

ENVS*2270 - Impacts of Climate Change

Fall 2024 Course Outline

Section: DE

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 will provide students with an overview of recent research into what climate change means for Canada and Canadians. Students will learn about evidence for significant changes to the Boreal forests and about the potential impacts of climate change on human health through increasing heat waves and the heat stress on individuals. The course is intended to bridge the gap between abstract discussion of the climate and understand what these changes mean at both personal and societal levels.

Prerequisite(s): Minimum of 4.00 credits

Restriction(s): Not available to students registered in the BAS, BBRM, BIESP, BSC, BSC(Agr) or BSC(Env) programs.

Department(s): School of Environmental Sciences

Instructor Information

Kimberley Bolton

Email: kbolton@uoguelph.ca

Method of Delivery

This course is a fully interactive online course and requires disciplined time management. To successfully complete this course, it is essential that you begin work as of the first week of the course and participate regularly throughout the semester. Your ability to participate online regularly is critical to your success in this course.

Course Learning Outcomes

1. Explain how interactions among atmosphere, ocean, land, and life lead to climate changes.
2. Describe the direct observations of climate change in recent decades, and articulate the evidence attributing global warming in this time period to human causes.
3. Assess the utility, and limits, of climate models to predict global and regional climate change.
4. Analyze the evidence regarding impacts of climate change globally and in Canada.
5. Engage critically and in a scholarly manner, in public arguments about climate change issues.
6. Evaluate the opportunities for climate change adaptation globally and in Canada
7. Describe proposed climate change mitigation strategies.
8. Evaluate your own contribution to greenhouse gas emissions and climate change.

Learning Resources

CourseLink is the course website and will act as your classroom. It is recommended that you log in to your course website frequently (at least 3 times per week) to check for announcements, access course materials, and review the weekly schedule and assignment requirements.

There is NO required textbook for this course.

Zoom (Software)

Zoom will be used for online meetings with students. Please email the instructor to set up a time to meet. You can access Zoom from within the CourseLink page under Content. Please check your system requirements (<https://opened.uoguelph.ca/student-resources/system-and-software-requirements/>) here (<https://opened.uoguelph.ca/student-resources/system-and-software-requirements/>).

Campus Resources

If you are concerned about any aspect of your academic program, make an appointment with a Program Counsellor (<https://www.uoguelph.ca/uaic/programcounsellors/>) in your degree program. If you are struggling to succeed academically: There are numerous academic resources offered by the Learning Commons (<https://www.lib.uoguelph.ca/using-library/spaces/learning-commons/>) including, Supported Learning Groups for a variety of courses, workshops related to time management, taking multiple choice exams, and general study skills.

Library Course Reserve (Ares)

For this course, you will be required to access course reserve materials through the University of Guelph McLaughlin Library. To access these items, select **Ares** on the navbar in CourseLink. Note that you will need your Central Login ID and password in order to access items on reserve.

For further instructions on accessing reserve resources, visit [How to Get Course Reserve Materials \(https://lib.uoguelph.ca/find/course-reserves-ares/how-get-course-reserve-material/\)](https://lib.uoguelph.ca/find/course-reserves-ares/how-get-course-reserve-material/).

If you have difficulty accessing reserve materials, please contact the e-Learning Operations and Reserve Services staff at:

Tel: 519-824-4120 ext. 53621 | Email: libres2@uoguelph.ca | Location: McLaughlin Library, First Floor, University of Guelph

Teaching and Learning Activities

Method of Learning

Throughout the course, you will encounter a variety of different learning tools. The course uses several different approaches to satisfy different learning styles.

The online content is divided into Units and Concepts. Each Unit will contain most of the following:

- Concept content
- Instructor Narrated Videos - these narrated PowerPoint videos were recorded in order to explain some of the concepts in more detail.
- Un-graded interactive Learning Activities
- Videos (YouTube, Ted Talks, etc.)
- Assigned online readings and videos (access these through Ares). These will complement, and add to what you are learning online.

Many of the Units contain ungraded interactive Learning Activities. These activities are designed to engage you directly with the material. This engagement will deepen your understanding of the subject and give you a chance to test your understanding without having the pressure of grades. The ungraded activities include multiple choice (and true/false) questions and matching exercises, and they are structured in such a way as to give you immediate feedback.

Course Structure

The course consists of seven units:

- Unit 01: Weather and Climate
- Unit 02: Let's talk about Science
- Unit 03: Evidence of Climate Change
- Unit 04: Climate Projections
- Unit 05: Impacts of Climate Change on Oceans
- Unit 06: Impacts of Climate Change
- Unit 07: Adaptation and Mitigation

Course Schedule

It is strongly recommended that you follow the course schedule provided below. The schedule outlines what you should be working on each week of the course and lists the important due dates for the assessments. By following the schedule, you will be better prepared to complete the assessments and succeed in this course.

Unit 01: Weather and Climate

Weeks 1 & 2 – Thursday, September 5 to Sunday, September 22

Readings

- Website: Unit 01 Content
- Ares: Please refer to Ares list for Unit and Group Discussion readings.

Activities

- Familiarize yourself with the course website by selecting Start Here on the navbar.
- Review the **Outline** and **Assessments** sections on the course website to learn about course expectations, assessments, and due dates.
- Confirm your access to the course reserve materials by selecting **Ares** on the navbar.
- Introduce yourself to your group in the Group Introductions Discussion topic

Assessments

- **Unit 01 Quiz**
 - Closes: Sunday, September 22 by 11:59 pm ET
- Introduce yourself in your **Group Introductions Topic**
 - Closes: Sunday, September 15 at 11:59 pm ET
- Post to **Group Discussion Topic 1** (at least two separate posts required)
 - Opens: Thursday, September 5 at 7:00 am ET
 - Closes: Sunday, September 15 at 11:59 pm ET
- Post to **Group Discussion Topic 2** (at least two separate posts required)
 - Opens: Monday, September 16 at 7:00 am ET
 - Closes: Sunday, September 22 at 11:59 pm ET

Unit 02: Let's Talk About Science

Week 3 – Monday, September 23 to Sunday, September 29

Readings

- Website: Unit 02 Content
- Ares: Please refer to the Ares list for Unit and Group Discussion readings.

Assessments

- **Unit 02 Quiz**
 - Closes: Sunday, September 29 by 11:59 pm ET
- Post to **Group Discussion Topic 3** (at least two separate posts required)
 - Opens: Monday, September 23 at 7:00 am ET
 - Closes: Sunday, September 29 at 11:59 pm ET

Unit 03: Evidence of Climate Changes

Weeks 4 & 5 – Monday, September 30 to Sunday, October 13

Readings

- Website: Unit 03 Content
- Ares: Please refer to the Ares list for Unit and Group Discussion readings

Assessments

- **Unit 03 Quiz**
 - Closes: Sunday, October 13 by 11:59 pm ET
- Submit **Group Discussion Topic**
 - Due: Wednesday, October 2 at 11:59 PM
- Post to **Group Discussion Topic 4** (at least two separate posts required)
 - Opens: Monday, October 7 at 7:00 am ET
 - Closes: Sunday, October 20 at 11:59 pm ET

Unit 04: Climate Projections

Weeks 6 & 7 – Monday, October 14 to Sunday, October 27 (Holiday and Fall Study Break: Monday and Tuesday, October 14 and 15)

Readings

- Website: Unit 04 Content
- Ares: Please refer to the Ares list for Unit and Group Discussion readings.

Assessments

- **Unit 04 Quiz**
 - Closes: Sunday, October 27 by 11:59 pm ET
- Post to **Group Discussion Topic 4** (at least two separate posts required)
 - Opens: Monday, October 7 at 7:00 am ET
 - Closes: Sunday, October 20 at 11:59 pm ET
- Post to **Group Discussion Topic 5** (at least two separate posts required)
 - Opens: Monday, October 21 at 7:00 am ET
 - Closes: Sunday, November 3 at 11:59 pm ET

Unit 05: Impacts of Climate Change on Oceans**Week 8 – Monday, October 28 to Sunday, November 3****Readings**

- Website: Unit 05 Content
- Ares: Please refer to the Ares list for Unit and Group Discussion readings.

Assessments

- **Unit 05 Quiz**
 - Closes: Sunday, November 3 by 11:59 pm ET
- Post to **Group Discussion Topic 5** (at least two separate posts required)
 - Opens: Monday, October 21 at 7:00 am ET
 - Closes: Sunday, November 3 at 11:59 pm ET

Unit 06: Impacts of Climate Change**Weeks 9 & 10 – Monday, November 4 to Sunday, November 17****Readings**

- Website: Unit 06 Content
- Ares: Please refer to the Ares list for Unit and Group Discussion readings.

Assessments

- **Unit 06 Quiz**
 - Closes: Sunday, November 17 by 11:59 pm ET
- Post to **Group Discussion Topic 6** (at least two separate posts required)
 - Opens: Monday, November 4 at 7:00 am ET
 - Closes: Sunday, November 17 at 11:59 pm ET
- Submit **Climate Change Projections Assignment**
 - Due: Sunday, November 17 at 11:59 PM

Unit 07: Adaptation and Mitigation**Weeks 11 & 12 – Monday, November 18 to Friday, November 29 (Please Note: Final deadline is a Friday)****Readings**

- Website: Unit 07 Content
- Ares: Please refer to the Ares list for Unit and Group Discussion readings.

Assessments

- **Unit 07 Quiz**
 - Closes: Friday, November 29 by 11:59 pm ET
- Post to **Group Discussion Topic 7** (at least two separate posts required)
 - Opens: Monday, November 18 at 7:00 am ET
 - Closes: Friday, November 29 at 11:59 pm ET

Assessment Breakdown

The grade determination for this course is indicated in the following table. Select **Content** on the navbar to locate **Assessments** in the table of contents panel to review details of each assessment. Close (or due) dates can be found under the Schedule heading of this outline.

Description	Weighting (%)	Due Date
Unit Quizzes	10%	Throughout Semester (see schedule for dates)
Group Discussion Topic	10%	Week 4 (October 2)
Group Discussion Posts	15%	Throughout Semester (see schedule for dates)
Climate Change Projections Assignment	25%	Week 10 (November 17)
Online Final Exam	40%	
TOTAL	100%	

Final Exam

Date: Dec 11

Time: Wed 8:30am-10:30am

Location: SEE*ONLINE *Please see Web Advisor closer to the date of scheduled final for location.*

To understand rules and regulations regarding Examinations students are encouraged to read Student's Responsibilities (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/examinations/>)

If the student is unable to meet the final exam requirements due to medical, psychological or compassionate circumstances they are encouraged to review Student's Responsibilities in the Academic Consideration, Appeals and Petitions (<https://calendar.uoguelph.ca/undergraduate-calendar/undergraduate-degree-regulations-procedures/academic-consideration-appeals-petitions/>) section of the Academic Calendar.

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.

Technology Requirements and Technical Support

Courselink System Requirements

You are responsible for ensuring that your computer system meets the necessary system requirements. (<https://opened.uoguelph.ca/student-resources/system-and-software-requirements/>) Use the browser check (<https://courselink.uoguelph.ca/d2l/systemCheck/>) tool to ensure your browser settings are compatible and up to date. (Results will be displayed in a new browser window)

This course uses **Zoom** as a video communication tool. Review the Zoom information for students (<https://support.opened.uoguelph.ca/students/courselink/tools/content/zoom/>) (uoguelph) (<https://support.opened.uoguelph.ca/students/courselink/tools/content/zoom/>) to ensure that your computer meets the technical requirements.

Technical Skills

As part of your online experience, you are expected to use a variety of technology as part of your learning:

- Manage files and folders on your computer (e.g., save, name, backup, rename, delete, and check properties);
- Install software, security, and virus protection;
- Use office applications (e.g., Word, PowerPoint, Excel, or similar) to create documents;
- Be comfortable uploading and downloading saved files;
- Communicate using email (e.g., create, receive, reply, print, send, download, and open attachments);
- Navigate the CourseLink learning environment and use the essential tools, such as **Dropbox**, **Quizzes**, **Discussions**, and **Grades** (the instructors for this are given in your course);
- Access, navigate, and search the internet using a web browser (e.g., Chrome, Firefox, Microsoft Edge, Safari, etc.);
- Perform online research using various search engines (e.g., Google) and library databases.

Technical Support

If you need any assistance with the software tools or the CourseLink website, contact CourseLink Support.

CourseLink Support

University of Guelph

Day Hall, Room 211

Email: courselink@uoguelph.ca (https://calendar.uoguelph.ca/syllabi/2024-fall/envs-2270-de01-envs_2270_de01/ email to: courselink@uoguelph.ca)

Tel: 519-824-4120 ext. 56939

Toll-Free (CAN/USA): 1-866-275-1478

Walk-In Hours (Eastern Time):

Monday thru Friday: 8:30 am-8:30pm

Phone/Email Hours (Eastern Time):

Monday thru Friday: 8:30am-8:30pm

Saturday: 10:00am - 4:00pm

Sunday: 12:00pm - 6:00pm

Standard Statements for Online Courses

Acceptable Use

The University of Guelph has an Acceptable Use Policy (<https://ithelp.uoguelph.ca/policy/acceptable-use-policy/>), which you are expected to adhere to.

Communicating with Your Instructor

During the course, your instructor will interact with you on various course matters in the course website using the following ways of communication:

- **Announcements:** The instructor will use Announcements on the Course Home page to provide you with course reminders and updates. Please check this section frequently for course updates from your instructor.
- **Ask Your Instructor Discussion:** Use this discussion forum to ask questions of your instructor about the content or course-related issues with which you are unfamiliar. If you encounter difficulties, the instructor is here to help you. Please post general course-related questions to the discussion forum so that all students have an opportunity to review the response. To access this discussion forum, select **Discussions** from the **Tools** dropdown menu.
- **Email:** If you have a conflict that prevents you from completing course requirements or have a question concerning a personal matter, you can send your instructor a private message by email. The instructor will generally respond to your email within 48 to 72 hours.

Netiquette Expectations

For distance education courses, the course website is considered the classroom and the same protections, expectations, guidelines, and regulations used in face-to-face settings apply, plus other policies and considerations that come into play specifically because these courses are online.

Inappropriate online behaviour will not be tolerated. Examples of inappropriate online behaviour include:

- Posting inflammatory messages about your instructor or fellow students;
- Using obscene or offensive language online;
- Copying or presenting someone else's work as your own;
- Adapting information from the Internet without using proper citations or references;
- Buying or selling term papers or assignments;
- Posting or selling course materials to course notes websites;
- Having someone else complete your quiz or completing a quiz for/with another student;
- Stating false claims about lost quiz answers or other assignment submissions;
- Threatening or harassing a student or instructor online;
- Discriminating against fellow students, instructors, and/or TAs;
- Using the course website to promote profit-driven products or services;
- Attempting to compromise the security or functionality of the learning management system;
- Sharing your username and password; and
- Recording lectures without the permission of the instructor.

Submission of Assignments to Dropbox

The **Group Discussion Topic** and the **Short Written Assignment** should be submitted electronically via the online Dropbox tool. When submitting your assignments using the **Dropbox** tool, do not leave the page until your assignment has been successfully uploaded. To verify that your submission was

complete, you can view the submission history immediately after the upload to see which files were uploaded successfully. The system will also email you a receipt. Save this email receipt as proof of submission.

Be sure to keep a back-up copy of all of your assignments in the event that they are lost in transition. In order to avoid any last-minute computer problems, your instructor strongly recommends you save your assignments to a cloud-based file storage (e.g., Google Docs) or send them to your email account, so that should something happen to your computer, the assignment could still be submitted on time or resubmitted.

It is your responsibility to submit your assignments on time as specified on the Schedule. Be sure to check the technical requirements and make sure you have the proper computer, that you have a supported browser, and that you have reliable Internet access. Remember that technical difficulty is not an excuse not to turn in your assignment on time. Don't wait until the last minute as you may get behind in your work.

If, for some reason, you have a technical difficulty when submitting your assignment electronically, please contact your instructor or CourseLink Support (<https://support.opened.uoguelph.ca/contact/>).

Late Policy and Extension Considerations

If you choose to submit your assignments late, the full allocated mark will be reduced by 5% per day after the deadline for the submission of the assignment.

Extensions will be considered for medical reasons or other extenuating circumstances. If you require an extension, discuss this with the instructor as soon as possible and well before the due date. Barring exceptional circumstances, extensions will not be granted once the due date has passed. These rules are not designed to be arbitrary, nor are they inflexible. They are designed to keep you organized, to ensure that all students have the same amount of time to work on assignments, and to help to return marked materials to you in the shortest possible time.

There will be NO extensions given for posts to the Group Discussion Topics.

Obtaining Grades and Feedback

Unofficial assessment marks will be available in the **Grades** tool of the course website.

Your instructor will attempt to have grades posted online within 2 weeks of the submission deadline, if the assignment was submitted on time. Once your assignments are marked, you can view your grades on the course website by selecting **Grades** from the **Tools** dropdown menu on the navbar. Your course will remain open to you for seven days following the last day of the final exam period.

University of Guelph degree students can access their final grade by logging into WebAdvisor (<https://webadvisor.uoguelph.ca>) (using your U of G central ID). Open Learning program students should log in to the OpenEd Student Portal (<https://courses.opened.uoguelph.ca/portal/logon.do?method=load>) to view their final grade (using the same username and password you have been using for your courses).

Rights and Responsibilities When Learning Online

For distance education (DE) courses, the course website is considered the classroom and the same protections, expectations, guidelines, and regulations used in face-to-face settings apply, plus other policies and considerations that come into play specifically because these courses are online. For more information on your rights and responsibilities when learning in the online environment, visit Rights and Responsibilities (<http://opened.uoguelph.ca/student-resources/rights-and-responsibilities/>).

Standard Statements for Open Learning Program Students

Open Learning program (OLp) students are required to follow the same Senate-approved academic regulations as University of Guelph undergraduate students and should consult the Open Learning Program Calendar or the Open Learning Program Counsellor for information and guidance on academic and administrative policies, procedures, and services, including academic accommodations and accessibility.

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/navigators/>) 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/>)

Copyright Notice

Content within this course is copyright protected. Third party copyrighted materials (such as book chapters and articles) have either been licensed for use in this course or have been copied under an exception or limitation in Canadian Copyright law. The fair dealing exemption in Canada's Copyright Act permits students to reproduce short excerpts from copyright-protected materials for purposes such as research, education, private study, criticism and review, with proper attribution. Any other copying, communicating, or distribution of any content provided in this course, except as permitted by law, may be an infringement of copyright if done without proper license or the consent of the copyright owner. Examples of infringing uses of copyrighted works would include uploading materials to a commercial third-party web site, or making paper or electronic reproductions of all, or a substantial part, of works such as textbooks for commercial purposes. Students who upload to CourseLink copyrighted materials such as book chapters, journal articles, or materials taken from the Internet, must ensure that they comply with Canadian Copyright law or with the terms of the University's electronic resource licenses. For more information about students' rights and obligations with respect to copyrighted works, review <https://www.lib.uoguelph.ca/about/policies/fair-dealing-policy> (<https://www.lib.uoguelph.ca/about/policies/fair-dealing-policy/>)

cim |all