

Geography 213  
Simon Fraser University  
Department of Geography  
Fall Semester 2021

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## INTRODUCTION TO GEOMORPHOLOGY

Geomorphology is the study of Earth's surface. It is a crucial part of environmental and problem solving and has even been used to understand the far-off planets like Mars and Venus have evolved. This particular course is about Earth's landscape, its present form, and the processes responsible for its large-scale organization. The goal is to provide students with an appreciation of how the landscape around them formed and its continued evolution with particular focus on landscapes of British Columbia, Western North America, and Canada.

In this course, we will seek answers to the following questions: How are mountains built? What controls topographic relief? How do landscape materials get from mountain tops down to valley floors? Can we differentiate between landscapes formed by rivers and glaciers? Has 570 million years of life on this planet affected the large-scale topographic organization of the Earth's surface? How have human activities affected the form of the landscape?

The course is recommended to students interested in Geography, Earth Science, Ecology, Environmental Science, Resource Management, and anyone who is curious about their natural surroundings. This course is required in several syllabi (Environmental Geoscience, Geology and Geochemistry) for Professional Geoscience (P. Geo.) accreditation by Engineers and Geoscientists, British Columbia (EGBC).

### Prerequisites

GEOG 111 (Earth Systems), EASC 101 (Dynamic Earth), or permission from the instructor.

### Required Text

Bierman, P.R. and D.R. Montgomery (2020) Key Concepts in Geomorphology, W.H. Freeman and Company Publishers New York, 591p.

### Course Format

This course will consist of a weekly two-hour lecture and 6 two-hour laboratories where you will apply the concepts learned in lectures. There will be no laboratory session in the first week of classes.

### Field Trip

There is a *mandatory virtual field trip* to complement topics covered in lectures and labs. The trip will consist of a series of videos at stops along the Fraser River.

### Mark Distribution

Laboratory assignments 30%

Field essay 20%

Mid-term examination 25%

Final examination 25%