

COURSE OUTLINE Process Geomorphology

Lectures: Monday/Thursdays, 1-2:20pm in COR B108 Office Hours: Thursdays 11:30-12:20pm Office Location: DTB B302 or via Zoom Contact: <u>gkrezoski@uvic.ca</u> or (250) 472-4269 (office phone)

COURSE DESCRIPTION

This course comprises a more in-depth look at concepts introduced in Introduction to Geomorphology course (GEOG 276). Here, you will dive into the <u>processes</u> of geomorphic change, with a look at the energy, forces, and components that create and maintain landforms. You will learn about geomorphic systems, the forces behind geomorphic change, feedbacks, and process linkages in natural systems. You will explore the mechanics behind the creation and transport of sediment from hillslopes to low-lying coastal areas and the formation of characteristic erosional and depositional landforms. The course is divided into 4 major topics: hillslope, fluvial, coastal + aeolian, glacial + periglacial processes. You will learn about traditional and more advanced research methods and apply some of these techniques in lab exercises.

KEY THEMES:

- Explain the principal forces and feedbacks driving geomorphic processes on Earth
- Apply basic physical relations to solve geomorphic problems
- Evaluate the suitability of research methods for a given research problem
- Critically reflect on scientific articles about geomorphic research

REQUIRED TEXTS

Throughout this course, I will provide a number of scientific articles and reading assignments that will be

Additional comprehensive text (not required, but <u>recommended</u> – a copy will be on reserve in the library for your use):

Ritter, D.F., R.C. Kochel, and J.F. Miller (2011). *Process Geomorphology* (5/e). Waveland Press (ISBN 13: 978-1-57766-669-1).

EVALUATION

<u>Grade Breakdown</u>	
Lecture Quizzes (3)	12 %
Lab Assignments (6)	40 %
Midterm Exam I	14 %
Midterm Exam II	

POLICY ON ATTENDANCE

Lecture Quizzes are based on lecture material – attendance is strongly recommended. Lab assignments comprise almost half of your final mark – attendance is strongly recommended. **Note**: Per the academic calendar, plan on spending ~8 hours a week on average on this class, including lecture attendance, readings, lab attendance, lab assignments, etc.

WEEKLY CALENDAR (important UVIC drop/add dates can be found here)

- First Day of Class: Thursday, September 9th, 2021
- Midterm Examination I: October 14th (via Brightspace)
- Midterm Examination II: November 8th (via Brightspace)
- Final Examination: December 6-21 (TBA)
- Three quizzes will be administered via Brightspace on lecture topics covered in the previous week(s). Quizzes will open after class on Thursdays at 2:30pm to Fridays at 5pm.

WEEK	DATE	Lecture Topic	Readings*
1	Sept 9	Introduction	Treatise 1.1, 1.9, 2.1, 2.5
2	Sept 13,16	Hillslope Processes	Treatise 4.1, 4.10, 4.17
3	Sept 20,23	Hillslope Processes (Quiz 1)	Treatise 7.13-7.23, 7.3- 7.5
4	Sept 27, <i>30</i>	Fluvial Processes I (Sept 30 is recorded lecture)	Treatise: 9.1, 9.2, 9.7
5	Oct 4,7	Fluvial Processes I	Treatise: 9.8, 9.10
6	Oct 14 (Thurs only)	(Midterm I)	
7	Oct 18,21	Fluvial Processes II (Quiz 2)	Treatise: 9.33, 9.34
8	Oct 25,28	Glacial and Periglacial Processes	Treatise: 8.5, 8.6-8.11
9	Nov 1,4	Glacial and Periglacial Processes	Treatise: 8.15-8.20
10	Nov 8 (Mon only)	(Midterm II)	
11	Nov 15,18	Coastal and Aeolian Processes	Treatise: 10.1, 10.3-10.6, 10.8, 10.10
12	Nov 22,25	Coastal and Aeolian Processes (Quiz 3)	Treatise: 11.1, 11.2, 11.6, 11.7
13	Nov 29, Dec 2	Coastal and Aeolian Processes	Treatise: 11.11, 11.17

*Readings are between ~30-50 pages per week and designed to supplement lecture material

DISCLAIMER

LABORATORY COMPONENT

Week

1

2

3

4

5

6

7

8

9

10

11

12

13

Labs are designed to cover a variety of exercises designed to elaborate on the lecture material. The labs are also used to teach practical skills in geomorphology. The laboratory sessions will be supervised by teaching assistants who will also be responsible for assessment of lab work.

gkrezoski@uvic.ca

Office hour:

Th 11:30 DTB B302

Lab 5 due (10%)

Dec 5

Mon B01 (09:30-11:20) TA: Jill Krezoski Tues B02 (08:30-10:20) TA: Keegan Paterson Weds B03 (08:30-10:20) TA: Keegan Paterson

> Due dates: Week of: Laboratory Schedule Sundays before 5pm Sept 8-10 No Labs Lab 1: Sediments and Critical Shear Stress (DTB B303) Sept 13-15 Lab 2: Arbutus Cove Slope Assessment (field trip, Sept 20-22 please dress appropriately for the weather) Lab 1 due (6%) Sept 27-29 Work Week (DTB B303) Oct 3 Lab 2 due (6%) Oct 4-6 Lab 3: Fluvial processes (Computer lab) Oct 10 Oct 11 *No Labs*, Thanksgiving Lab 3 due (10%) Oct 18-20 Work Week (DTB A251) Oct 24 Oct 25-27 Lab 4: Glacial concepts: Part 1 (DTB B303) Lab 4: Glacial concepts: Part 2 (DTB B303) Nov 1-3 Lab 4 due (8%) Nov 8 No Labs, Reading week Nov 7

> > Lab 5: Coastal/Aeolian: Part 1 (Computer Lab – DTB

Lab 5: Coastal/Aeolian: Part 2 (Computer Lab – DTB

ACADEMIC INTEGRITY

Nov 15-17

Nov 22-24

Nov 29-Dec 1

A251)

A251)

Work Week