

# Course Schedule

Important: **ALL TIMES EASTERN** - Please see the [University Policies](#) section of your Course Outline for details

For information regarding grading, please refer to the [Grade Breakdown](#) page.

Module	Week	Readings and Other Assigned Material	Activities and Assignments	End/Due Date
	<a href="#">Week 1: Introduction</a>	Chapter 1: Climate Change in the Public Sphere	Groups for <a href="#">Discussion Activities</a> will be created by Technical Support	Check after Monday, January 9, 2023 at 12:01 AM
			Week 1 <a href="#">Discussion Activities</a>	Sunday, January 15, 2023 at 11:59 PM
			Week 2 <a href="#">Discussion Activities</a>	Friday, January 20, 2023 at 11:59 PM
	<a href="#">Week 2: Introduction to the Climate System</a>	Chapter 2: Basic System Dynamics	Complete your weekly quiz	Wednesday, January 25, 2023 at

([Quizzes](#)).

11:59 PM

Module 1

[Week 3: The Earth and Energy](#)

Chapter 3: Climate Controls: Energy from the Sun

Week 3  
[Discussion](#)  
[Activities](#)

Friday,  
January 27,  
2023 at  
11:59 PM

Complete your  
weekly quiz  
([Quizzes](#)).

Wednesday,  
February 1,  
2023 at  
11:59 PM

Week 4  
[Discussion](#)  
[Activities](#)

Friday,  
February 3,  
2023 at  
11:59 PM

[Week 4: The Carbon Cycle](#)

Chapter 5: Climate Controls: The Greenhouse Effect

Complete your  
weekly quiz  
([Quizzes](#)).

Wednesday,  
February 8,  
2023 at  
11:59 PM

Week 5  
[Discussion](#)

Friday,  
February 10,  
2023 at

Activities

11:59 PM

[Week 5: Past and Future Climate](#) Chapter 7: Climate Models

Complete your weekly quiz ([Quizzes](#)).

Wednesday, February 15, 2023 at 11:59 PM

Submit your Module 1 [Discussion Summary Assignment](#) (Weeks 1-5)

Friday, February 17, 2023 at 11:59 PM

[Week 6: Impacts on Natural Systems](#) Chapter 9: Climate Change Impacts on Natural Systems

Week 6 [Discussion Activities](#)

Friday, February 17, 2023 at 11:59 PM

Complete your weekly quiz ([Quizzes](#)).

**Wednesday, March 1, 2023 at 11:59 PM**

**Reading Week (Saturday, February 18, 2023 to Sunday, February 26, 2023)**

Week 7

Friday,

## Module 2

[Week 7: Impacts on Humans](#)

Chapter 10:  
Climate Change  
Impacts and  
Adaptation in  
Human Systems

[Discussion  
Activities](#)

March 3,  
2023 at  
11:59 PM

Complete your  
weekly quiz  
([Quizzes](#)).

Wednesday,  
March 8,  
2023 at  
11:59 PM

[Week 8:  
Assessing  
Vulnerability](#)

There is no  
chapter assigned  
this week.

Week 8  
[Discussion  
Activities](#)

Friday,  
March 10,  
2023 at  
11:59 PM

Complete your  
weekly quiz  
([Quizzes](#)).

Wednesday,  
March 15,  
2023 at  
11:59 PM

[Week 9:  
Adaptation](#)

There is no new  
chapter assigned  
this week. Please  
refer back to  
Chapter 10.

Week 9  
[Discussion  
Activities](#)

Friday,  
March 17,  
2023 at  
11:59 PM

Complete your  
weekly quiz

Wednesday,  
March 22,  
2023 at



[\(Quizzes\)](#). 11:59 PM

[Assignment 1: Climate Change Impacts and Adaptation at the Community Scale](#) is due Friday, March 24, 2023 at 11:59 PM

Submit your Module 2 [Discussion Summary Assignment](#) (Weeks 6-9) Friday, March 24, 2023 at 11:59 PM

[Week 10: Introduction to Mitigation](#)

Chapter 6 Climate Change Mitigation: Reducing Greenhouse Gas Emissions and Transforming the Energy System

Week 10 [Discussion Activities \(Optional\)](#) Friday, March 24, 2023 at 11:59 PM

Complete your weekly quiz [\(Quizzes\)](#). Wednesday, March 29, 2023 at 11:59 PM

Chapter 11: Climate Change Policy and Governance

Week 11 [Discussion Activities \(Optional\)](#) Friday, March 31, 2023 at 11:59 PM

## Module 3

[Week 11: Politics, Policy and Governance](#)

United Nations Framework Convention on Climate Change. (2015). [The Paris Agreement](#). (pp. 1-18).

Complete your weekly quiz ([Quizzes](#)).

Wednesday, April 5, 2023 at 11:59 PM

Week 12  
[Discussion Activities](#)  
(Optional)

Thursday, April 6, 2023 at 11:59 PM

Complete your weekly quiz ([Quizzes](#)).

Monday, April 10, 2023 at 11:59 PM

[Week 12: Sustainability Transformations: Linking Adaptation and Mitigation in Communities](#)

Chapter 12: Understanding Climate Change: Pathways Forward

[Assignment 2: Emissions and Mitigation at the Community Scale](#) is due.

Monday, April 17, 2023 at 11:59 PM



# Contact Information

## Announcements

You are expected to check **Announcements** on the **Course Home** page on a regular basis. To ensure you are viewing the complete list of announcements, you may need to click **Show All Announcements**.

## Discussions

Discussion topics can be accessed by clicking **Connect** and then **Discussions** on the course navigation bar above. A [General Discussion](#) topic has also been made available to allow you to communicate with your peers in this course. Your instructor may drop in at this discussion topic.

## Contact Us

### Who and Why

### Contact Details

#### Instructor and TA

- Course-related questions (e.g., course content, deadlines, assignments, etc.)
- Questions of a personal nature

**Post your course-related questions** to the [Ask the Instructor](#) discussion topic. This allows other students to benefit from your question as well.

**Questions of a personal nature** can be directed to your instructor or your TA.

Instructor: Mohammed Uddin  
[msalim.uddin@uwaterloo.ca](mailto:msalim.uddin@uwaterloo.ca)

Your instructor checks email and the [Ask the Instructor](#) discussion topic frequently and will make every effort to reply to your questions within 48 hours, Monday to Friday.

[learnhelp@uwaterloo.ca](mailto:learnhelp@uwaterloo.ca)

#### Technical Support,

Include your full name, WatIAM user ID, student number,



Centre for Extended  
Learning

and course name and number.

- Technical problems with Waterloo LEARN Technical support is available during regular business hours, Monday to Friday, 8:30 AM to 4:30 PM (Eastern Time).

[IST Knowledge Base: For Students](#)

**Learner Support Services,**  
Centre for Extended  
Learning

[Student Resources](#)

[extendedlearning@uwaterloo.ca](mailto:extendedlearning@uwaterloo.ca)

- General inquiries
  - Examination information
- Include your full name, WatIAM user ID, student number, and course name and number.
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# Course Description and Learning Outcomes

## Course Description

Climate change is one of the most profound environmental and social issues affecting communities, nations and individuals. This course is an introduction to this global challenge, including its scientific underpinnings, history, potential impacts on natural systems and human societies around the world, and two societal responses: adaptation and greenhouse gas mitigation. Opportunities to develop sustainable resilient communities, as well as Canadian climate change policy responses will be highlighted.

The goal of this course is to provide students of any discipline with the fundamentals of climate change: both biophysical and human dimensions. This course will be delivered entirely online, and will provide students with an opportunity to hone science communication skills, explore sources of scientific uncertainty, political complexities, and equity implications of this global challenge.

Climate change is a pervasive and challenging phenomenon that can be viewed through a multitude of lenses. A scientific lens, for instance, reveals altered ecosystems and climatic tipping points while the lens of ethics raises the question of the right to develop and influence the well-being of others while doing so. By carefully laying the scientific foundations, we will explore creative, positive, nuanced visions of the future that are rooted in scientific understanding of earth systems but also capture (or at least begins a conversation about) core human values, such as equity, compassion, innovation, and connection. A wider variety of actors are increasingly taking action on climate change, or bear some responsibility for doing so, giving us the opportunity to analyze coordinated, effective responses that go beyond international negotiations.

This course is intended for undergraduate students of all backgrounds (arts, social sciences, and sciences) who wish to explore the biophysical and human dimensions of climate change. The course will also help students to hone their abilities to communicate potential solutions to others.

## Learning Outcomes

Through a deeply interdisciplinary approach and with an emphasis on fostering effective communication skills, successful students in this course will:

- Demonstrate understanding of key elements of the climate system, and how these elements are being altered by the human emission of greenhouse gases.
- Carefully consider the impacts of climate change on both human and natural systems.
- Articulate the difference between climate change adaptation and mitigation, and understand a portfolio of actions that communities can take to respond to climate change.
- Understand the key issues at play in international climate change negotiations, as well as recent Canadian policy proposals.
- Investigate futures that are fundamentally sustainable, low-carbon, and resilient to climate change impacts.

*This online course was developed by Sarah Burch, with instructional design and multimedia development support provided by the Centre for Extended Learning. Further media production was provided by Instructional Technologies and Multimedia Services.*

# About the Course Author

## Course Author — Sarah Burch Associate Professor and Canada Research Chair



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Sarah Burch, PhD is an assistant professor in the Department of Geography and Environmental Management, University of Waterloo, Canada. Dr. Burch has published widely on transformative responses to climate change at the community scale, and innovative strategies for governing sustainability. She co-teaches a Massive Open Online Course called 'Climate Literacy: Navigating Climate Change Conversations', which reaches thousands of students in over 130 countries.

Dr. Burch received a PhD in resource management and environmental studies from the University of British Columbia, Canada (2009) and held a postdoctoral fellowship at the University of Oxford (2009-2011). She is a co-ordinating lead author in the second Assessment Report on Climate Change in Cities, and North American co-ordinator of the Earth System Governance network of Research Fellows. She was a contributing author to the fourth assessment report of the Intergovernmental Panel on Climate Change (winner of the Nobel Peace Prize in 2007) and was awarded a Banting Fellowship for her work on sustainability innovation. Her most recent book (2014) is entitled 'Understanding Climate Change: Science, Policy and Practice.'

# Materials and Resources

## Textbook

### Required

1. Burch, S. L., & Harris, S. E. (2021). *Understanding Climate Change: Science, Policy, and Practice* (2nd ed.). Toronto: University of Toronto Press, Scholarly Publishing Division.

A free e-text version of this textbook is available through the [UW Library website](#).

**For textbook ordering information, please contact the [W Store | Course Materials + Supplies](#).**

For your convenience, you can compile a list of required and optional course materials through [BookLook](#) using your Quest userID and password. If you are having difficulties ordering online and wish to call the Waterloo Bookstore, their phone number is +1 519-888-4673 or toll-free at +1 866-330-7933. Please be aware that textbook orders **CANNOT** be taken over the phone.

## Resources

- Library services for [Co-op students on work term and students taking online courses](#)

# Grade Breakdown

The following table represents the grade breakdown of this course.

Activities and Assignments	Weight (%)
Quizzes (best 10 out of 11)	40%
Discussion Summary Assignments	20%
Assignment 1: Climate Change Impacts and Adaptation at the Community Scale	20%
Assignment 2: Emissions and Mitigation at the Community Scale	20%

**Note:** The late penalty for written assignments (Discussion Summaries for Modules 1, 2, and 3; Assignments 1 and 2) is 5% per day.

## Official Grades

Official Grades and Academic Standings are available through [Quest](#).

# University Policies

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## Submission Times

Please be aware that the University of Waterloo is located in the **Eastern Time Zone** (GMT or UTC-5 during standard time and UTC-4 during daylight saving time) and, as such, the time that your activities and/or assignments are due is based on this zone. If you are outside the Eastern Time Zone and require assistance with converting your time, please try the [Ontario, Canada Time Converter](http://www.worldtimeserver.com/convert_time_in_CA-ON.aspx) ([http://www.worldtimeserver.com/convert\\_time\\_in\\_CA-ON.aspx](http://www.worldtimeserver.com/convert_time_in_CA-ON.aspx)).

## Accommodation Due to Illness

**If your instructor has provided specific procedures for you to follow if you miss assignment due dates, term tests, or a final examination, adhere to those instructions.** Otherwise:

### Self-Declared Absences for Undergraduate Students

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Undergraduate students have the option to self-declare a short-term absence during the formal lecture period by following the [Undergraduate student short-term absences](https://uwaterloo.ca/registrar/current-students/undergraduate-student-short-term-absences) (<https://uwaterloo.ca/registrar/current-students/undergraduate-student-short-term-absences>) process outlined by the Registrar's Office.

### Missed Assignments/Tests/Quizzes

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Contact the instructor as soon as you realize there will be a problem, and preferably within 48 hours, but no more than 72 hours, have a medical practitioner complete a [Verification of Illness Form](https://uwaterloo.ca/campus-wellness/health-services/student-medical-clinic) (<https://uwaterloo.ca/campus-wellness/health-services/student-medical-clinic>).

**Email** a scanned copy of the Verification of Illness Form to your instructor. In your email to the instructor, provide your name, student ID number, and exactly what course activity you missed.

Further information regarding Management of Requests for Accommodation Due to Illness can be found on the [Accommodation due to illness](https://uwaterloo.ca/registrar/current-students/accommodation-due-to-illness) (<https://uwaterloo.ca/registrar/current-students/accommodation-due-to-illness>) page.

### Missed Final Examinations

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Contact your instructor as soon as possible if you are unable to fulfill academic requirements due to illness or other extenuating circumstances.

Further information about Examination [Accommodations](http://ugradcalendar.uwaterloo.ca/page/Acad-Regs-Accommodations) (<http://ugradcalendar.uwaterloo.ca/page/Acad-Regs-Accommodations>) is available in the Undergraduate Calendar.

## Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect, and responsibility. **If you have not already completed the online tutorial regarding academic integrity you should do so as soon as possible.** Undergraduate

students should see the [Academic Integrity Tutorial \(https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integrity-tutorial\)](https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/academic-integrity-tutorial) and graduate students should see the [Graduate Students and Academic Integrity \(https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/graduate-students-and-academic-integrity\)](https://uwaterloo.ca/library/get-assignment-and-research-help/academic-integrity/graduate-students-and-academic-integrity) website.

Proper citations are part of academic integrity. Citations in CEL course materials usually follow CEL style, which is based on APA style. Your course may follow a different style. If you are uncertain which style to use for an assignment, please confirm with your instructor or TA.

For further information on academic integrity, please visit the [Office of Academic Integrity \(http://uwaterloo.ca/academic-integrity/\)](http://uwaterloo.ca/academic-integrity/).

## Turnitin

**Turnitin.com:** Text matching software (Turnitin®) may be used to screen assignments in this course. Turnitin® is used to verify that all materials and sources in assignments are documented. Students' submissions are stored on a U.S. server, therefore students must be given an alternative (e.g., scaffolded assignment or annotated bibliography), if they are concerned about their privacy and/or security. Students will be given due notice, in the first week of the term and/or at the time assignment details are provided, about arrangements and alternatives for the use of Turnitin® in this course.

It is the responsibility of the student to notify the instructor if they, in the first week of term or at the time assignment details are provided, wish to submit the alternate assignment.

[Turnitin® at Waterloo \(https://uwaterloo.ca/academic-integrity/integrity-waterloo-faculty/turnitinr-waterloo\)](https://uwaterloo.ca/academic-integrity/integrity-waterloo-faculty/turnitinr-waterloo)

## Discipline

A student is expected to know what constitutes [academic integrity \(http://uwaterloo.ca/academic-integrity/\)](http://uwaterloo.ca/academic-integrity/) to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about "rules" for group work/collaboration, should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to [Policy 71 - Student Discipline \(https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71\)](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71). For typical penalties, check [Guidelines for the Assessment of Penalties \(https://uwaterloo.ca/secretariat/guidelines/guidelines-assessment-penalties\)](https://uwaterloo.ca/secretariat/guidelines/guidelines-assessment-penalties).

## Appeals

A decision made or penalty imposed under [Policy 70 - Student Petitions and Grievances \(https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70\)](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70), (other than a petition) or [Policy 71 - Student Discipline \(https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71\)](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-71), may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to [Policy 72 - Student Appeals \(https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-72\)](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-72).



## Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read [Policy 70 - Student Petitions and Grievances](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70) (<https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policy-70>), Section 4. When in doubt please be certain to contact the department's administrative assistant who will provide further assistance.

## Final Grades

In accordance with [Policy 46 - Information Management](https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policies/policy-46-information-management) (<https://uwaterloo.ca/secretariat/policies-procedures-guidelines/policies/policy-46-information-management>), Appendix A - Access to and Release of Student Information, the Centre for Extended Learning does not release final examination grades or final course grades to students. Students must go to [Quest](https://uwaterloo.ca/quest/) (<https://uwaterloo.ca/quest/>) to see all final grades. Any grades posted in Waterloo LEARN are unofficial.

## AccessAbility Services

[AccessAbility Services](https://uwaterloo.ca/accessability-services/) (<https://uwaterloo.ca/accessability-services/>), located in Needles Hall, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodation to lessen the impact of your disability, please register with AccessAbility Services at the beginning of each academic term and for each course.

## Accessibility Statement

The Centre for Extended Learning strives to meet the needs of all our online learners. Our ongoing efforts to become aligned with the [Accessibility for Ontarians with Disabilities Act \(AODA\)](http://www.ontario.ca/laws/statute/05a11) (<http://www.ontario.ca/laws/statute/05a11>) are guided by University of Waterloo accessibility [Legislation](https://uwaterloo.ca/human-resources/accessibility/legislation) (<https://uwaterloo.ca/human-resources/accessibility/legislation>) and policy and the [World Wide Web Consortium's \(W3C\) Web Content Accessibility Guidelines \(WCAG\) 2.0](http://www.w3.org/TR/WCAG20/) (<http://www.w3.org/TR/WCAG20/>). The majority of our online courses are currently delivered via the Desire2Learn Learning Environment. Learn more about [Desire2Learn's Accessibility Standards Compliance](http://www.d2l.com/accessibility/standards/) (<http://www.d2l.com/accessibility/standards/>).

## Use of Computing and Network Resources

Please see the [Guidelines on Use of Waterloo Computing and Network Resources](https://uwaterloo.ca/information-systems-technology/about/policies-standards-and-guidelines/campus-network/guidelines-use-waterloo-computing-and-network-resources) (<https://uwaterloo.ca/information-systems-technology/about/policies-standards-and-guidelines/campus-network/guidelines-use-waterloo-computing-and-network-resources>).

## Copyright Information

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If there are any questions about this notice, please contact the University of Waterloo, Centre for Extended Learning, Waterloo, Ontario, Canada, N2L 3G1 or [extendedlearning@uwaterloo.ca](mailto:extendedlearning@uwaterloo.ca) (<mailto:extendedlearning@uwaterloo.ca>).