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

Monday, Wednesdays and Fridays, 8:30pm-9:20am, ROZH 103

1.3 Final Exam

EXAM Thursday December 12th, 2019

Room TBA

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
2.2 Teaching Assistants

Teaching Assistant: Nadia Ingriselli  
Email: ingrisen@uoguelph.ca

Teaching Assistant: Nicole Legge  
Email: nlegge@uoguelph.ca

Teaching Assistant: Nicole Shearer  
Email: shearern@uoguelph.ca

Teaching Assistant: Reem Zeitoun  
Email: rzeitoun@uoguelph.ca

3 Learning Resources

3.1 Required Resources


OUP Course Package (includes): (Other)

- Williston, B. Environmental Ethics for Canadians. 2nd Oxford University Press.

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 experimental design through:

   • The discussion of course content during lecture periods
   • Designing and carrying out a greenhouse experiment
   • Midterm and final examinations

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
   • Midterm and final examinations

4. An understanding of how the philosophy of science can inform the environmental sciences through:

   • The discussion of course content during lecture periods
   • Midterm and final examinations

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
   • Midterm and final examinations
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:

   • Attendance of guest lectures in class
   • Midterm and final examinations

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.

5 Teaching and Learning Activities

5.1 Lecture

10 September - 21 September
Topics: Experiment design

24 September - 5 October
Topics: How science is done

10 October - 19 October
Topics: Philosophy of science

22 October - 2 November
Topics: Environmental ethics

Month of November
An overview of environmental sciences topics:

Aquatic, atmospheric, terrestrial

Physical, chemical, biological

Throughout the semester Topics:
Case studies and guest lectures

26 November - 30 November Topics:
Course wrap-up

5.2 Lab

Week of 10 September Topics: No lab

Week of 17 September Topics: Experiment design (Assignment introduction)

Week of 24 September Topics: Experiment design presentation

Week of 1 October Topics: Experiment set-up

Week of 8 October Topics: No lab

Week of 15 October Topics: No lab

Week of 22 October Topics: Mock Hearing Assignment Introduction & Poster Workshop

Week of 29 October Topics: No lab

Week of 5 November Topics: Experiment Completion

Week of 12 November Topics: Mock Hearings

Week of 19 November Topics: Experiment Poster Presentations

5.3 Lab Schedule and Location

Lab section 1: Thursdays 8:30 to 11:20 AM  MINS 128
Lab section 2: Tuesdays 2:30 to 5:20 PM  ANNU 306
Lab section 3: Tuesdays 8:30 to 11:20 AM  MINS 128
Lab section 4: Tuesdays 11:30 AM to 2:20 PM  MCKN 309
Lab section 5: Thursdays 2:30 to 5:20 PM  MCKN 307
Lab section 6: Tuesdays 2:30 to 5:20 PM  ANNU 002
Lab section 7: Mondays 2:30 to 5:20 PM  ANNU 002

6 Assessments

6.1 Marking Schemes & Distributions

<table>
<thead>
<tr>
<th>Name</th>
<th>Scheme A (%)</th>
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</thead>
<tbody>
<tr>
<td>Group Contract</td>
<td>2.5</td>
</tr>
<tr>
<td>Experimental Design Presentation</td>
<td>5</td>
</tr>
<tr>
<td>The job search</td>
<td>10</td>
</tr>
<tr>
<td>Midterm exam</td>
<td>20</td>
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<tr>
<td>Media Article Analysis</td>
<td>10</td>
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<tr>
<td>Debate</td>
<td>15</td>
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<tr>
<td>Poster presentations</td>
<td>15</td>
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<tr>
<td>Peer review of posters</td>
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<tr>
<td>Final exam</td>
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<tr>
<td>Total</td>
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</tbody>
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6.2 Assessment Details

**Group Contract (2.5%)**
*Date:* Mon, Sep 16 - Fri, Sep 20

**Experimental Design Presentation (5%)**
*Date:* Mon, Sep 23 - Fri, Sep 27, In Lab
Due week of Sept. 23rd

**The job search (10%)**
*Date:* Fri, Oct 4
Midterm exam (20%)
   Date: Fri, Oct 18, In Class

Media Article Analysis (10%)
   Date: Fri, Nov 8

Debate (15%)
   Date: Mon, Nov 11 - Fri, Nov 15, In Lab

Poster presentations (15%)
   Date: Mon, Nov 18 - Fri, Nov 22, In Lab

Peer review of posters (2.5%)
   Date: Mon, Nov 18 - Fri, Nov 22

Final exam (20%)
   Date: Thu, Dec 12, 2:30 PM - 4:30 PM

7 Course Statements

7.1 Grading Policies

Written assignments will be submitted via the dropbox on CourseLink, before midnight on the due date. Oral presentations and poster assignments 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. See Dr. Hunt if you wish to request an extension.

7.2 Course Policy on Group Work

You are authorized to work as a group only for the lab assignments (the debate/hearing and the plant growth experiment/poster assignment).

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
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-regregchg.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 book their exams at least 7 days in advance and not later than the 40th Class Day.

More information can be found on the SAS website
https://www.uoguelph.ca/sas

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