

University of Toronto
Department of Geography & Planning

GGR401H1-S – Geomorphology and the Anthropocene

Course Information

<i>Time and Location:</i>	Thursday 2 – 4 pm Ontario Institute for Studies in Education (OI, OISE) 5250
<i>Instructor:</i>	Dr. Sarah Peirce
<i>Contact:</i>	Office – Sidney Smith, Rm 5019 Email – s.peirce@utoronto.ca
<i>Office Hours:</i>	TBD and by appointment

Course Description

The term 'Anthropocene' has been proposed as a new geologic epoch to represent the current geological time interval in which humans began to have a profound impact on Earth's systems. These anthropogenic impacts include drastic changes to the Earth's land surface including the rate, magnitude, and direction of geomorphological change.

This seminar course will consider the ways in which hillslope, fluvial, coastal, aeolian, and cryospheric domains have been altered or influenced by humans and the implications for geomorphology, environmental change, and natural hazards. In addition, we will consider the role of geomorphology as a science for understanding, investigating, monitoring, and predicting the changes in landscape form and processes.

Course weight: 0.5 Full Course Equivalent (FCE)

Prerequisite(s): 10.0 FCE's

Recommended preparation: 2.0 FCE's (science) in any of GGR/ESS/BIO/CHM/EEB/FOR

Learning Outcomes

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

- Describe and assess natural and anthropogenic agents of geomorphic change, including the impact that humans are having on the occurrence of various geomorphic forms, processes, and hazards;
- Critically evaluate the Anthropocene as a geological epoch in which humans profoundly impact the forms and processes that shape the landscape;
- Evaluate scientific literature in the field of geomorphology;
- Communicate scientific research and policies to a general and specialized audience using visual, oral, and written formats;
- Facilitate discussions and activities related to concepts in geomorphology.

Course Format

Course structure and readings

This course will be delivered using a combination of lectures as well as discussions and activities related to assigned readings to explore topics in geomorphology and the role of the Anthropocene.

This is a reading course, with one to three readings typically assigned each week. During most classes, the group will be divided into smaller groups to discuss questions and topics associated with the weekly readings and lecture material. Following smaller group discussions or activities, we will come back together to openly discuss main themes. To be successful in this course, you must complete the readings, submit weekly questions, and contribute to all small and large group discussions.

Classroom culture

This upper-year course requires active participation from students. We will use activities like brainstorming, work periods, and discussions to enhance the learning experience of you and your peers.

It is expected that you come to class prepared to participate and be respectful to your peers and instructors. This includes attending lectures, reading discussion material ahead of class, arriving in class on time, not using offensive language, and using electronic devices (e.g. cell phones and laptops) for classroom-purposes only.

Quercus

This course will use the online teaching and learning platform, Quercus, for providing you with readings, assignment details, grades, and lecture slides (<https://q.utoronto.ca/>). It is your responsibility to visit the website regularly to access important course information and materials.

Course Materials

There is no assigned textbook or course reader for this course. All assigned readings will be made available through Quercus or through the U of T library.

Please note: The readings may be adjusted based on class interest, discussions, and current events. I will announce changes in class, but it is your responsibility to check Quercus for announcements/changes regarding the readings.

Supplementary material

Below are some helpful textbooks and readings for those seeking additional background in geomorphology:

- Anderson, R. S., & Anderson, S. P. (2010). *Geomorphology: The Mechanics and Chemistry of Landscapes*. New York: Cambridge University Press.

- Bierman, P. R., & Montgomery, D. R. (2014). *Key Concepts in Geomorphology*. New York: W.H. Freeman and Company Publishers.
- Goudie, A. S., & Viles, H. A. (2016). *Geomorphology in the Anthropocene*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9781316498910>
- Gregory, K. J., & Goudie, A. S. (Eds.). (2011). *The SAGE Handbook of Geomorphology*. London, UK: SAGE Publications Ltd. <https://doi.org/10.4135/9781446201053>
- Shroder, J. F. (Ed.). (2013). *Treatise on Geomorphology*. London: Academic Press.

Methods of Evaluation

In-class contributions	30 %
Seminar facilitation	20 %
Capstone project	50 %

In-class contributions (30%)

There are two (2) components to your in-class contribution. For one component, you will submit two (2) questions each week (weeks 2 - 8, 10 - 12 for a total of ten (10) weeks) related to the assigned readings and topics. These questions will be used to help drive classroom discussion each week. These are to be submitted through Quercus by Wednesday at 10 am (the day before class) for 10% of your final grade.

The second component of your in-class contributions is based on your ongoing participation in classroom discussions, activities etc. which will be graded throughout the semester for a total of 20% of your final grade.

Seminar facilitation (20%)

In addition to contributing questions and actively participating to weekly class discussions, you will help facilitate one (1) of the weekly seminars (between weeks 5 – 10, excluding week 9) based on the assigned readings and weekly questions from your peers. In pairs or in groups, you will outline a facilitation plan, choose questions for discussion, facilitate a seminar activity based on the topic and readings of the week. Additional details will be provided in class and on Quercus. Groups for facilitation will be assigned during the first week. (20% of final grade)

Capstone project (50%)

As an upper-year course, you are expected to bring together knowledge and skills from throughout your undergraduate career to develop an integrated capstone project. For this course, you will prepare a report related to a topic in geomorphology and the Anthropocene, broken down into 3 main components, with additional details being provided in class:

- **Part 1** - Topic and annotated bibliography (10% of final grade) - submitted on Quercus
- **Part 2** - Oral presentation (10% of final grade) – In-class oral presentation
- **Part 3** –Report presented using ArcStory Map (or similar) aimed at an informed, but general, audience (30% of final grade) – link submitted on Quercus

Course Schedule

Anticipated Schedule

Week	Topic	Activities
1 – Jan 9	Course Introduction Geomorphology	
2 – Jan 16	The Anthropocene	
3 – Jan 23	Weathering and Hillslopes	
4 – Jan 30	Fluvial Domain I	
5 – Feb 6	Fluvial Domain II	Capstone Part 1 – Topic and Annotated Bibliography
6 – Feb 13	Coastal Domain	
Feb 17- 21	Reading Week	
7 – Feb 27	Aeolian Domain	
8 – Mar 5	Cryospheric Domain	
9 – Mar 12	Various	Capstone Part 2 - Presentations
10 – Mar 19	Applied Geomorphology	
11 – Mar 26	Hope	Bring a paper to share
12 – Apr 2	Geomorphology and the Anthropocene	Capstone Part 3 - Report

Note that this is the anticipated schedule and list of topics. It may change due to class interests, news, etc. Changes will be announced during class and updated in Quercus as needed.

Course Policies

Late Policy

Assignments will be submitted in-class and using Quercus (see specific assignments for details). As part of your in-class contribution, weekly questions are due the day before class by 10 am and will not be accepted for marking once class as begun the following day (2 pm Thursday).

Other written assignments (i.e. capstone components) will not be accepted 7 days after the due date (11:59 pm). There are no late penalties in this course.

Communication and email

You are encouraged to ask course related questions during class, during office hours, and in course discussion forums. When using email, you must use your U of T account as other email addresses may be filtered as spam. Please include GGR401 in the subject heading, and your full name in the text. I will typically respond to emails within 24 hours, excluding weekends and holidays. Emails received after 5 pm will typically receive a response the following business day.

Accommodations

If you are seeking accommodation for a missed assignment, you should submit a request for special consideration to the instructor or academic unit as soon as possible and no later than one week after the assignment due date. The request should include appropriate documentation, such as the Verification of Illness or Injury form (www.illnessverification.utoronto.ca).

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

Re-marking requests

Requests for re-marking of assignments 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. Please note that if you submit your material for re-grading, your mark can increase or decrease.

Electronic Devices

Students are encouraged to bring electronic devices (e.g. cell phone, laptops, tablets etc.) to class for participation in classroom activities like online polls. Outside of use for in-class activities, students should have their cell phones turned off.

Additional 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/>.

Academic integrity

Academic integrity is fundamental to learning and scholarship at the University of Toronto. Participating honestly, respectfully, responsibly, and fairly in this academic community ensures that the U of T degree that you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

The University of Toronto's Code of Behaviour on Academic Matters (<http://www.governingcouncil.utoronto.ca/policies/behaveac.htm>) 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).
- 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*. If you have any questions about what is or is not permitted in this course, please do not hesitate to contact me. If you have questions about appropriate research and citation methods, you are expected to seek out additional information from me or other available campus resources like the [College Writing Centres](#), the [Academic Success Centre](#), or the [U of T Writing Website](#).

Additional Resources

Library Support

For this course, library services are available at <https://onsearch.library.utoronto.ca/ask> and through the following librarian liaison:

Robarts Library - Eveline Houtman, eveline.houtman@utoronto.ca

You may also find support through the Map and Data Library, located in Robarts Library: <https://mdl.library.utoronto.ca/>

Writing Support

A helpful resource for this course is the University of Toronto’s Writing website (<https://writing.utoronto.ca/>), which includes links to campus Writing Centres (<https://writing.utoronto.ca/writing-centres/arts-and-science/>) as well as advice pages on academic writing (<https://advice.writing.utoronto.ca/>).

Support Services

Office of the Faculty Registrar: <https://www.artsci.utoronto.ca/current/faculty-registrar>
Student Services and Support:
<https://future.utoronto.ca/current-students/student-services-campus-life/student-services-and-support/#tab-stgeorge>

Mental Health

If you or someone you know is experiencing distress, there are resources to help you including:

- Your College Registrar
- Health and Wellness Centre (<https://www.studentlife.utoronto.ca/hwc>)
- Student Life (<http://www.studentlife.utoronto.ca/feeling-distressed>)

An important part of the University experience is learning how and when to ask for help. Please take the time to inform yourself of available resources.