

Course Outline
Fall 2023

Course Instructor:

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Lab Instructor:

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Lectures: Monday, Wednesday 1:30 – 2:30 in RC 2003

Labs: Friday 8:30 – 10:30 (F1), 1030-12:30 (F2) in AT 3009/RC 2003

Course Description:

This course is an introduction to geomorphology, the study of landforms and the processes that produce and alter them. Emphasis is placed on the mechanics of geomorphic processes. The relationships between landscapes and the forces responsible for their shape (endogenic processes, gravity, wind, ice, water and waves) will be discussed in lectures. Students will be expected to understand the fundamental principles of geomorphology and be able to demonstrate clear understanding of the global landscape forming processes and landforms. Students will also be expected to attend field trips and participate in any discussion initiated during lectures or labs. Laboratory work will include analysis of landforms from maps and air photos.

Course Objectives:

On completion of this course you will be thoroughly familiar with the basic concepts and laws of geomorphology. You will be able to identify landforms and explain the processes by which they were formed. You will also learn basic practical skills (through lab work) associated with this field of science.

Textbook:

Trenhaile, A.S. Geomorphology: A Canadian Perspective. Any Edition. Don Mills, Ontario: Oxford University Press.

Note: older versions are quite cheap to purchase on Amazon:

<https://www.amazon.com/Geomorphology-Canadian-Perspective-Trenhaile/dp/0195430786>

Lab Manual:

Geomorphology Laboratory Manual. Fall 2023.

Course Grading:

Lab Assignments	30%
Fieldtrip Attendance	5%
1 st Test*	15% (Oct. 18)
2 nd Test*	20% (Nov. 13)
Final Exam*	30%

*To pass the course, students are required to have at least 33 of the 65 marks allocated to the tests.

Course Policies

The following course policies are consistent with those of the Geography Department and Lakehead University.

1. Regular attendance is expected in lectures.
2. Any absence due to illness, disability, or domestic affliction should be reported to the instructor. Additional digital materials will be available on the D2L site.
3. Students with special needs should talk to me at the beginning of the course and register with the Student Success Centre.
4. Assigned readings, when provided, are to be read prior to the next lecture. This will allow you to get the most out of the lectures and ask informed questions.
5. Questions may be asked **anytime** during lectures. I won't be offended.

6. Make-up exams will be given only with an acceptable excuse as defined by the University calendar (medical, bereavement, etc.)
7. Lab assignments are to be submitted to the D2L site by the specified due date. Material submitted after the deadline maybe accepted by emailing Jason Freeburn directly, but may be penalized 10% per day.
8. Lab assignments will be graded for **content, legibility, structure, spelling and grammar**.
9. Lab and fieldwork safety instructions will be communicated, including any coursework that raise the risk of contracting COVID. More details will be provided in the first lab session about completing an “informed consent” to participate in a couple course-related activities.
10. Both of the tests and the final exam will be done through the D2L portal but will be done in person (in the assigned classroom). Please notify me if you are unable to obtain the use of a wifi-enabled laptop computer for the test.

LAB TOPICS SCHEDULE

Date	Number	Title
Sept. 15	1	Introductions, Data Retrieval and Geomorphic Feature Descriptions
Sept. 22	2	Magnitude – Frequency Concept – Stream Flow and Flood Analysis
Sept. 29	3	Cordilleran Glaciation
Oct. 6	4	Glacial Spillways
Oct. 15		Field Trip – No labs
		FALL READING WEEK
Oct. 20	5	Field trip follow-up - Stream Discharge
Oct. 27	6	Stream Networks
Nov. 3	7	Stream Sinuosity and Sediment Loads
Nov. 10	8	Mass Wasting – Case Study: Frank Slide
Nov. 17	9	Coastal Landforms – Form and Orientation of Beaches and Bars

FIELD TRIP

Date	Title
Oct. 15	Thunder Bay's Past and Modern Geomorphic Processes (<i>handout to be provided at time of trip.</i>)