



COURSE OUTLINE

1. **Course:** BIOL 313, Principles of Ecology - Winter 2024

Lecture 01 : MWF 13:00 - 13:50 in ST 140

Instructor	Email	Phone	Office	Hours
Dr Ariane Cantin	acantin@ucalgary.ca	403 220-7622	BI 446	Wednesdays 2:30-3:30PM or by appointment.

To account for any necessary transition to remote learning for the current semester, courses with in-person lectures, labs, or tutorials may be shifted to remote delivery for a certain period of time. In addition, adjustments may be made to the modality and format of assessments and deadlines, as well as to other course components and/or requirements, so that all coursework tasks are in line with the necessary and evolving health precautions for all involved (students and staff).

In Person Delivery Details:

Lecture and labs will be in person, presence to each lab session and participation to lab team work is mandatory.

Course Site:

D2L: BIOL 313 L01-(Winter 2024)-Principles of Ecology

Note: Students must use their U of C account for all course correspondence.

TopHat will be used to assess student participation and provide students with practice questions. Questions will be set as "homework" so students can complete them on their own time. **ITP Metrics** will be used to form teams and do peer assessments during the term. **Students must complete ALL TopHat questions and both ITP Metrics surveys (mid-semester and final) to obtain the 5% participation mark.**

We will be working hard to **answer your emails within 24 hours** (except on weekends and holidays).

General questions on Lecture Materials should be asked on the **D2L Discussion Board**, no questions will be answered by email.

For any assessment, time will be adjusted for SAS students if needed and accommodations for students will be done on a case-by-case basis.

Equity Diversity & Inclusion:

The University of Calgary is committed to creating an equitable, diverse and inclusive campus, and condemns harm and discrimination of any form. We value all persons regardless of their race, gender, ethnicity, age, LGBTQIA2S+ identity and expression, disability, religion, spirituality, and socioeconomic status. The Faculty of Science strives to extend these values in every aspect of our courses, research, and teachings to better promote academic excellence and foster belonging for all.

The Biological Sciences Equity Committee acknowledges there are persistent barriers that prevent such accessibility and hinder our progress towards EDI. Our representatives (faculty, staff, postdocs, graduate and undergraduate students) are committed to addressing any concerns and work towards proactive solutions that enact necessary change within the department. To submit anonymous questions, comments or concerns regarding EDI related issues, please reach out to our Chair, Arshad Ayyaz (arshad.ayyaz@ucalgary.ca), or a committee representative of your choice at <https://science.ucalgary.ca/biological-sciences/about/equity-diversity-and-inclusion>

Course Outcomes:

- Demonstrate that ecological interactions happen at different scales and discuss why/how we examine those interactions to explain the distribution and abundance of organisms
- Develop links to why ecology is important for many disciplines of biology and has relevance to our everyday lives, conservation, etc
- Explain how/why ecological interactions need to be considered in an evolutionary context
- Explain the process of optimization, and how natural selection favors individuals whose behaviors lead to an increase in fitness
- Explain the fitness consequences for mate choice and the differences that exist between males and females
- Link individual rates of survival and fecundity and life history strategies to population growth rates

- Explain why exponential/geometric growth results from density independent per capita rates and how logistic growth results from density dependent per capita rates
- Explain how ecology processes and interactions, can promote and maintain biological diversity
- Describe and predict human impacts on ecology systems, making links to the global carbon cycle, climate change, and global scale ecological process
- Design, conduct, and analyze an authentic ecological experiment. Report the results of this experiment in the format of a scientific paper.

2. Requisites:

See section [3.5.C](#) in the Faculty of Science section of the online Calendar.

Prerequisite(s):

Biology 241 and 243.

3. Grading:

The University policy on grading and related matters is described in [F.1](#) and [F.2](#) of the online University Calendar.

In determining the overall grade in the course the following weights will be used:

Course Component	Weight	Due Date (duration for exams)	Modality for exams	Location for exams
Individual Participation (Top Hat, ITP Metrics Surveys) ¹	5%	Ongoing		
Team Lab Activities (7 activities, 1% each) ²	7%	Ongoing		
Team Graphical Abstract and Peer Review ³	8%	Ongoing		
Pre-Lab Quizzes (for labs 2-5 and 7, 5 quizzes, 1% each) ⁴	5%	Ongoing		
Midterm ⁵	25%	Feb 14 2024 at 07:30 pm (2 Hours)	in-person	TBD
Individual Introduction & Methods	5%	Mar 01 2024		
Individual Results & Discussion	5%	Mar 22 2024		
Individual Final Project	15%	Apr 09 2024		
Registrar Scheduled Final Exam	25%	Will be available when the final exam schedule is released by the Registrar	in person	Will be available when the final exam schedule is released by the Registrar

¹ All activities (all Top Hat questions and both ITP Metrics surveys) need to be done to get the 5% participation mark. Details and due dates will be available on D2L.

² Grade weighted by final ITP Metrics peer score. Details and due dates will be available on D2L.

³ Details will be available on D2L. Due date for the graphical abstract is 30 min before lab the week of April 1 and peer review will occur during the lab session on that same week. Grade weighted by final ITP Metrics peer score.

⁴ Pre-Lab Quizzes done online on D2L due 30 min before the start of each lab.

⁵ The midterm location will be communicated at the beginning of the semester.

Each piece of work (reports, assignments, quizzes, midterm exam(s) or final examination) submitted by the student will be assigned a grade. The student's grade for each component listed above will be combined with the indicated weights to produce an overall percentage for the course, which will be used to determine the course letter grade.

The conversion between a percentage grade and letter grade is as follows.

	A+	A	A-	B+	B	B-	C+	C	C-	D+	D
Minimum % Required	95 %	88 %	84 %	80%	76%	72 %	68 %	64%	60%	55 %	50 %

This course will have a Registrar Scheduled Final exam that will be delivered in-person and on campus. [The Final Examination Schedule](#) will be published by the Registrar's Office approximately one month after the start of the term. The final exam for this course will be designed to be completed within 2 hours.

At the end of the term, each student will evaluate the contributions of the other members of their team (using the ITP Metrics Peer Evaluation tool). All team members will get a peer score based on their final peer evaluation. This provides a way to evaluate the relative contributions of each team member to the team's work. Each student's total teamwork mark will be multiplied by their individual peer score to determine their final mark for the teamwork component of the course (15% of final grade).

The University of Calgary offers a [flexible grade option](#), Credit Granted (CG) to support student's breadth of learning and student

wellness. Faculty units may have additional requirements or restrictions for the use of the CG grade at the faculty, degree or program level. To see the full list of Faculty of Science courses where CG is not eligible, please visit the following website: <https://science.ucalgary.ca/current-students/undergraduate/program-advising/flexible-grading-option-cg-grade>

4. Missed Components Of Term Work:

In the event that a student legitimately fails to submit any online or in-person assessment on time (e.g. due to illness, domestic affliction, etc...), please contact the course coordinator, or the course instructor if this course does not have a coordinator to arrange for a re-adjustment of a submission date, or possible exemption and reweighing of components. Absences not reported within 48 hours will not be accommodated. Students may be asked to provide supporting documentation ([Section M.1](#)) for an excused absence, See [FAQ](#).

If an excused absence is approved, options for how the missed assessment is dealt with is at the discretion of the coordinator or course instructor. Some options such as an exemption and pro-rating among the components of the course may not be a viable option based on the design of this course.

Students will be assigned a team at the beginning of the semester. Each team will write and sign a contract detailing how they plan to communicate and organize themselves. If a student is unable to attend a lab activity, they should contact their team (if possible before the lab) to discuss how they can make up for the missed component as detailed in their contract. **A student can only miss a maximum of two lab activities without a legitimate reason** as the group work builds each week and their absence directly impacts the progression of other members of the team. **Should a student miss more than two activities, their team or themselves need to reach out immediately to the course coordinator. The student will then be removed from the group and be required to complete assignments on their own should they wish to progress in the course.**

Free pass extensions: Each student will have a **two 48hrs free pass extensions** they can use without justification during the term for their individual lab assignments, final project, TopHat questions, or ITP metrics surveys.

Late assignment policy: Lab assignments that are submitted up to **one day** late (24hrs after the due date or free pass extension) will receive **80%** of the marks, assignments submitted **2 days late** (24-48hrs) will receive **50%** of the marks earned, and assignments turned in **3 days late or more** (>48hrs) will receive **feedback but no marks** (0 points).

5. Scheduled Out-of-Class Activities:

The following out of class activities are scheduled for this course.

Activity	Location	Date and Time	Duration
Midterm	TBD	Wednesday, February 14, 2024 at 7:30 pm	2 Hours

REGULARLY SCHEDULED CLASSES HAVE PRECEDENCE OVER ANY OUT-OF-CLASS-TIME-ACTIVITY. If you have a conflict with the out-of-class-time-activity, please contact your course coordinator/instructor no later than **14 days prior** to the date of the out-of-class activity so that alternative arrangements may be made.

6. Course Materials:

Recommended Textbook(s):

Molles and Laursen, *Ecology: Concepts and Applications 5th Canadian Edition*: McGraw-Hill Education.

Lecture and pre-lab slides will be made available on D2L.

Note that the 3rd, 4th and 5th Canadian Editions of the textbook can be used for this course.

In order to successfully engage in their learning experiences at the University of Calgary, students taking online, remote and blended courses are required to have reliable access to the following technology:

- A computer with a supported operating system, as well as the latest security, and malware updates;
- A current and updated web browser;
- Webcam/Camera (built-in or external);
- Microphone and speaker (built-in or external), or headset with microphone;
- Current antivirus and/or firewall software enabled;
- Stable internet connection.

For more information please refer to the UofC [ELearning](#) online website.

7. Examination Policy:

In-person exams are closed-book and individual.

Time will be adjusted for SAS students if needed and other accommodations will be done on a case-by-case basis. Please contact Dr. Cantin at least 14 business days prior to the assessment to discuss the matter.

For the midterm and final examinations, students may bring one double-sided page of notes and a non-programmable calculator.

Students should also read the Calendar, [Section G](#), on Examinations.

8. Approved Mandatory And Optional Course Supplemental Fees:

There are no mandatory or optional course supplemental fees for this course.

9. Writing Across The Curriculum Statement:

For all components of the course, in any written work, the quality of the student's writing (language, spelling, grammar, presentation etc.) can be a factor in the evaluation of the work. See also Section [E.2](#) of the University Calendar.

10. Human & Living Organism Studies Statements:

Students will not participate as subjects or researchers in human studies.

See also [Section E.5](#) of the University Calendar.

STUDIES IN THE BIOLOGICAL SCIENCES INVOLVE THE USE OF LIVING AND DEAD ORGANISMS. Students taking laboratory and field-based courses in these disciplines can expect involvement with and experimentation on such materials. Students perform dissections on dead or preserved organisms in some courses. In particular courses, students experiment on living organisms, their tissues, cells, or molecules. Sometimes field work requires students to collect a variety of living materials by many methods, including humane trapping.

All work on humans and other animals conforms to the Helsinki Declaration and to the regulations of the Canadian Council on Animal Care. The Department strives for the highest ethical standards consistent with stewardship of the environment for organisms whose use is not governed by statutory authority. Individuals contemplating taking courses or majoring in one of the fields of study offered by the Department of Biological Sciences should ensure that they have fully considered these issues before enrolling. Students are advised to discuss any concern they might have with the Undergraduate Program Director of the Department.

Students are expected to be familiar with [Section SC.4.1](#) of the University Calendar.

11. Reappraisal Of Grades:

A student wishing a reappraisal, should first attempt to review the graded work with the Course coordinator/instructor or department offering the course. Students with sufficient academic grounds may request a reappraisal. Non-academic grounds are not relevant for grade reappraisals. Students should be aware that the grade being reappraised may be raised, lowered or remain the same. See [Section I.3](#) of the University Calendar.

- a. **Term Work:** The student should present their rationale as effectively and as fully as possible to the Course coordinator/instructor within **ten business days** of either being notified about the mark, or of the item's return to the class. If the student is not satisfied with the outcome, the student shall submit the Reappraisal of Graded Term work [form](#) to the department in which the course is offered within 2 business days of receiving the decision from the instructor. The Department will arrange for a reappraisal of the work within the next ten business days. The reappraisal will only be considered if the student provides a detailed rationale that outlines where and for what reason an error is suspected. See sections [I.1](#) and [I.2](#) of the University Calendar

- b. **Final Exam:** The student shall submit the request to Enrolment Services. See [Section I.3](#) of the University Calendar.

12. Other Important Information For Students:

- a. **Mental Health** The University of Calgary recognizes the pivotal role that student mental health plays in physical health, social connectedness and academic success, and aspires to create a caring and supportive campus community where individuals can freely talk about mental health and receive supports when needed. We encourage you to explore the mental health resources available throughout the university community, such as counselling, self-help resources, peer support or skills-building available through the SU Wellness Centre (Room 370, MacEwan Student Centre, [Mental Health Services Website](#)) and the Campus Mental Health Strategy website ([Mental Health](#)).
- b. **SU Wellness Services:** For more information, see their [website](#) or call [403-210-9355](#).
- c. **Sexual Violence:** The Sexual Violence Support Advocate, Carla Bertsch, can provide confidential support and information

regarding sexual violence to all members of the university community. Carla can be reached by email (svsa@ucalgary.ca) or phone at [403-220-2208](tel:403-220-2208). The complete University of Calgary policy on sexual violence can be viewed [here](#).

- d. **Student Ombuds Office:** A safe place for all students of the University of Calgary to discuss student related issues, interpersonal conflict, academic and non-academic concerns, and many other problems.
- e. **Student Union Information:** [SU contact](#), Email your SU Science Reps: science1@su.ucalgary.ca, science2@su.ucalgary.ca, science3@su.ucalgary.ca.

f. **Academic Accommodation Policy:**

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Student-Accommodation-Policy.pdf>

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>.

Students needing an accommodation in relation to their coursework or to fulfil requirements for a graduate degree, based on a Protected Ground other than Disability, should communicate this need, by filling out the [Request for Academic Accommodation Form](#) and sending it to Lisa Gieg by email imgieg@ucalgary.ca preferably 10 business days before the due date of an assessment or scheduled absence.

- g. **Misconduct:** Academic integrity is the foundation of the development and acquisition of knowledge and is based on values of honesty, trust, responsibility, and respect. We expect members of our community to act with integrity. Research integrity, ethics, and principles of conduct are key to academic integrity. Members of our campus community are required to abide by our institutional [Code of Conduct](#) and promote academic integrity in upholding the University of Calgary's reputation of excellence. Some examples of academic misconduct include but are not limited to: posting course material to online platforms or file sharing without the course instructor's consent; submitting or presenting work as if it were the student's own work; submitting or presenting work in one course which has also been submitted in another course without the instructor's permission; borrowing experimental values from others without the instructor's approval; falsification/fabrication of experimental values in a report. Please read the following to inform yourself more on academic integrity:

[Student Handbook on Academic Integrity](#)
[Student Academic Misconduct Policy](#) and [Procedure](#)
[Faculty of Science Academic Misconduct Process](#)
[Research Integrity Policy](#)

Additional information is available on the [Student Success Centre Academic Integrity page](#)

- h. **Copyright of Course Materials:** All course materials (including those posted on the course D2L site, a course website, or used in any teaching activity such as (but not limited to) examinations, quizzes, assignments, laboratory manuals, lecture slides or lecture materials and other course notes) are protected by law. These materials are for the sole use of students registered in this course and must not be redistributed. Sharing these materials with anyone else would be a breach of the terms and conditions governing student access to D2L, as well as a violation of the copyright in these materials, and may be pursued as a case of student academic or [non-academic misconduct](#), in addition to any other remedies available at law.
- i. **Freedom of Information and Privacy:** This course is conducted in accordance with the Freedom of Information and Protection of Privacy Act (FOIPP). Students should identify themselves on all written work by placing their name on the front page and their ID number on each subsequent page. For more information, see [Legal Services](#) website.
- j. **Surveys:** At the University of Calgary, feedback through the Universal Student Ratings of Instruction ([USRI](#)) survey and the Faculty of Science Teaching Feedback form provides valuable information to help with evaluating instruction, enhancing learning and teaching, and selecting courses. Your responses make a difference - please participate in these surveys.

Electronically Approved - Dec 22 2023 10:06

Department Approval

Associate Dean's Approval