

GGR308H1-F: Canadian Arctic and Subarctic Environments

University of Toronto

Department of Geography & Planning

Fall 2020

Course Information

<i>Lecture:</i>	Tuesday 10:10 am - 12 pm (Toronto time/Eastern Time) LEC0101/9101 (Online)
<i>Instructor:</i>	Sarah Peirce Assistant Professor, Teaching Stream s.peirce@utoronto.ca
<i>Teaching Assistant:</i>	Cathal Doherty, cathal.doherty@mail.utoronto.ca

Course Description

We will explore the physical features and processes of Arctic and Subarctic regions including climate, cryosphere, hydrology, geomorphology, as well as terrestrial and aquatic ecosystems. Current stresses of climate change and pollution are also considered, including their impact on Canadian communities.

Prerequisite(s): Equivalent of one full-year science course at the 200-level or permission from the instructor.

Recommended preparation: JEG100H1

Learning Outcomes

This course, and the following learning outcomes, have been designed to enhance your knowledge of the physical forms and processes associated with the Arctic and Subarctic while strengthening your writing and communication skills. These skills are essential in the sciences and will be valuable regardless of what academic or career path you pursue in the future.

By the end of the course, you will be able to:

- Identify and describe the main physical features (e.g. snow, sea ice, and permafrost) found in Arctic and Subarctic regions.
- Explain the fundamental Earth system processes associated with the Arctic and Subarctic and their connectivity to the global climate system.
- Explain and evaluate the ways in which past and present climate, as well as climate change, impacts Arctic and Subarctic environments, ecosystems, organisms, and Canadian communities.

- Critically assess and synthesize information from reliable sources related to the Arctic and Subarctic for presentation in various (e.g. written, visual, etc.) formats for an appropriate audience.

Course Format and Expectations

Online Delivery

This course is being offered online only. Until otherwise stated, lectures for this course will be delivered live during the scheduled time (Toronto time/Eastern Time) using BB Collaborate and recorded for later (asynchronous) viewing.

You are encouraged to attend the live lectures, although this is not required to complete or succeed in the course. Any necessary changes to the mode of delivery due to technical issues, community health guidelines (i.e. opportunities for in-person office hours), or other issues will be communicated through Quercus.

To succeed in GGR308, you are expected to be an active course participant. This includes reaching out and engaging with your teaching team and peers as well as scheduling an appropriate amount of time to complete course modules regularly.

Quercus

This course will use the online teaching and learning platform, [Quercus](#), for providing you with important course materials including announcements, lecture slides, lecture recordings, assignment guidelines, and grades. Lecture slides will be posted in advance of lecture sessions.

Each week of class there will be a new Quercus module released dedicated to that week's topic. These modules contain lecture slides, helpful resources, practice quizzes, and a discussion forum for sharing comments and questions as well as connecting with your peers and teaching team.

It is **your responsibility** to visit the website regularly to access important course information and materials.

Active Engagement

Active learning can improve student engagement and long-term retention of course material. This course uses activities like polls, activity sheets, practice quizzes, discussion forums, and brainstorming to enhance the learning experience of you and your peers. Some of these activities can be completed during lecture time and others will be integrated into the weekly course modules. Please always be prepared to participate and to be respectful to your peers and instructors in this course.

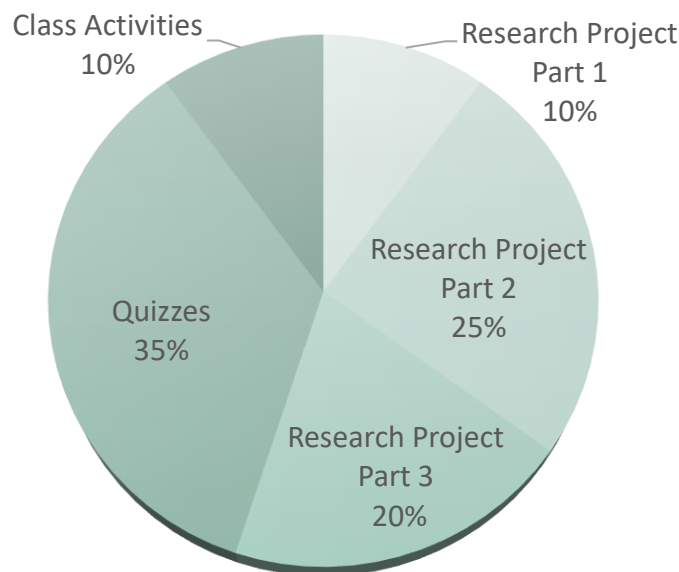
Course Materials

There is no required textbook for this course. Readings or resources that complement course materials and course activities will be posted on Quercus.

The following resources available through Quercus 'Library Course Reserves' will also be helpful for this course:

- ACIA (2005). *Arctic Climate Impact Assessment*. Cambridge University Press.
- AMAP (2017). *Snow, Water, Ice and Permafrost in the Arctic (SWIPA) 2017*. Arctic Monitoring and Assessment Programme (AMAP).
- AMAP (2011). *Snow, Water, Ice and Permafrost in the Arctic (SWIPA): Climate Change and the Cryosphere*. Arctic Monitoring and Assessment Programme (AMAP).
- French, H.M (2018). *The Periglacial Environment*. 4th edition. John Wiley and Sons.
- Pielou, E.C. (1995). *A Naturalist's Guide to the Arctic*. University of Cambridge Press.
- Serreze, M.C. and Barry R.G. (2014). *The Arctic Climate System*, 2nd edition. Cambridge University Press.

Methods of Evaluation



Additional details for each assignment will be provided during lectures and available on Quercus. All assignments will be submitted electronically on Quercus (see schedule below).

Class Activities

- Class Activity 1 (5%) – Due September 29, 2020
- Class Activity 2 (5%) – Due October 20, 2020

Throughout the semester, you will be assigned short activities (e.g. brainstorming, etc.) related to course content for marks.

Quizzes

- Quiz 1 (10%) – Due October 6, 2020
- Quiz 2 (10%) – Due November 3, 2020
- Quiz 3 (15%) – Due December 8, 2020

You will complete three online quizzes to assess your understanding of course concepts. Quizzes will have various question types, including multiple choice and short answer.

Arctic and Subarctic Research Project

- Part 1 (10%) – Annotated bibliography – Due October 13, 2020
- Part 2A (5%) – Peer feedback of draft infographic posters due November 24, 2020
 - NOTE: Draft posters are due November 17, 2020
- Part 2B (20%) – Final infographic poster due December 1, 2020
- Part 3 (20%) – Final project due December 15, 2020 (Final Assessment Period)

You will investigate a physical feature (e.g. snow, sea ice, land ice, or permafrost) of the Arctic and Subarctic environment, including its response to climate change, and its relationship with Canadian communities.

Assignment Submission and Late Penalties

- All assignments and quizzes will be submitted electronically on Quercus.
- Where applicable (see assignment guidelines for full details), term work must be submitted on Quercus by 11:59 pm (Toronto time/Eastern Time) on the date they are due. Late assignments will receive a deduction of 5% per day (including Saturday and Sunday). Late assignments will not be accepted after 7 days past the due date without an approved extension.
- Quizzes will be open for a period of time on the day they are due, during which time you must complete and submit your quiz.
- Quizzes do not have late penalties and will not be accepted after the due date and time without approved extensions.
- Extensions without penalty can be granted for reasons of accommodation, illness, or emergencies. Please contact your instructor as soon as possible to discuss extensions.

Turnitin.com

The following applies to all written assignments submitted through Quercus. Please contact me if you have any questions or would like to opt-out of using Turnitin.

Normally, students will be required to submit their course essays to Turnitin.com for review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University's use of the Turnitin.com service are described on the Turnitin.com website.

Course Schedule

Below is the anticipated course schedule. Please check Quercus regularly for any changes to topics.

Week 1 – September 15

- Topic – Introduction to the Arctic and Subarctic

Week 2 – September 22

- Topic – Climate
- Movie – Inuit Knowledge and Climate Change

Week 3 – September 29

- Topic – Climate Change, Snow
- Due date – Class Activity 1

Week 4 – October 6

- Topic – Land Ice
- Due date – Quiz 1

Week 5 – October 13

- Topic – Permafrost and Periglacial Landforms
- Due date – Research Project Part 1 – Annotated bibliography

Week 6 – October 20

- Topic – Arctic Hydrology
- Due date – Class Activity 2

Week 7 – October 27

- Topic – The Arctic Ocean and Sea Ice

Week 8 – November 3

- Topic – The Arctic Coastline
- Due date – Quiz 2

Fall Break – November 9-13

Week 9 – November 17

- Topic – Ecosystems and Vegetation
- Due date – Research Project Part 2A – Draft infographic poster due

Week 10 – November 24

- Topic – Animals
- Due date – Research Project Part 2A – Peer feedback on draft infographic posters

Week 11 – December 1

- Topic – Pollution in the Arctic
- Due date – Research Project Part 2B – Final Infographic Poster

Week 12 – December 8

- Topic – The Future
- Due date – Quiz 3

Final Assessment Period

- Due December 15, 2020 – Research Project Part 3 – Final Project

Course Policies and Statements

Accessibility

Students with diverse learning styles and needs are welcome in this course. If you have a disability or health consideration that may require accommodations, please approach me and/or the Accessibility Services Office as soon as possible at 416-978-8060 or <http://www.accessibility.utoronto.ca/>.

Equity Statement

The University of Toronto is committed to equity, human rights and respect for diversity. All members of the learning environment in this course should strive to create an atmosphere of mutual respect where all members of our community can express themselves, engage with each other, and respect one another's differences. U of T does not condone discrimination or harassment against any persons or communities.

Communication and Email

You are encouraged to ask course-related questions during class and office hours, on course discussion forums, and using Quercus Inbox or email. When using email, you must use your U of T account as other email addresses may be filtered as spam. Also, please include GGR308 in the subject heading, and your full name in the text.

I will typically respond to Quercus Inbox messages and emails within 24 hours, excluding weekends and holidays. Emails received after 5 pm will typically be replied to the following business day. Please follow up with your teaching team if you have not received a response within 2 business days.

Accommodations

If you are seeking accommodation for late term work, you should submit a request for special consideration to the instructor or academic unit as soon as possible and no later than one (1) week after the assignment or quiz due date.

The University is temporarily suspending the need for a doctor's note or medical certificate for absences from academic participation. Please use the Absence Declaration tool on ACORN to declare an absence if you require consideration for missed academic work. You are responsible for contacting your instructors to request the academic consideration you are seeking. Record each day of your absence as soon as it begins, up until the day before you return to classes or other academic activities.

Please alert the instructor as soon as possible, and at least two weeks in advance, if term work due dates conflict with religious observances so that reasonable alternate arrangements can be made.

Grade Change

Requests for re-marking of assignments or quizzes must be made to the instructor within two weeks of receiving the grade, after which the mark is considered final. Please provide a written document or email with your name, the course code, and a short explanation what you would like re-graded and why. Your material will be re-graded by the person who originally graded it (either TA or instructor). Please note that your mark can increase or decrease as a result of re-grading.

Academic Integrity

****If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. ****

The University of Toronto's [Code of Behaviour on Academic Matters](#) outlines the behaviours that constitute academic misconduct, the processes for addressing academic offences, and penalties that may be imposed. Potential offences include, but are not limited to:

- In papers and assignments:
 - Using someone else's ideas or words without appropriate acknowledgement.
 - Submitting your own work in more than one course without the permission of the instructor.
 - Making up sources or facts.
 - Obtaining or providing unauthorized assistance on any assignment (this includes working in groups on assignments that are supposed to be individual work).
- On quizzes, tests, and exams:
 - Using or possessing any unauthorized aid, including a cell phone.
 - Looking at someone else's answers.
 - Letting someone else look at your answers.
 - Misrepresenting your identity.
 - Submitting an altered test for re-grading.

- Misrepresentation:
 - Falsifying or altering any documentation required by the University, including (but not limited to) doctor's notes.
 - Falsifying institutional documents or grades.

All suspected cases of academic dishonesty will be investigated following the procedures outlined in the *Code of Behaviour on Academic Matters*.

Copyright

Lectures and course materials prepared by the instructor are considered by the University to be an instructor's intellectual property covered by the Copyright Act, RSC 1985, c C-42. Course materials such as PowerPoint slides and lecture recordings are made available to you for **your own study purposes**. These materials **cannot** be shared outside of the class or "published" in any way. Posting recordings or slides to other websites without the express permission of the instructor will constitute copyright infringement.

Additional Resources

Below are some helpful resources for this course. Click on each the link to find out more information.

Online Learning

- [Getting Ready for Online](#)
- [Recommended Technology Requirements for Remote/Online Learning](#)

Library and Writing Support

- Library services are available online at: <https://onesearch.library.utoronto.ca/ask>
- [Writing at the University of Toronto](#)
 - [How Not to Plagiarize](#)
 - [Advice on Academic Writing](#)

Support Services

- [Office of the Faculty Registrar](#)
- [Student Services and Support](#)

Mental Health

If you or someone you know is experiencing distress, there are resources on campus and off-campus to assist you including:

- [Safety & Support](#)
- [Health & Wellness](#)