

# ENVS\*2330 - Current Issues in Ecosystem Science and Biodiversity

## Fall 2024 Course Outline

**Section: 01**

**Credits: 0.50**

## Land Acknowledgement: Guelph

The University of Guelph resides on the ancestral lands of the Attawandaron people and the treaty lands and territory of the Mississaugas of the Credit. We recognize the significance of the Dish with One Spoon Covenant to this land and offer respect to our Anishinaabe, Haudenosaunee and Métis neighbours. Today, this gathering place is home to many First Nations, Inuit, and Métis peoples and acknowledging them reminds us of our important connection to this land where we work and learn.

## Calendar Description

This course provides an introduction to a range of specific environmental and scientific issues relating to ecological sciences. Issues to be covered include the biology of climate change, forest science and management of terrestrial ecosystems. Three examples of current problems of societal concern will be used as starting points to examine the role of science in addressing them, while developing students' knowledge of the underlying science and its relation to policy and economics.

**Prerequisite(s):** 1 of BIOL\*1050, BIOL\*1070, ENVM\*1000, ENVM\*1200, ENVS\*1030

**Restriction(s):** ENVB\*3330, ENVS\*2150

**Department(s):** School of Environmental Sciences

## Lecture Schedule

TuTh 8:30am-9:50am in ANNU\*156 (9/5 to 12/13)

## Lab / Seminar Schedule

Section	Day	Time	Location
0101	Thursday	2:30 PM - 4:20 PM	MCKN 311
0102	Friday	11:30 AM - 1:20 PM	MCKN 305
0103	Monday	11:30 AM - 1:20 PM	MCKN 315

## Instructor Information

**Neil Rooney**

Email: nrooney@uoguelph.ca

## Teaching Assistants

Teaching Assistant (GTA): Alice Dabrowski

Email: dabrowsa@uoguelph.ca

Teaching Assistant (GTA): Tazin Rahman

Email: trahman@uoguelph.ca

## Learning Resources

### Recommended Resources

*There are no recommended textbooks.*

## Additional Resources

*There is no lab manual.*

*There are no field trips.*

*There are no additional costs for this course.*

## Course Learning Outcomes

1. Describe the pools and processes of major global biogeochemical cycles at ecosystem scales through: The discussion of course content during lecture periods, In class quizzes
2. Explain the hypothesized drivers of global biodiversity distribution through: The discussion of course content during lecture periods, In class quizzes
3. Explain the quantitative tools (statistics, models and theory) used in environmental sciences through: The discussion of course content during lecture periods In class quizzes Constructing an abstract for a scientific paper An analysis of the scientific evidence related to an environmental issue by arguing in a debate-style format
4. Demonstrate the ability to integrate ecosystem and biodiversity concepts into a unified view of natural systems through: The discussion of course content during lecture periods, In class quizzes
5. Concisely and effectively communicate in writing the findings of two major scientific studies through the drafting of a journal style abstract
6. Demonstrate teamwork and oral communication skills through an analysis of the scientific evidence related to an environmental issue by arguing in a debate-style format
7. Demonstrate critical thinking skills by reviewing the scientific literature surrounding a contentious environmental issue and drafting a position paper defending one side of that issue

## Lab / Seminar Schedule

Week of September 9 - No seminar

Week of September 16 - Literature research workshop

Week of September 23 - Introduction of debate topics

Week of September 30 - Journal article discussion

Week of October 7 - No seminar

Week of October 14 - No Seminar

Week of October 21 - Writing workshop

Weeks of November 8, 15, 22 - Debates

## Teaching and Learning Activities

Lectures will examine a variety of current environmental/societal issues and how they are being addressed by the scientific study of ecosystems. Broadly, these issues will be used to explore the following themes:

1. Biogeochemical cycles and how human activities affect them.
2. Biodiversity, food web structure and the stability of aquatic and terrestrial ecosystems
3. Anthropogenic effects on the structure and function of aquatic and terrestrial ecosystems
4. Linking biogeochemical cycling to biodiversity and ecosystem function

## Marking Schemes & Distributions

Description	Weighting (%)
Group Contract	2.5
Assignment 1	7.5
Concept Map	10

Oral Debate	17.5
Position Paper	17.5
Peer Evaluation	5
In Class Quizzes	40
<b>Total</b>	<b>100</b>

## Assessment Details

### Group Contract (2.5%)

**Date:** Week of 23 September (End of Seminar)  
Draft and sign a group work contract

### Assignment 1 (7.5%)

**Date:** Fri, Oct 11, 11:55 PM  
Write an abstract for a peer reviewed scientific paper

### Concept Map (10%)

**Date:** Mon, Oct 21  
A concept map of the position paper for you debate

### Oral debate (17.5%)

To occur during month of November

### Position Paper (17.5%)

Position paper detailing arguments for you side of the debate supported by peer reviewed literature. Due 1 week after your debate.

### Peer evaluation (5%)

To occur during month of November

### Online Quizzes (40%)

In class quizzes each worth 8% held:

- September 26th - Online
- October 17th
- October 31st
- November 14th
- November 28th

## Last Day to Drop Course

The final day to drop Fall 2024 courses without academic penalty is the last day of classes: November 29

After this date, a mark will be recorded, whether course work is completed or not (a zero is assigned for missed tests/assignments). This mark will show on the student's transcript and will be calculated into their average.

## Course Standard Statements

### Grading Policies

Written assignments will be submitted via Dropbox on D2L, before midnight on the due date. Oral presentations will be due during the appropriate lab period or otherwise as assigned. All late assignments will receive a 10% deduction for each day, or part thereof, that they are late. Keep paper and/or reliable electronic back-up copies of all out-of-class assignments: you may be asked to resubmit your work at any time.

### Course Policy on Group Work

Group work will be allowed only where specified (e.g. for debate assignment).

**Course Policy regarding use of electronic devices and recording of lectures**

None

## Standard Statements for Undergraduate Courses

### Academic Integrity

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community – faculty, staff, and students – to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring. University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection.

Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-misconduct/>) is outlined in the Undergraduate Calendar.

### Accessibility

The University promotes the full participation of students who experience disabilities in their academic programs. To that end, the provision of academic accommodation is a shared responsibility between the University and the student.

When accommodations are needed, the student is required to first register with Student Accessibility Services (SAS). Documentation to substantiate the existence of a disability is required; however, interim accommodations may be possible while that process is underway.

Accommodations are available for both permanent and temporary disabilities. It should be noted that common illnesses such as a cold or the flu do not constitute a disability. Use of the SAS Exam Centre requires students to make a booking at least 10 days in advance, and no later than the first business day in November, March or July as appropriate for the semester. Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time. For students at the Guelph campus, information can be found on the SAS website. (<https://www.uoguelph.ca/sas/>)

### Accommodation of Religious Obligations

If you are unable to meet an in-course requirement due to religious obligations, please email the course instructor within two weeks of the start of the semester to make alternate arrangements.

See the Academic calendar for information on regulations and procedures for Academic Accommodations of Religious Obligations (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-accommodation-religious-obligations/>).

### Copies of Out-of-class Assignments

Keep paper and/or other reliable back-up copies of all out-of-class assignments: you may be asked to resubmit work at any time.

### Drop Date

Students will have until the last day of classes to drop courses without academic penalty. The deadline to drop two-semester courses will be the last day of classes in the second semester. This applies to all undergraduate students except for Doctor of Veterinary Medicine and Associate Diploma in Veterinary Technology (conventional and alternative delivery) students. The regulations and procedures for course registration are available in the Undergraduate Calendar - Dropping Courses (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/dropping-courses/>).

### Email Communication

As per university regulations, all students are required to check their <uoguelph.ca> e-mail account regularly: e-mail is the official route of communication between the University and its students.

### Health and Wellbeing

The University of Guelph provides a wide range of health and wellbeing services at the Vaccarino Centre for Student Wellness (<https://wellness.uoguelph.ca/>). If you are concerned about your mental health and not sure where to start, connect with a Student Wellness Navigator (<https://wellness.uoguelph.ca/navigation/>) who can help develop a plan to manage and support your mental health or check out our mental wellbeing resources (<https://wellness.uoguelph.ca/shine-this-year/>). The Student Wellness team are here to help and welcome the opportunity to connect with you.

## **Illness**

Medical notes will not normally be required for singular instances of academic consideration, although students may be required to provide supporting documentation for multiple missed assessments or when involving a large part of a course (e.g., final exam or major assignment).

## **Recording of Materials**

Presentations that are made in relation to course work—including lectures—cannot be recorded or copied without the permission of the presenter, whether the instructor, a student, or guest lecturer. Material recorded with permission is restricted to use for that course unless further permission is granted.

## **Resources**

The Academic Calendars (<http://www.uoguelph.ca/registrar/calendars/?index>) are the source of information about the University of Guelph's procedures, policies and regulations which apply to undergraduate, graduate and diploma programs.

## **When You Cannot Meet a Course Requirement**

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons please advise the course instructor (or designated person, such as a teaching assistant) in writing, with your name, id#, and e-mail contact. See the Undergraduate Calendar for information on regulations and procedures for Academic Consideration. (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>)