assignments have been returned to the class. Late Lecture Assignments will not be accepted.

Plagiarism

You are encouraged to discuss assignments with your classmates, however, **individual assignments must be your own individual work – beware of plagiarism**. Plagiarizing is appropriating the work or parts or passages of another’s writing (including the ideas or language) and passing them off as the product of one’s own mind or manual skill.

Except where work is assigned to a group, all written work must be done individually. Plagiarism is a serious offence that is considered to be academic misconduct and **will not be tolerated**. A student caught plagiarizing will forfeit all credit for the assignment and documentation will be sent to the Chair and Dean for their records. Please visit the link to the Academic Integrity Policy later in this syllabus for more information.

Missed Exams

All exams must be written at the scheduled times. However, it is understood that emergency circumstances occur (e.g. severe illness or emergency in the immediate family); for such circumstances accommodation may be offered at the discretion of the instructor, provided the student:

- (a) notifies the instructor **in advance** of the exam (not after), and

(b) provides **acceptable documentation** of the circumstance where possible (i.e. medical documentation).

In the event of emergency circumstances, it is at the instructor's discretion whether to administer a make-up exam or adjust exam grade weighting accordingly.

**** HOLIDAYS, SCHEDULED FLIGHTS, EVENTS, AND WORK ARE NOT CONSIDERED TO BE EMERGENCIES ****

Be sure not to make travel, work, or other personal plans for the end of semester until the final exam schedule is finalized and posted.

Cheating

A student caught cheating on an exam will forfeit all credit for that exam and perhaps for the course. Cheating is a serious offence and is considered to be academic misconduct. Cheating includes but is not limited to:

- (a) using unauthorized materials or resources in a quiz/exam, and
- (b) providing information to another person regarding exam content.

The consequences for cheating and plagiarism are outlined by Camosun College's Academic Integrity policy.

Student Safety

The following laboratory safety practices are required to participate in all laboratory activities. Students must follow all safety rules and procedures when in the lab space.

Lab footwear	<ul style="list-style-type: none">• For safety reasons WorkSafeBC mandates that students are required to wear closed shoes in all lab times. Flip flops, sandals, or shoes with holes are NOT acceptable.
Eating & drinking	<ul style="list-style-type: none">• Absolutely NOTHING may be ingested while in the lab. Chewing gum and applying makeup or lip balm are similarly prohibited.• If something must be consumed, then it may be taken out of the lab.
Hand washing	<ul style="list-style-type: none">• Hands should be thoroughly washed BEFORE leaving the lab.

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 camosun.ca/services.

Support Service	Website
Academic Advising	camosun.ca/services/academic-supports/academic-advising
Accessible Learning	camosun.ca/services/academic-supports/accessible-learning
Counselling	camosun.ca/services/health-and-wellness/counselling-centre
Career Services	camosun.ca/services/co-operative-education-and-career-services
Financial Aid and Awards	camosun.ca/registration-records/financial-aid-awards
Help Centres (Math/English/Science)	camosun.ca/services/academic-supports/help-centres
Indigenous Student Support	camosun.ca/programs-courses/iecc/indigenous-student-services
International Student Support	camosun.ca/international
Learning Skills	camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills
Library	camosun.ca/services/library
Office of Student Support	camosun.ca/services/office-student-support
Ombudsperson	camosun.ca/services/ombudsperson
Registration	camosun.ca/registration-records/registration
Technology Support	camosun.ca/services/its
Writing Centre	camosun.ca/services/academic-supports/help-centres/writing-centre-learning-skills

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.

Academic Integrity

Students are expected to comply with all College policy regarding academic integrity; which is about honest and ethical behaviour in your education journey. The following guide is designed to help you understand your responsibilities: <https://camosun.libguides.com/academicintegrity/welcome>

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.13.pdf> for Camosun's Academic Integrity policy and details for addressing and resolving matters of academic misconduct.

Academic Accommodations for Students with Disabilities

Camosun College is committed to achieving full accessibility for persons with disabilities. Part of this commitment includes arranging appropriate academic accommodations for students with disabilities to ensure they have an equitable opportunity to participate in all of their academic activities. If you are a student with a documented disability and think you may need accommodations, you are strongly encouraged to contact the Centre for Accessible Learning (CAL) and register as early as possible. Please visit the CAL website for more information about the process of registering with CAL, including important deadlines:

<https://camosun.ca/cal>

Academic Progress

Please visit <https://camosun.ca/sites/default/files/2023-02/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 <https://camosun.ca/sites/default/files/2021-05/e-2.2.pdf> for further details about course withdrawals. For deadline for fees, course drop dates, and tuition refund, please visit <https://camosun.ca/registration-records/tuition-fees#deadlines>.

Grading Policy

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.5.pdf> for further details about grading.

Grade Review and Appeals

Please visit <https://camosun.ca/sites/default/files/2021-05/e-1.14.pdf> for policy relating to requests for review and appeal of grades.

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 (see

[Medical/Compassionate Withdrawals policy](#)). Please visit <https://camosun.ca/services/forms#medical> to learn more about the process involved in a medical/compassionate withdrawal.

Sexual Violence

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 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 Policy:

<https://camosun.ca/sites/default/files/2021-05/e-2.9.pdf> and camosun.ca/services/sexual-violence-support-and-education.

To contact the Office of Student Support: oss@camosun.ca or by phone: 250-370-3046 or 250-370-3841

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 <https://camosun.ca/sites/default/files/2021-05/e-2.5.pdf> to understand the College's expectations of academic integrity and student behavioural conduct.

Looking for other policies?

The full suite of College policies and directives can be found here: <https://camosun.ca/about/camosun-college-policies-and-directives>

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

