Course Description:

This course will focus on the processes and landforms associated with modern and past glacial environments. An overview of the basics of glacial geomorphology will be followed with a much more detailed study of glacial dynamics, processes of erosion, transportation and deposition, as well as glaciotechnism. Glacial environment continuum, with the associated subglacial, ice-marginal and proglacial, sediments and landforms will also be considered. A number of lab exercises will be assigned.

Course Objectives:

The students will be familiar with all the major issues and terminology associated with glacial geomorphology. This includes the following topics:

- Glaciers and Climate
- Isostatic Rebound
- Glacial Ice and Ice-flow Dynamics
- Processes of Erosion
- Processes of Transportation
- Glacial Hydrology
- Glaciolacustrine Environments
- Modern Valley Glaciers - Sediments and Hydrology
- Glacial Stratigraphy
- Paleosols (time permitting)
- Glacioaeolian Environments (time permitting)

Textbook:

None.
**Assigned Readings:**

Chapters from:

**Discussion Papers:**


Assignments:

Glacial landscapes (Peterborough and Rosyth)
Isostatic rebound
Till macro-fabrics

Course Grading:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Lab Assignments</td>
<td>20%</td>
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<tr>
<td>Discussion Participation</td>
<td>10%</td>
</tr>
<tr>
<td>Midterm Exam*</td>
<td>30%</td>
</tr>
<tr>
<td>Final Exam*</td>
<td>40%</td>
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*To pass the course, a student will be required to have at least 35 of the 70 marks allocated to both 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. Absence due to extracurricular activities (e.g., athletics) should be discussed with the instructor PRIOR to the absence. If you miss a class, it is your responsibility to obtain the notes from a classmate. I can provide you with any handouts, but will not provide you a repeat of the lecture or my lecture notes.

3. Students with special needs should talk to me at the beginning of the course and register with the Learning Assistance Centre.

4. Tardiness is frowned upon. Be late at your own risk.

5. 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.

6. Questions may be asked anytime during lectures. I won’t be offended.

7. No make-up exams will be given without a medical excuse backed by a medical certificate. No one will be allowed to write the tests or the final exam prior to the scheduled date.

8. Lab assignments and essays are to be handed in before the specified due date. Material submitted after the deadline will be accepted but will be penalized 10% per day.

9. Lab assignments and essays will be graded for content, legibility, structure, spelling and grammar.