

COURSE SYLLABUS

BIOL111 “Ecology and the Environment” Winter 2025

1. General Course Description

“Introduces the basic concepts of ecology and shows how they relate to environmental issues such as population growth, resource management, biodiversity, agriculture, air and water pollution, energy, and climate change, and to solutions leading to a sustainable environment.

NOTE Also offered online, consult Arts and Science Online (Learning Hours may vary).

Learning Hours: 108 (36 Lecture, 72 Private Study)

Requirements: Prerequisite None. One-Way Exclusion May not be taken with or after BIOL 300/3.0.

Offering Faculty: Faculty of Arts and Science

Course Learning Outcomes:

Analyze the factors controlling human population growth in developed and developing countries.

Describe the basic principles of community ecology and population ecology.

Describe the earth's renewable and non-renewable resources, their current status, the factors that influence them and explain how humans can use them in more sustainable ways.

Identify the main biomes on Earth and explain the factors that influence them.

Predict most likely future trends of current environmental problems and formulate potential solutions.”

Source: *Queen's Academic Calendar 2024-2025*

2. Course Learning Outcomes

By the end of this course, successful students will be able to:

- i. describe the principal processes that sustain the planetary life support system;
- ii. discuss how human activities have caused unprecedented environmental degradation;
- iii. explain and give examples of how scientists apply ecological principles to understand contemporary environmental problems;
- iv. practice the professional skills of reading, critiquing, and discussing ecological research and environmental issues with more confidence; and
- v. appreciate the diversity of career options available to applied ecologists.

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3. Course Components and Schedule

The course involves the following components:

- Textbook-based Lectures (highlighted LIGHT BLUE below)
- Quiz and Final Exam about the textbook lectures/readings (highlighted DARK BLUE below)
- Spotlight Series of Guest Speakers and Films (highlighted ORANGE below)
- Group Project (highlighted PINK below)

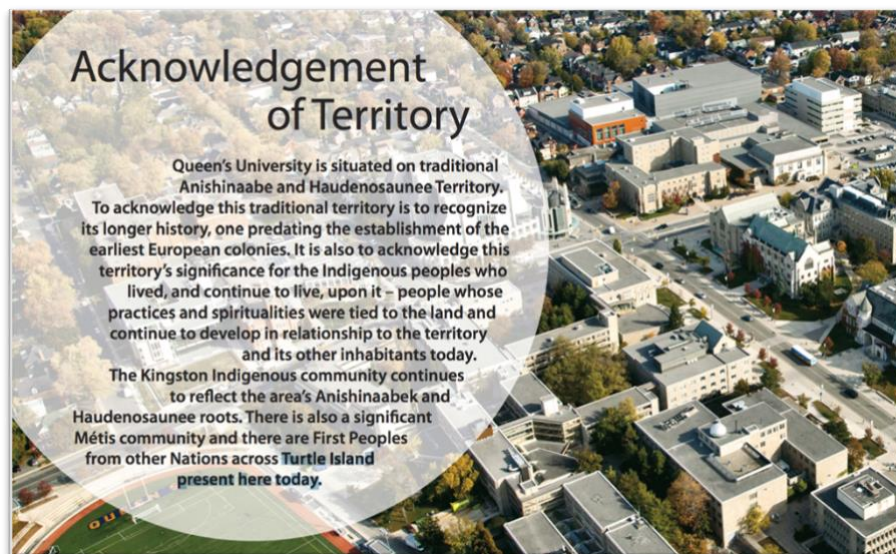
Week	Class	Date	Class Description	Reading	Assignment
1	1	Tuesday, January 7, 2025	Lecture 1: Environment, Resources, & Society	Ch 1	
	2	Friday, January 10, 2025	Spotlight 1: Introducing the Anthropocene		Assignment 1
2	3	Tuesday, January 14, 2025	Lecture 2: Responding to Global Change	Ch 2	
	4	Friday, January 17, 2025	Spotlight 2: Film:2040		Assignment 2
3	5	Tuesday, January 21, 2025	Lecture 3: Ecosphere I	Ch 3	
	6	Friday, January 24, 2025	Spotlight 3: Sonia Nobrega, QUBS		Assignment 3
4	7	Tuesday, January 28, 2025	Lecture 4: Ecosphere II	Ch 4	
	8	Friday, January 31, 2025	Spotlight 4: Film: Butterflies on the Brink		Assignment 4
5	9	Tuesday, February 4, 2025	Lecture 5: Ecosphere III	Ch 5	
	10	Friday, February 7, 2025	Spotlight 5: Paul Grogan, Queen's Biology		Assignment 5
6	11	Tuesday, February 11, 2025	Mid-Term Quiz [8:30 am]		
	12	Friday, February 14, 2025	Spotlight 6: Film: Anthropocene		Assignment 6
		Tuesday, February 18, 2025	Reading Week (no classes)		
		Friday, February 21, 2025	Reading Week (no classes)		
7	13	Tuesday, February 25, 2025	Lecture 6: Water & Fisheries	Ch 9, 12	
	14	Friday, February 28, 2025	Group Project [Mandatory Attendance]		
8	15	Tuesday, March 4, 2025	Lecture 7: Climate Change	Ch 8	
	16	Friday, March 7, 2025	Spotlight 7: Daniel Selbie, DFO [virtual]		Assignment 7
9	17	Tuesday, March 11, 2025	Lecture 8: Minerals & Energy	Ch 13	
	18	Friday, March 14, 2025	Spotlight 8: Megan Quinn, NCC		Assignment 8
10	19	Tuesday, March 18, 2025	Lecture 9 Forests & Agriculture	Ch 10, 11	
	20	Friday, March 21, 2025	Spotlight 9: Audrey Looby, U. Victoria [virtual]		Assignment 9
11	21	Tuesday, March 25, 2025	Group Presentations [8:30 am]		
	22	Friday, March 28, 2025	Group Presentations [8:30 am]		
12	23	Tuesday, April 1, 2025	Group Presentations [8:30 am]		
	24	Friday, April 4, 2025	Group Presentations [8:30 am]		
		Exam Period	Final Exam		

4. Important University Dates

Please visit the [Faculty of Arts and Sciences Sessional Dates website](#) for all academic deadlines.

5. Land Acknowledgement

Let us acknowledge that Queen's is situated on traditional Anishinaabe and Haudenosaunee territory. We are grateful to be able to live, learn and play on these lands. It is from these lands we will find strength, inspiration, and knowledge to do the important work we must do to achieve a just and sustainable society.



Credit: Queen's University [Four Directions Indigenous Student Centre](#)

6. Equity, Diversity, and Inclusivity Statement

Queen's University recognizes that the values of equity and diversity are vital to and in harmony with its educational mission and standards of excellence. It acknowledges that direct, indirect, and systemic discrimination exists within our institutional structures, policies, and practices and in our community. These take many forms and work to differentially advantage and disadvantage persons across social identities such as race, ethnicity, disability, gender identity, sexual orientation, faith, and socioeconomic status, among other examples. In this class I will work to promote an anti-discriminatory, anti-racist and accountable environment where everyone feels welcome. Every member of this class is asked to show respect for every other member.

Building a Classroom Community

University is a place to share, question, and challenge ideas. Each student brings a different set of lived experiences. You can help to create a safer, more respectful classroom community for learners by following these guidelines:

- Make a personal commitment to learn about, understand, and support your peers.
- Assume the best of others and expect the best of them.
- Recognize and value the experiences, abilities, and knowledge each person brings to the course.
- Acknowledge the impact of oppression on other people's lives and make sure your words and tone are respectful and inclusive.
- Encourage others to develop and share their ideas.
- Pay close attention to what your peers say/write before you respond. Think through and re-read what you have written before you post online or send your comments to others.
- Be open to having your ideas challenged and challenge others with the intent of facilitating growth.

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- Look for opportunities to agree with one another, building on and intentionally referencing peers' thoughts and ideas; disagree with ideas without making personal attacks, demeaning, or embarrassing others.

Fostering Accessibility

All of us have a shared responsibility for fostering accessibility and promoting meaningful inclusion of those with disabilities. The [Accessibility Hub](#) at Queen's University's Human Rights & Equity Office offer a host of [tutorials](#) that provide us all with practical tips for:

- creating accessible documents, e.g., to submit to your teaching team or share with peers in peer feedback activities/in a presentation,
- emails, e.g., while communicating with group members or your teaching team, and
- meeting practices (e.g., in tutorials/labs/seminars or virtual meetings).

Name/Pronoun

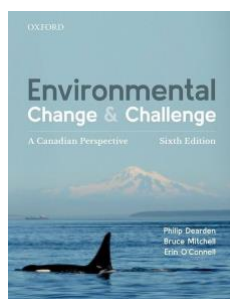
If, for whatever reason, you wish to change how your name appears in onQ and/or on class lists, please follow these steps. You may also use this process to add your pronouns to the appearance of your name.

1. Log into SOLUS.
2. Click on Personal Information tab.
3. Click on the Names tab
4. Click on the Add New Name tab
5. Choose Preferred from the Name Type drop down menu
6. Enter the name you would like to appear in onQ and/or on class lists.
7. Click Save.

Please allow 24 to 48 hours for your name to be registered within the system. If you have further questions or concerns, please contact ITS at Queen's University.

7. Course Materials**Required Course Textbook**

Course Textbooks	Edition(s)	Publisher	For Purchase	Cost	At Queen's Library?
Environmental Change & Challenge: A Canadian Perspective	6th	Oxford University Press Canada	Queen's Bookstore	\$142.99	Yes



Textbook is available from the Campus Bookstore and Queen's Library (Course Reserves).

8. Copyright of Course Material

Course materials created by the course instructor, including all slides, presentations, handouts, tests, exams, and other similar course materials, are the intellectual property of the instructor. 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.

9. Questions about the Course and Contacting the Teaching Team

The teaching team's means of communication with students is through:

- **OnQ Announcements**
- **OnQ Forums**

Please kindly ask questions about the course content and assignments in the **“Ask the Teaching Team” OnQ Discussion Forum**. This is the most efficient and equitable way of disseminating information about the course to all students (150 students). Personal information should not be shared with the teaching team. To protect your privacy, please submit an academic consideration/accommodation for personal issues that affect your attendance/performance in this course.

10. Assessments

Learning outcomes for this course will be assessed through three different types of evaluations:

- (i) Mid-term Quiz and Final Exam on textbook lectures and assigned textbook readings.
- (ii) In-Class Assignments on Spotlight lectures/videos.
- (iii) Presentation on Group Project.

Detailed instructions for graded components and deadlines are communicated on the course OnQ site.

Weighting and Alignment with Course Learning Outcome

Category	Graded Item	Mark	Subtotal
Quizzes & Exams	Mid-Term Quiz	20	60
	Final Exam	40	
Spotlights	Assignment 1	3	24
	Assignment 2	3	
	Assignment 3	3	
	Assignment 4	3	
	Assignment 5	3	
	Assignment 6	3	
	Assignment 7	3	
	Assignment 8	3	
	Assignment 9	3	
	Assignment 10	3	
Group Project	Presentation	16	16
Total			100

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The mid-term quiz and final exam align with learning outcomes (i) to (ii); spotlight assignments and the group project align with learning outcomes (iii) to (v).

Assessment Flexibility

Spotlight assignments are normally completed in class. To allow for some flexibility, two spotlight assignments will be available virtually on demand, and the lowest marks for two spotlight assignments will be automatically dropped.

Descriptions of Learning Activities and Assessments

The mid-term quiz and final exam test your comprehension of course lectures and textbook readings. Spotlight assignments support active engagement and reflection of spotlight seminars and films by provide you with an opportunity to develop written responses to 1-2 questions. Group project is an opportunity to collaborate with others to read, synthesize, and present a research article on a Canadian environmental problem of your choice.

Timing of Final Examinations

Once the exam schedule has been finalized, the exam date will be posted on your SOLUS account. The exam dates for each term are listed on the Faculty of Arts and Science webpage under "Important Dates." Student exam schedules for the Fall Term are posted on SOLUS immediately prior to Thanksgiving and on the Friday before Reading Week for the Winter Term. Students should delay finalizing any travel plans until after the examination schedule has been posted. Exams will not be moved or deferred to accommodate employment, travel/holiday plans or flight reservations. For information regarding what is considered extenuating circumstances and qualifications for Academic Consideration, please visit the Faculty of Arts and Science's Academic Consideration webpage. If you are unable to attend an exam and receive approval for a deferred proctored exam, a further deferral of that exam will not be accommodated.

Assignment Submission Policy

Spotlight in-class assignments are due at the end of class. No late submission is permitted.

11. Policies

Class Attendance

Your presence and participation in class contributes to the knowledge and skills that you will develop throughout this course. I expect that you attend class regularly, 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.

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. I encourage students to contact 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.

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- [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.

Accommodations for Disabilities

Queen's University is committed to working with students with disabilities to remove barriers to their academic goals. Queen's Student Accessibility Services (QSAS), students with disabilities, instructors, and faculty staff work together to provide and implement academic accommodations designed to allow students with disabilities equitable access to all course material (including in-class as well as exams). If you are a student currently experiencing barriers to your academics due to disability related reasons, and you would like to understand whether academic accommodations could support the removal of those barriers, please visit the [QSAS website](#) to learn more about academic accommodations or start the registration process with QSAS by clicking **Access Ventus** button at [Ventus | Accessibility Services | Queen's \(queensu.ca\)](#) VENTUS is an online portal that connects students, instructors, Queen's Student Accessibility Services, the Exam's Office and other support services in the process to request, assess, and implement academic accommodations. To learn more go to: <https://www.queensu.ca/ventus-support/students/visual-guide-ventus-students>

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,

- **Short term Physical or Mental Illness or Injury (stomach flu, anxiety/depression, mononucleosis, concussion, broken bones, surgery, medical treatments, etc.)**
- **Traumatic Event/Confidential (Bereavement, serious injury, illness or required treatment for a significant other/family member or a traumatic event such as divorce, sexual assault, social injustice, etc.)**
- **Requirements by Law or Public Health Authorities (court dates, jury duty, requirements to isolate, etc.)**
- **Significant Event (varsity athletic event, distinguished event, serving in the Reserve Forces, etc.)**

Queen's University is committed to providing academic consideration to students experiencing extenuating circumstances. For more information, please see the [Senate Policy on Academic Consideration for Students in Extenuating Circumstances](#).

Each Faculty has developed a protocol to provide a consistent and equitable approach in dealing with requests for academic consideration for students facing extenuating circumstances. For more information, undergraduate students in the Faculty of Arts and Sciences should consult the Faculty's webpage on [Academic Consideration in Extenuating Circumstances](#) and submit a request via the [Academic](#)

[Consideration Request Portal](#). Students in other Faculties and Schools who are enrolled in this course should refer to the protocol for their home Faculty.

Students are encouraged to submit requests as soon as the need becomes apparent and to contact their instructor and/or course coordinator as soon as possible once academic consideration has been granted. Any delay in contact may limit the options available for academic consideration.

For more information on the Academic Consideration process, what is and is not an extenuating circumstance, and to submit an Academic Consideration request, please see the Faculty of Arts and Science's [Academic Consideration website](#). ASO courses include links to information on **Academic Consideration** on your **Course Homepage** in onQ.

Queen's Policy Statement on Academic Integrity

Queen's University is dedicated to creating a scholarly community free to explore a range of ideas, to build and advance knowledge, and to share the ideas and knowledge that emerge from a range of intellectual pursuits. Queen's students, faculty, administrators and staff therefore all have responsibilities for supporting and upholding the fundamental values of academic integrity. Academic integrity is constituted by the five core fundamental values of honesty, trust, fairness, respect and responsibility and by the quality of courage. These values and qualities are central to the building, nurturing and sustaining of an academic community in which all members of the community will thrive. Adherence to the values expressed through academic integrity forms a foundation for the "freedom of inquiry and exchange of ideas" essential to the intellectual life of the University.

The following statements from "The Fundamental Values of Academic Integrity" (2nd edition), developed by the International Center for Academic Integrity (ICAI), contextualize these values and qualities:

1. **Honesty** Academic communities of integrity advance the quest for truth and knowledge through intellectual and personal honesty in learning, teaching, research, and service.
2. **Trust** Academic communities of integrity both foster and rely upon climates of mutual trust. Climates of trust encourage and support the free exchange of ideas which in turn allows scholarly inquiry to reach its fullest potential.
3. **Fairness** Academic communities of integrity establish clear and transparent expectations, standards, and practices to support fairness in the interactions of students, faculty, and administrators.
4. **Respect** Academic communities of integrity value the interactive, cooperative, participatory nature of learning. They honor, value, and consider diverse opinions and ideas.
5. **Responsibility** Academic communities of integrity rest upon foundations of personal accountability coupled with the willingness of individuals and groups to lead by example, uphold mutually agreed-upon standards, and take action when they encounter wrongdoing.
6. **Courage** To develop and sustain communities of integrity, it takes more than simply believing in the fundamental values. Translating the values from talking points into action -- standing up for them in the face of pressure and adversity — requires determination, commitment, and courage.

Students are responsible for familiarizing themselves with and adhering to the Senate [regulations](#) concerning academic integrity, along with [Faculty or School](#) specific information. Departures from academic integrity include, but are not limited to, plagiarism, use of unauthorized materials, facilitation, forgery and falsification. Actions which contravene the regulation on academic integrity carry sanctions that can range from a warning, to loss of grades on an assignment, to failure of a course, to requirement to withdraw from the university.

Syllabus statement for Generative Artificial Intelligence (AI) Tools

Original work, completed wholly by you, is expected to be submitted in this course. The use of an artificial intelligence tool like ChatGPT is not permitted.

Queen's [Student Academic Success Services](#) (SASS) offers a self-directed, online academic integrity module which we encourage all students to take which will help with:

- Understanding the nature of the academic integrity departure
- Understanding the expectations of and role of sources in scholarly writing
- Integrating sources into your writing (paraphrasing, quoting, summarizing)
- Understanding when and how to cite your sources
- Managing your time effectively to avoid the need for shortcuts
- Taking effective notes to ensure accuracy of source material and correct attribution

Turnitin Statement

This course makes use of Turnitin, a third-party application that helps maintain standards of excellence in academic integrity. Normally, students will be required to submit their course assignments through onQ to Turnitin. In doing so, students' work will be included as source documents in the Turnitin reference database, where they will be used solely for the purpose of detecting plagiarized text in this course. Data from submissions is also collected and analyzed by Turnitin for detecting Artificial Intelligence ([AI](#))-[generated text](#). These results are not reported to your instructor at this time but could be in the future.

Turnitin is a suite of tools that provide instructors with information about the authenticity of submitted work and facilitates the process of grading. The similarity report generated after an assignment file is submitted produces a similarity score for each assignment. A similarity score is the percentage of writing that is similar to content found on the internet or the Turnitin extensive database of content. Turnitin does not determine if an instance of plagiarism has occurred. Instead, it gives instructors the information they need to determine the authenticity of work as a part of a larger process.

Please read Turnitin's [Privacy Policy](#), [Acceptable Use Policy](#) and [End-User License Agreement](#), which govern users' relationship with Turnitin. Also, please note that Turnitin uses cookies and other tracking technologies; however, in its service contract with Queen's Turnitin has agreed that neither Turnitin nor its third-party partners will use data collected through cookies or other tracking technologies for marketing or advertising purposes. For further information about how you can exercise control over cookies, see [Turnitin's Privacy Policy](#). Turnitin may provide other services that are not connected to the purpose for which Queen's University has engaged Turnitin. Your independent use of Turnitin's other services is subject solely to Turnitin's Terms of Service and Privacy Policy, and Queen's University has no liability for any independent interaction you choose to have with Turnitin. *Portions of this text have been adapted, with permission, from the University of Toronto Centre for Teaching Support and Innovation tip sheet "[Turnitin: An Electronic Resource to Deter Plagiarism](#)".*