



# ENVS\*1030 Introduction to Environmental Sciences

Fall 2023

Section(s): 01

School of Environmental Sciences

Credit Weight: 1.00

Version 1.00 - August 30, 2023

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## 1 Course Details

### 1.1 Calendar Description

This course introduces students to what it means to think critically from an environmental sciences perspective. It covers an introduction to: philosophy of science, philosophy of the environment, the evaluation of scientific evidence, and scientific arguments. The course focuses on how we understand and recognize environmental problems, how we decide what to do about them, and what role science can and should play in these discussions.

**Restrictions:** ENVS\*1100. Registration in the BSC(Env) program or BBRM.EM.

### 1.2 Timetable

Lectures: Monday, Wednesday, Friday 8:30am – 9:20am

ALEX 200

### 1.3 Final Exam

No Final Exam

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## 2 Instructional Support

### 2.1 Instructional Support Team

**Instructor:** Neil Rooney  
**Email:** nrooney@uoguelph.ca

**Telephone:** +1-519-824-4120 x52573  
**Office:** Edmund C Bovey Building 2107  
**Office Hours:** To be determined  
  
**Lab Co-ordinator:** Alyson Brown  
**Email:** alysonb@uoguelph.ca  
**Telephone:** 1-519-824-4120 x53393  
**Office:** ALEX (AXEL) 221

## 2.2 Teaching Assistants

**Teaching Assistant (GTA):** Sonja Drosdowech  
**Email:** sdrosdow@uoguelph.ca  
  
**Teaching Assistant (GTA):** Tyler Black  
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**Teaching Assistant (GTA):** Dilrukshi Kombala Liyanage  
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**Teaching Assistant (GTA):** Ana Strbac  
**Email:** astrbac@uoguelph.ca  
  
**Teaching Assistant (GTA):** Mathew Wake  
**Email:** mwake@uoguelph.ca

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## 3 Learning Resources

### 3.1 Required Resources

Ruxton, G.D. & N. Colegrave. **Experimental Design for the Life Sciences**. 3rd Oxford University Press (Other)

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## 4 Learning Outcomes

Students who successfully complete this course will achieve the following Learning Outcomes (LO):

### 4.1 Course Learning Outcomes

By the end of this course, you should be able to:

1. The ability to describe the essential elements of proper scientific study design through:

- The discussion of course content during lecture periods
  - Designing and carrying out a scientific field study
  - Course assignments and quizzes
2. An understanding of the options for employment in the environmental sciences sector through:
- The discussion of course content during lecture periods
  - An assignment that plots a course from undergraduate course selection to employment opportunities in the environmental science sector
3. The ability to describe the scientific process as it pertains to the environmental sciences through:
- The discussion of course content during lecture periods
  - Course assignments and quizzes
4. An understanding of how the philosophy of science can inform the environmental sciences through:
- The discussion of course content during lecture periods
  - Course assignments and quizzes
5. An appreciation for environmental ethics and the role that they play in the environmental sciences through:
- The discussion of course content during lecture periods
  - Course assignments and quizzes
6. The ability to determine the scientific evidence that underpins media portrayals of issues in the environmental sciences through:
- The discussion of course content during lecture periods
  - Research and writing exercises that explore media portrayals of environmental issues

7. The demonstration of teamwork and oral communication skills through an analysis of the scientific evidence related to an environmental issue by arguing in a debate-style format

8. An appreciation of the broad nature of environmental science issues through:

- Attending online lectures that include guest scientists
- Course assignments and quizzes

## 4.2 University's Learning Objectives

In the process we will address a number of the University's Learning Objectives (see the Undergraduate Calendar), especially **Critical and Creative Thinking, Literacy, and Communicating**.

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# 5 Teaching and Learning Activities

## 5.1 Lecture

**Fri, Sep 8 - Fri, Sep 22**

**Topics:** Scientific study design

**Mon, Sep 25 - Wed, Oct 4**

**Topics:** How environmental science is done

**Fri, Oct 6 - Wed, Oct 18**

**Topics:** Philosophy of science

**Fri, Oct 20 - Mon, Oct 30**

**Topics:** Environmental ethics

**Month of November**

**Topics:** An overview of environmental sciences topics:

Aquatic, atmospheric, terrestrial

Physical, chemical, biological

**Throughout the semester**

**Topics:** Case studies and guest scientists

**Wed, Nov 29 - Fri, Dec 1**

**Topics:** Course wrap-up

## 5.2 Lab

**Week of 11 September**

**Topics:** No lab

**Week of 18 September**

**Topics:** Scientific study design (Assignment introduction)

**Week of 25 September**

**Topics:** Scientific study design presentation

**Week of 2 October**

**Topics:** Scientific study set-up

**Week of 9 October**

**Topics:** No lab

**Week of 16 October**

**Topics:** No lab

**Week of 23 October**

**Topics:** Two activities this week

- Debate assignment introduction
- Poster Workshop

**Week of 30 October**

**Topics:** No lab

**Week of 6 November**

**Topics:** Scientific study completion

**Week of 13 November**

**Topics:** Debates

**Week of 20 November**

**Topics:** Scientific study poster presentations

**5.3 Lab Schedule and Location**

Lab section 1: Wednesdays 2:30 PM - 5:20 PM ALEX, Room 028

Lab section 2: Tuesdays 2:30 to 5:20 PM ROZH, Room 108

Lab section 3: Tuesdays 8:30 to 11:20 AM ALEX, Room 309

Lab section 4: Tuesdays 11:30 AM to 2:20 PM MCKN, Room 305

Lab section 5: Thursdays 2:30 to 5:20 PM MCKN, Room 311

Lab section 6: Mondays 11:30 AM to 2:20 PM ROZH Room 107

Lab section 7: Thursdays 8:30 to 11:20 AM ALEX, Room 028

Lab section 8: Wednesday 11:30 AM to 2:20 PM, ALEX, Room 028

**6 Assessments****6.1 Marking Schemes & Distributions**

Name	Scheme A (%)
Quiz 1	6
Group Contract 1	2.5
Scientific Study Design Presentation	5
Quiz 2	6
The job search	10
Quiz 3	6
Group Contract 2	2.5
Quiz 4	6
Media Article Analysis	10
Quiz 5	6

Name	Scheme A (%)
Debate	15
Poster presentations	15
Quiz 6	10
Total	100

## 6.2 Assessment Details

### Quiz 1 (6%)

Date: Fri, Sep 22

### Group Contract 1 (2.5%)

Date: Mon, Sep 18 - Fri, Sep 22

### Scientific Study Design Presentation (5%)

Date: Mon, Sep 25 - Fri, Sep 29, In Lab

### Quiz 2 (6%)

Date: Mon, Oct 2

### The job search (10%)

Date: Fri, Oct 6

### Quiz 3 (6%)

Date: Mon, Oct 16

### Group Contract 2 (2.5%)

Date: Mon, Oct 23 - Fri, Oct 27

### Quiz 4 (6%)

Date: Mon, Oct 30

### Media Article Analysis (10%)

Date: Fri, Nov 10

### Quiz 5 (6%)

Date: Mon, Nov 13

### Debate (15%)

Date: Mon, Nov 13 - Fri, Nov 17, In Lab

### Poster presentations (15%)

Date: Mon, Nov 20 - Fri, Nov 24, In Lab

### Quiz 6 (10%)

Date: Fri, Dec 1

## 7 Course Statements

## 7.1 Grading Policies

Written assignments and quizzes will be submitted via the dropbox on Courselink, before midnight on the due date. All late assignments will receive a 10% deduction for each day, or part thereof, that they are late. Contact Dr. Rooney if you wish to request an extension.

## 7.2 Course Policy on Group Work

You will work in groups for both the Scientific Study and the Debate assignments. Group members will draft and sign group contracts which will serve as the basis for agreed upon roles and responsibilities.

# 8 University Statements

## 8.1 Email Communication

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

## 8.2 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. The grounds for Academic Consideration are detailed in the Undergraduate and Graduate Calendars.

Undergraduate Calendar - Academic Consideration and Appeals

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml>

Graduate Calendar - Grounds for Academic Consideration

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

Associate Diploma Calendar - Academic Consideration, Appeals and Petitions

<https://www.uoguelph.ca/registrar/calendars/diploma/current/index.shtml>

## 8.3 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 students (undergraduate, graduate and diploma) 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 their respective Academic Calendars.

Undergraduate Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-drop.shtml>

Graduate Calendar - Registration Changes

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/genreg-reg->



regchg.shtml

Associate Diploma Calendar - Dropping Courses

<https://www.uoguelph.ca/registrar/calendars/diploma/current/c08/c08-drop.shtml>

## 8.4 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.

## 8.5 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 14 days in advance, and no later than November 1 (fall), March 1 (winter) or July 1 (summer). Similarly, new or changed accommodations for online quizzes, tests and exams must be approved at least a week ahead of time.

For Guelph students, information can be found on the SAS website  
<https://www.uoguelph.ca/sas>

For Ridgetown students, information can be found on the Ridgetown SAS website  
<https://www.ridgetownc.com/services/accessibilityservices.cfm>

## 8.6 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 encourages academic integrity. 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.

Undergraduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

Graduate Calendar - Academic Misconduct

<https://www.uoguelph.ca/registrar/calendars/graduate/current/genreg/index.shtml>

## **8.7 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.

## **8.8 Resources**

The Academic Calendars are the source of information about the University of Guelph's procedures, policies, and regulations that apply to undergraduate, graduate, and diploma programs.

Academic Calendars

<https://www.uoguelph.ca/academics/calendars>

## **8.9 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).

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