

BIOL300: ECOLOGY

Course Details:

Term Offered: Fall 2026

Credit Weighting: 3.0 units

Delivery Mode: on campus

Learning Hours: 120 learning hours

Pre-Requisites: BIOL103. Recommended: BIOL206, BIOL212, a 2nd-year statistics course

Course Description:

Ecology is the study of the relationships between living things and their environment. In BIOL300, we emphasize the interpretation of ecological patterns in terms of mechanisms and consequences of evolution by natural selection. We will explore diverse topics including trade-offs and constraints, organismal ecology, population dynamics, interactions, community structure, energy and elemental flow through ecosystems, and global diversity patterns. During labs activities, you will gain hands-on experience in field sampling and species identification, as well as data analysis and interpretation.

Course Learning Outcomes:

On successful completion of this course, students will be able to:

1. explain the basic concepts underlying life history, population, community, and ecosystem ecology, and provide a critique of their strengths, shortcomings, and significance
2. integrate across ecological scales to understand and assess current environmental issues
3. identify and assess the linkages between evolution and ecology at all ecological scales
4. apply life-history, population, community, and ecosystem concepts to generate hypotheses and understand patterns in ecological data
5. apply practical field skills to collect data on wild organisms

Course Communication:

We will post important information to the Announcements Section in onQ. Students should post general course questions to the appropriate discussion forum in onQ. For questions that you would prefer to remain private, please contact the course inbox biol300@queensu.ca. The teaching team monitors the inbox and discussion forums regularly and will attempt to respond within 48 hours (Monday – Friday). Please use your Queens account to access onQ and email the teaching team.

Course Expectations

BIOL300 students are responsible for knowing and adhering to the rules, regulations, and requirements of the course, including due dates, and the details of all required activities. Although most students benefit from participating in-person, we recognize the need for flexibility and have designed BIOL300 so that all activities (except for the field trip and final exam) have options for in-person and asynchronous remote learning. Both modes of instruction cover the same course content and have the same learning requirements: you can decide which approach, or a combination of approaches, works best for you.

You should expect to invest on average 10 to 12 hours per week in this course. This includes the time you spend in lecture and lab, completing scheduled course activities, and studying course material. We encourage you to develop a study schedule and stick to it: you will be more likely to complete the course successfully if you stay organized and up to date. All remote lecture modules, and in-term course activities (except the field trip) are autonomous but have specific due dates. This approach is designed to give students some flexibility in choosing when to complete work while also ensuring no one falls behind. Keeping up to date with course content and activities is your responsibility. The “Timeline” page in onQ is your first resource for due dates and a detailed course schedule.

BIOL300 is committed to counteracting discrimination and developing a climate of educational equity that recognizes and respects the equal dignity and worth of all individuals to fully participate in all aspects of the course. Our commitment to providing options for both synchronous in-person and asynchronous remote learning for most course activities, built-in flexible deadlines, and a focus on completion-based activities during the academic term, are three specific examples of practices that we employ which are known to be particularly beneficial to equity-seeking groups. We will continue adjusting our course practices and policies each year with the aim to improving the climate of educational equity in BIOL300.

Queen’s University is situated on the territory of the Haudenosaunee and Anishinaabek. We are grateful to be able to live, learn, and play on these lands. University is a place to share, question, and challenge ideas. You can help to create a safer, more respectful classroom community by following these guidelines:

- make a personal commitment to learn about, understand, and support others
- assume the best of others and expect the best of them
- recognize and value the experiences, abilities, and knowledge of each person
- pay close attention to what a person says/writes before you respond. Think through and re-read what you have written before you respond
- be open to having your ideas challenged and challenge others with the intent of facilitating growth
- look for opportunities to agree with one another, building on and intentionally referencing others’ thoughts and ideas; disagree with ideas without making personal attacks, demeaning, or embarrassing others

Required Materials and Costs

Course Textbooks	Edition(s)	Publisher	For Purchase	Cost	At Queen's Library?
Relyea, 2021, Ecology, The Economy of Nature	10th	W.H. Freeman, Macmillan Learning	in university bookstore, eBook through publisher	\$76.99	Yes

Field trip: This course includes a mandatory in-person field trip to Queen's University Biological Station. Three day-long trips run over two weekends in mid-September (see course Timeline for specific dates). Each student only needs to attend one of the three days. There are a limited number of spots on each date: sign-up sheets will be available on the first day of class. The trip costs \$75 per participant, which includes transportation, site access, and lunch. Students are required to wear appropriate clothing and shoes which are safe for working in the field. You will also need to bring a paper field notebook and pencil for taking notes while outdoors. If you have accessibility concerns regarding this trip, please reach out to us in advance. Any student who is unable to attend due to Accommodations or approved Academic Consideration will be eligible for an alternative activity (at no cost) which will take place on campus later in the term.

Assessments

Assessment	Description	CLOs assessed	Weighting (% of final grade)	Due (see onQ Timeline)
Lecture Content (50% course grade). See details in Module 1				
Textbook Participation	Based on textbook readings	1–4	7.5%	Regularly
Lecture Participation	Written responses to questions posed during lectures/online modules		7.5%	Regularly
Final Exam	Based on lecture and textbook content		35%	During exam period
Laboratory Content (50% course grade). See details in Lab Introduction page				
Field trip	Preparation, on-site quizzes, participation	3–5	10%	2 weekends in mid-September
Lab Reports	Testing ecological hypotheses using data. Developing and reporting figures, statistics, and Results text.	4,5	20%	Regularly
Practice Lab Exams			10%	Regularly
Final Exam			10%	During exam period

Policy on Class Attendance

Your presence and participation in class contributes to the knowledge and skills that you will develop throughout this course. We expect you to attend class regularly and participate in class conversations and learning activities. These types of activities provide active engagement, promote a deeper understanding of the course content, and contribute to your success in this course. Recognizing the need for flexibility, all components of the course (except the field trip and final exam) include asynchronous online options for participation.

Policy on Late Submissions

All activity due dates (except the field trip and final exam) have a 72-hour grace period. This means that your submission is due on the date and time specified in onQ, but we will accept all submissions up to 72 hours after the deadline without penalty. Submission folders in onQ will close 72 hours after the deadline and any assessments not submitted by that time will not be accepted. Short term Academic Consideration is therefore built into all due dates and will not be extended past this built-in 3-day grace period. Students who wish to apply Academic Accommodations or Academic Consideration requests longer than 3 days should reach out to the course inbox (biol300@queensu.ca) before the due date and we will arrange suitable accommodations. We will not accept requests for extensions submitted during the grace period. Do not wait until the last minute to complete your work!

Policy on Missed Assessments

All activities (except the field trip and final exam) include wide windows of availability and can be completed at the time and place of the student's choosing within those windows. Although students generally benefit the most from attending and participating in lectures and labs synchronously (there are Zoom attendance options for all Lab Help Sessions but not for lecture), asynchronous options for participation are also available.

Except for the field trip and final exam, BIOL300 activities are primarily based on completion; if you complete and submit the activity before the due date, and your submission meets the minimum requirements, you will receive credit. We employ the following policies:

- Lecture participation submissions should be emailed to biol300@gmail.com. The Teaching Team will review submissions; if your submission demonstrates you have made a sincere effort you will receive credit regardless of whether your answer is correct.
- Textbook participation involves answering questions in onQ. You must answer the relevant questions by a specified due date to receive full credit. You will receive full credit for participating if >75% of your answers are correct.
- Lab Reports, Revisions, and Practice Lab Exams are submitted to folders in onQ. Any complete submission that fails to meet the minimum requirements (see Lab page for details) will receive 50% grade credit. This policy honours the effort required to complete these activities while also maintaining minimum standards of quality.

- The Lab Report grade is calculated using your best 8 out of 10 report and revision submissions, and the Practice Lab Exam grade is calculated using your best 4 of 5 submissions. This policy provides additional flexibility to the course schedule and helps to address last minute unexpected challenges that prevent submission.

Policy on Review of Graded Work

Graded work in this course is marked very carefully by the Teaching Team. We do not typically remark submissions unless there are clear mathematical errors. If you have a concern about your grade, please make sure that your concern is legitimate by checking over the feedback provided and reading over all correspondence in onQ (announcements, instructions, etc.). If you are confident that you have a valid concern, submit a copy of the original work to the Regrade Request folder in onQ including a detailed explanation of why you believe it has been marked incorrectly. Please be clear what sections you are concerned about and link these to your explanation statement. Regrade Requests must be submitted within 10 days of the posting of your grade for that submission. Your entire submission will be re-marked - this means that your total mark may go up or down. We will consider and respond to all regrade requests within two weeks of receiving your request; if you have not heard from us within 2 weeks, please email the course inbox.

Statement on Artificial Intelligence:

Unless otherwise explicitly stated in writing, you are expected to submit original work, completed wholly by you (or collaboratively with group members when group work is permitted). The use of generative AI tools such as (but not limited to) ChatGPT in your submitted work is not permitted. This includes use in quizzes, lecture/textbook or lab completion-based activities, writing code, and preparing lab reports or field notebooks. Using generative AI tools on submitted class work constitutes a departure from academic integrity.

Agentic AI tools are applications that can act autonomously on a user's behalf: completing tasks, accessing systems, and making decisions without continuous human direction. Examples include automated agents that can submit assignments, complete online activities, or interact with course platforms. The use of agentic AI to complete, submit, or contribute to any activity is not permitted in this course. When a tool acts on your behalf, the resulting work is not your own; this falls within [existing definitions of departures from academic integrity](#). You must not authorize any third-party tool or application to access Queen's systems, including onQ, using your institutional credentials. Doing so creates risks that extend beyond your own academic standing.

Using AI to complete your BIOL300 course work puts you at a disadvantage because it limits your learning opportunities and does nothing to help prepare you for the final exam.

Accommodations for Disabilities

Queen's University is committed to working with students with disabilities to remove barriers to their academic goals. See full explanation and policy statement available through the Office of the Provost and Vice-Principal (Academic)

<https://www.queensu.ca/provost/teaching-and-learning/course-policies>

BIOL300 follows accommodations registered in [Ventus](#). The course includes several Universal Design features which provide flexibility for all students and may preclude the need to use your accommodations. Examples include:

- remote participation options for all activities except the field trip and final exam
- 72-hour grace periods for most competition-based activities and submission deadlines
- the “drop the lowest” score approach used when calculating specific grade items

If you require additional accommodations that are not already met by existing course policies, please email the course inbox (biol300@queensu.ca) and we will work with you to find a solution that meets your needs while maintaining course integrity.

Academic Consideration for Students in Extenuating Circumstances

Academic Consideration is a process for the University community to provide a compassionate response to assist students experiencing unforeseen, short-term extenuating circumstances that may impact or impede a student's ability to complete their academics. This may include but is not limited to any extenuating circumstance (illness, bereavement, traumatic event, injury, family emergency, etc.) which is short-lived, begins within the term, and will not last longer than 12 weeks. See full explanation and policy statement available through the Office of the Provost and Vice-Principal (Academic)

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Arts and Science undergraduate students can find the Faculty of Arts and Science protocol and the [portal where a request can be submitted](#). Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty. For guidance on submitting requests, please refer to the information available on the [Academic Consideration website](#) under “Applying for Academic Consideration.”

Please check the course policies on Late Submissions and Missed Assessments (above) to see if your needs are already covered by the Universal Design structure of the course. If you need to request additional academic consideration, you will be required to provide the following name and email address to ensure it reaches our team accordingly:

Instructor/Course Coordinator Name: Dr. Paul Martin

Instructor/Course Coordinator email address: biol300@queensu.ca

Academic Support

All undergraduate students face new learning and writing challenges as they progress through university: essays and reports become more complex; effectively incorporating research into writing becomes more important; the types of assignments become more diverse; managing your time and developing the skills you need to read and think critically gets more challenging. We encourage you to explore the supports available to students through Student Academic Success Services (SASS). SASS offers many different ways to receive support:

- Free online or in-person [appointments](#) to get personalized support on writing and academic skills from expert staff and trained peers.
- [Workshops](#) and [drop-in programs](#). SASS' [Events Calendar lists events coming soon](#).
- [Online resources](#) that provide strategies for academic skills and writing development at university.
- If English is not your first language, SASS has specific resources for [English as Additional Language students](#), including weekly programs and EAL academic skills appointments. You can meet on an ongoing basis with an EAL consultant to work on your academic writing, speaking, listening, and reading skills.

Effectively using the support systems available to you is a sign of intelligence, not weakness.

Academic Integrity

It is each student's responsibility to know what constitutes a violation of Academic Integrity and how to avoid it. See full explanation and policy statement available through the Office of the Provost and Vice-Principal (Academic) <https://www.queensu.ca/provost/teaching-and-learning/course-policies>

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. See full explanation and policy statement available through the Office of the Provost and Vice-Principal (Academic) <https://www.queensu.ca/provost/teaching-and-learning/course-policies>

Copyright of Course Material

Course materials created by the course instructor(s), including all slides, presentations, handouts, tests, exams, and other similar course materials, are the intellectual property of the instructor(s). It is a departure from academic integrity to distribute, publicly post, sell or otherwise disseminate an instructor's course materials or to provide an instructor's course materials to anyone else for distribution, posting, sale or other means of dissemination, without the instructor's express consent. A student who engages in such conduct may be subject to penalty for a departure from academic integrity and may also face adverse legal consequences for infringement of intellectual property rights.