

# COURSE SYLLABUS



COURSE TITLE: BIOL-228: Ecology

CLASS SECTION: 001A/B/C

TERM: F2021

COURSE CREDITS: 4

DELIVERY METHOD(S): In Person

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](#).

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For COVID-19 information please visit <https://legacy.camosun.ca/covid19/index.html>.

*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 explanation in advance, you will be removed from the course and the space offered to the next waitlisted student.*

## INSTRUCTOR DETAILS

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NAME: Sarah Cockburn

EMAIL: [cockburns@camosun.bc.ca](mailto:cockburns@camosun.bc.ca)

OFFICE: Fisher 352

HOURS: Collaborate office hours (Online): Tuesday 11-11:50am and Wednesday 12:30-1:50pm

In person office hours (F352): Thursday 12-1:20pm

*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

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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):

Not Applicable

### EXCLUSION(S):

Not Applicable

## COURSE LEARNING OUTCOMES / OBJECTIVES

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

1. Define Ecology and employ the scientific method by applying appropriate sampling techniques and data analyses to appraise suitable ecological questions.
2. Differentiate between autecology, population, community and ecosystem. Explain and criticize key concepts and models appropriate to these levels of inquiry.
3. 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

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**Textbooks:** Recommended/optional material (not required) Bowman, W.D, & Hacker, S.D (2021) Ecology Fifth Edition. New York, USA, Oxford University Press.

**Lab Manual:** Lab instructions and related assignments will be posted on D2L prior to each scheduled lab.

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

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

Lecture: 001A/B/C      Y 201    Wed 10:30am-11:50 am  
F 268    Thurs 10:30am-11:50 am

Labs:    D01A                  F244    Monday 1:30pm-4:20 pm  
          D01B/C                F244    Monday 9:30am-12:20 pm

WEEK or DATE RANGE	ACTIVITY or TOPIC	Chapter	Laboratory Exercise
1-Sept 6-10 College Closed Sept 6 Labour Day	The Web of life	1	1. <b>No Lab (Labour day holiday)</b>
2- Sept 13-17	Organisms and their Environment Evolution and Ecology	3,4 6	2. Statistics Exercise and Population growth set up.
3- Sept 20-24	Life History Behavioural Ecology	7,8	3. Lab stimulation: Understanding Experimental Design (SimBio) and Lemna count

WEEK or DATE RANGE	ACTIVITY or TOPIC	Chapter	Laboratory Exercise
4- Sept 27-Oct 1 <i>College closed Sept 30 National Day for Truth and Reconciliation</i>	Population Distribution and Abundance	9	4. Community Sampling and Lemna count
5- Oct 4-Oct 8	Population Dynamics <b>MID-TERM I (Oct 7)</b>	10	5. Germination set up and Lemna Count
6- Oct 11-15 College closed Oct 11 Thanksgiving	Population Growth and Regulation	11	<b>NO Lab- Thanksgiving</b> 6. Research Project Draft Due and Lemna count
7- Oct 18-22	Predation	12	7. <b>Lab Quiz I</b> and Lemna count
8- Oct 25-29	Parasitism	13	8. Germination lab and Lemna count
9- Nov 1-5	Competition Mutualism and Commensalism	14	9. Mark and Recapture lab
10- Nov 8-12 <i>College closed Nov 11 Remembrance Day</i>	<b>MID-TERM II (Nov 10)</b>	15	10. Niche Lab and Lemna count
11- Nov 15-19	Mutualism and Commensalism cont. The Nature of Communities Change in Communities	16	11. Population Growth Lab (Lemna lab)
12- Nov 22-26	Food Webs	21	12. Nutrient Pollution: SimBio Lab
13- Nov 29-Dec 3	Conservation/Climate Change	23	13. Research Project Due
14- Dec 6-10	Ecosystem Management	24	14. <b>Lab Quiz II</b>
Dec 13-21	Final Exam Period		

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 scan 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
Midterm 1 (October 7 <sup>th</sup> )	12
Midterm 2 (November 10)	12
Lab Quiz 1 (October 18 <sup>th</sup> )	8
Lab Quiz 2 (December 13)	8
Lab Assignments	18

DESCRIPTION	WEIGHTING
Lecture and D2L Assignments/Quizzes	12
In class assignments/activities/quizzes	2
Final Lab Project	8
Final Exam (TBA)	20
<b>TOTAL</b>	<b>100%</b>

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

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### Lecture Attendance

Attending lectures will be an important part of succeeding in this course. From time to time there will be quizzes and other in-class activities for marks that will also help you and I determine how you are doing with the material. If you know that there is a lecture that you will miss where an announced activity will take place, you must let me know ahead of time and have a legitimate reason to miss it (e.g. an emergency or an illness with documented evidence). The lecture PowerPoint presentations will be posted on <http://online.camosun.ca> but there will be much more information provided during lecture time that you won't want to miss!

### Laboratory Attendance

The laboratory experience is critical to the course objectives and so attendance throughout the entire laboratory session is mandatory and will be noted. Lateness in arriving, failure to attend the lab or leaving the lab before its scheduled finish time will result in forfeiting credit for that lab, including any written assignments.

Arriving more than **5 minutes** after the start of the lab time is considered late and will only be acceptable one time or with a legitimate excuse.

If a lab session is missed, another student's data **may not** be used to complete a lab assignment for credit. Exceptions can be made **at the instructor's discretion** in legitimate cases of emergency (e.g. illness); in such cases the instructor must receive **advance notification** and **documented evidence** of the situation (e.g. medical certificate) and grant approval for any accommodation.

### Missed Exams

Without exception, all lecture and lab 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 documented evidence of the circumstance is applicable.

In the event of emergency circumstances, it is at the instructor's discretion whether to administer a make-up exam or adjust the weighting of the final exam to make up the missing marks. Note that work commitments or

holiday travel are NOT considered emergency circumstances. Be sure not to make any travel plans for the end of the semester under the final exam schedules are finalized and posted.

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

On most D2L quiz assignments you will be given 2 attempts and an average of the 2 scores will be recorded.

### Late Penalties

Assignments are due at the **beginning** of the class period on the due date. Assignments not handed in at the beginning of class will be considered late, for which there is a 10% penalty/day. The format is expected to be professional, i.e. a neat, legible, clean copy. "Rough" drafts risk rejection and a subsequent late penalty. If the assignment is more than one page, separate pages must be stapled before you come to class. Electronic submissions will not be accepted unless otherwise stated by the instructor.

**Note:** There is the option of 1 free late assignment. There will be no penalty provided the assignment is received prior to it being marked and returned to the class. Any assignment received after its return to the rest of the class will be marked but will not receive credit.

### Additional Information

There will be two SimBio (simbio.com) interactive virtual labs this semester (see lab schedule). There will be a cost of 6\$ per/lab a total of \$12/student for the semester. Further details about these labs will be provided to you in class.

No programmable devices are allowed in exams (cell phones, apple watches etc.).

## STUDENT RESPONSIBILITY

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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

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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	<a href="http://camosun.ca/advising">http://camosun.ca/advising</a>
Accessible Learning	<a href="http://camosun.ca/accessible-learning">http://camosun.ca/accessible-learning</a>
Counselling	<a href="http://camosun.ca/counselling">http://camosun.ca/counselling</a>
Career Services	<a href="http://camosun.ca/coop">http://camosun.ca/coop</a>
Financial Aid and Awards	<a href="http://camosun.ca/financialaid">http://camosun.ca/financialaid</a>
Help Centres (Math/English/Science)	<a href="http://camosun.ca/help-centres">http://camosun.ca/help-centres</a>
Indigenous Student Support	<a href="http://camosun.ca/indigenous">http://camosun.ca/indigenous</a>
International Student Support	<a href="http://camosun.ca/international/">http://camosun.ca/international/</a>
Learning Skills	<a href="http://camosun.ca/learningskills">http://camosun.ca/learningskills</a>
Library	<a href="http://camosun.ca/services/library/">http://camosun.ca/services/library/</a>
Office of Student Support	<a href="http://camosun.ca/oss">http://camosun.ca/oss</a>
Ombudsperson	<a href="http://camosun.ca/ombuds">http://camosun.ca/ombuds</a>
Registration	<a href="http://camosun.ca/registration">http://camosun.ca/registration</a>
Technology Support	<a href="http://camosun.ca/its">http://camosun.ca/its</a>
Writing Centre	<a href="http://camosun.ca/writing-centre">http://camosun.ca/writing-centre</a>

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.

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## 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](http://camosun.ca/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](http://camosun.ca/sexual-violence). To contact the Office of Student Support: [oss@camosun.ca](mailto: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.