

# EESB02H3 F

## Principles of Geomorphology

### Fall 2023 Syllabus

#### Course Meetings

##### EESB02H3 F

Section	Day & Time	Delivery Mode & Location
LEC01	Monday, 11:00 AM - 1:00 PM	In Person: HW 215
PRA0001	Wednesday, 9:00 AM - 11:00 AM	In Person: EV 222
PRA0002	Wednesday, 11:00 AM - 1:00 PM	In Person: EV 222
PRA0003	Wednesday, 1:00 PM - 3:00 PM	In Person: EV 222
PRA0004	Wednesday, 3:00 PM - 5:00 PM	In Person: EV 222

Refer to ACORN for the most up-to-date information about the delivery and location of the course meetings.

See Quercus for Practical details. Lectures, for the most part, will be in-person on Monday and Practicals will be held in-person in EV222.

#### Course Contacts

**Instructor:** Prof. Mandana (Mandy) Meriano

**Email:** [m.meriano@utoronto.ca](mailto:m.meriano@utoronto.ca)

**Office Hours and Location:** Thursdays from 10am-12pm via Zoom

Join Zoom Meeting

<https://utoronto.zoom.us/j/85703636810>

Meeting ID: 857 0363 6810

Passcode: 129667

**Additional Notes:** I will be unavailable during Reading week for contact. Please contact the course TA(s) during this time.

#### Course Overview

The physical and chemical processes responsible for the development of regolith at the surface of the earth and the mechanics of entrainment, transport and deposition of mass by rivers, wind, glaciers, water waves, gravitational stresses, etc., which control the evolution of surface morphology.

Field excursions and laboratory exercises will allow students to apply theory to natural systems and to understand the dynamics of one man-modified geomorphic system.

The earth's surface form and its dynamic behavior at range of spatial and temporal scales is an integral part of the physical, biological and human environment. It is strongly influenced by human activity, while at the same time imposing severe constraints upon that activity. The study of the earth's surface forms and their morphodynamic behavior, both naturally and under the impact of human habitation, is the field of Geomorphology. It is the human interaction with the surface of the earth that gives rise to a number of environmental concerns: e.g., surface erosion, catastrophic floods, sea-level rise, landslides, water resources and water extraction, etc. This introductory course combines aspects of geology, climatology, hydrology, and soil science to present a coherent introduction to the surface of the Earth, with emphasis on both fundamental concepts and practical applications, as a basis for understanding and intelligent management of the Earth's physical and chemical environment.

### Course Learning Outcomes

By the end of the course students will have developed a coherent understanding of the various aspects of geology, climatology, hydrology, and soil science that shape the surface of the Earth, with emphasis on both fundamental concepts and practical applications, as a basis for understanding and intelligent management of the Earth's physical and chemical environment.

**Prerequisites:** EESA06H3

**Corequisites:** None

**Exclusions:** GGR201H

**Recommended Preparation:** None

**Credit Value:** 0.5

### Course Materials

TEXTBOOK: Bierman, P.R. and Montgomery, D.R. 2020. *Key Concepts in Geomorphology*, 2<sup>nd</sup> ed. W.H. Freeman and Company, New York, NY.

The course textbook is available from the UTSC Bookstore.

### Marking Scheme

Assessment	Percent	Details	Due Date
Practical 1	10%	Meet your TA in EV222 on September 20. See Quercus for Practical details.	2023-10-04
Practical 2	10%	Meet your TA in EV222 on October 04. See Quercus for Practical details.	2023-10-18

Assessment	Percent	Details	Due Date
<b>Practical 3</b>	10%	Fieldwork in Highland Creek on October 18, weather permitting. See Quercus for Practical details and announcements regarding weather and meeting time and location.	2023-11-08
<b>Practical 4</b>	10%	Meet your TA in EV222 on November 08. See Quercus for Practical details.	2023-11-22
<b>Flume Demonstration</b>	0%	We will meet outside of EV222 for the flume demonstration. See Quercus for meeting announcements and updates.	2023-11-22
<b>Term Test</b>	25%	The midterm exam is based on material covered in lectures and readings up to and including the class before the midterm exam. Readings will be from your course textbook. The format is multiple choice and short answer questions.	2023-10-23
<b>Final Exam</b>	35%	The final exam will be based on all term material (including readings and lectures). Readings will be from your course textbook. The format is multiple choice and short answer questions.	Final Exam Period

### Late Assessment Submissions Policy

**ABSENCES:** If you need to miss a practical or term test for any legitimate reason, you must submit appropriate documentation within three business days of your absence. If the reason for your absence is medical, an official UTSC medical note must be completed by a doctor who examined you while you were ill/injured (i.e. not after the fact). The medical note can be downloaded at:

[http://www.utsc.utoronto.ca/~registrar/resources/pdf\\_general/UTSCmedicalcertificate.pdf](http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf). Note that conditions ranked as mild or negligible will not be considered a valid excuse.

**MISSED TERM WORK:** If a legitimate reason prevents you from submitting a piece of term work by its posted deadline, you must submit appropriate documentation within three business days of your absence. If the reason is medical, an official UTSC medical note must be completed by a doctor who examined you while you were ill/injured (i.e. not after the fact). The medical note can be downloaded at:

[http://www.utsc.utoronto.ca/~registrar/resources/pdf\\_general/UTSCmedicalcertificate.pdf](http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf). Note that conditions ranked as mild or negligible will not be considered a valid excuse.

**HANDING IN ASSIGNMENT:** You are responsible for making sure that your TA receives your work. Students who mail assignments in, place work on the floor outside an office or EV Lab, or slip assignments under a door, do so at their own risk.

**LOST OR MISPLACED ASSIGNMENT:** It is your responsibility to make more than one copy of your work. Excuses are not accepted in the case of lost or misplaced work.

**LATE ASSIGNMENTS:** The penalty for late submission is 10% per day.

## Course Schedule

<b>Week</b>	<b>Description</b>
<b>Week 1</b> Sept 11	Earth's Dynamic Surface <i>Textbook readings: Ch 1</i>
<b>Week 2</b> Sept 18	Earth's Solid Materials and Weathering <i>Textbook readings: Ch 5,6</i>
<b>Week 3</b> Sept 25	Topography: Channels and Drainage Basins <i>Textbook readings: Ch 3</i>
<b>Week 4</b> Oct 02	Geomorphic Hydrology (Part I) <i>Textbook readings: Ch 4,8,9</i>
<b>Week 5</b> Oct 16	Geomorphic Hydrology (Part II) <i>Textbook readings: Ch 4,8,9</i>
<b>Week 6</b> Oct 23	Mid-term exam held during class time
<b>Week 7</b> Oct 30	Groundwater <i>Textbook readings: Ch 4</i>
<b>Week 8</b> Nov 06	Glaciers <i>Textbook readings: Ch 13</i>
<b>Week 9</b> Nov 13	Landscape Evolution <i>Textbook readings: Ch 2,12,15,16</i>
<b>Week 10</b>	Coastal Geomorphology <i>Textbook readings: Ch 10</i>

Nov 20	
<b>Week 11</b> Nov 28	Deserts: Wind as a Geomorphic Agent <i>Textbook readings: Ch 11</i>
<b>Week 12</b> Dec 04	TBA (generally some lectures run into a 2 <sup>nd</sup> week – this lecture time will allow us to fully complete all the above noted topics)

## Policies & Statements

### Academic Integrity

The University treats cases of cheating and plagiarism very seriously. 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 dishonesty and the processes for addressing academic offences.

Potential offences in papers and assignments include 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.

On tests and exams, cheating includes using or possessing unauthorized aids, looking at someone else's answers during an exam or test, misrepresenting your identity, or falsifying or altering any documentation required by the University.

### Equity, Diversity and Inclusion

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.

The University of Toronto is a richly diverse community and as such is committed to providing an environment free of any form of harassment, misconduct, or discrimination. In this course, I seek to foster a civil, respectful, and open-minded climate in which we can all work together to develop a better understanding of key questions and debates through meaningful dialogue. As such, I expect all involved with this course to refrain from actions or behaviours that intimidate, humiliate, or demean persons or groups or that undermine their security or self-esteem based on traits related to race, religion, ancestry, place of origin, colour, ethnic origin, citizenship,

creed, sex, sexual orientation, gender identity, gender expression, age, marital status, family status, disability, receipt of public assistance or record of offences.

## **University Land Acknowledgement**

I wish to acknowledge this land on which the University of Toronto operates. For thousands of years, it has been the traditional land of the Huron-Wendat, the Seneca, and the Mississaugas of the Credit. Today, this meeting place is still the home to many Indigenous people from across Turtle Island and we are grateful to have the opportunity to work on this land.

## **Accommodations**

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible.

AccessAbility Services staff (located in Rm AA142, Arts and Administration Building) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations 416-287-7560 or email [ability.utsc@utoronto.ca](mailto:ability.utsc@utoronto.ca). The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

## **Use of Generative Artificial Intelligence Tools**

Students may use artificial intelligence tools, including generative AI, in this course as learning aids or to help produce assignments. However, students are ultimately accountable for the work they submit.

Students may not use artificial intelligence tools for taking tests, writing research papers, creating computer code, or completing major course assignments. However, these tools may be useful when gathering information from across sources and assimilating it for understanding.

The knowing use of generative artificial intelligence tools, including ChatGPT and other AI writing and coding assistants, for the completion of, or to support the completion of, an examination, term test, assignment, or any other form of academic assessment, may be considered an academic offense in this course.

## **Recording of Classroom Material by Students**

Recording or photographing any aspect of a university course - lecture, tutorial, seminar, lab, studio, practice session, field trip etc. – without prior approval of all involved and with written approval from the instructor is not permitted.

## **Video Recording and Sharing (Download and Re-use Prohibited)**

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session.

Course videos and materials belong to your instructor, the University, and/or other sources depending on the specific facts of each situation and are protected by copyright. Do not

download, copy, or share any course or student materials or videos without the explicit permission of the instructor.

For questions about the recording and use of videos in which you appear, please contact your instructor.

### **Mandy Meriano Land Acknowledgement**

I've always had a thing for that scent you smell after a rainfall. I love that smell so much that when I was a kid, I used to lick the clay bricks that lined our balcony because they would give off the same earthy scent. I guess it's no surprise that I've spent so much time learning about - and working with earth and water. I think it's through this work that I've made my connection with THIS Land which I like to acknowledge. I acknowledge the Indigenous Peoples who lived on this Land before us and continue to live upon it today. I like to pay tribute to the hopes and dreams they held and continue to hold for this Land. I feel blessed to be on this Land. I am grateful for its strength and potential below my feet, its heaven's warmth on my skin, the tickle of its snowflakes on my tongue, the passing of its rivers between my fingers and - with some luck - the force of its wind on my back.