



CAMOSUN COLLEGE
School of Arts & Science
Department of Environmental Technology

ENVR-207-001
Applied Geomorphology
Fall 2018

COURSE OUTLINE

The course description is online @ <http://camosun.ca/learn/calendar/current/web/envr.html>

Ω Please note: This outline will not be kept indefinitely. It is recommended students keep this outline for their records, especially to assist in transfer credit to post-secondary institutions.

1. Instructor Information

(a) Instructor	Emrys Prussin		
(b) Office hours	Mondays 11:30 – 12:20, Thursdays 10:30 – 11:20, or by appointment		
(c) Location	Paul 237		
(d) Phone	250-370-3352	Alternative:	
(e) E-mail	prussine@camosun.bc.ca		
(f) Website	See D2L for course website		

2. Intended Learning Outcomes

Upon completion of this course the student will be able to:

1. Describe the major mechanisms of initial land formation.
2. Identify the physical processes and landforms associated with geomorphic agents such as gravity, water and ice.
3. Describe the Quaternary landscape history of southwestern BC.
4. Use a variety of tools and assessment methods common to geomorphological investigations.
5. Carry out a field-based geomorphological project, data collection, analysis and reporting.
6. Interpret sedimentary deposits.

3. Required Materials

There is no single textbook for this course. Required readings will come from several sources, all of which are available in the bookstore or on reserve in the library...

Optional: Christopherson, R.W. and M. Byrne, 2016. *Geosystems, 4th Canadian Edition*. Toronto: Pearson Education Canada, 669 pp. plus appendices.

- Older versions are around, but ultimately you are responsible for the material from the new edition.

Optional: Trenhaile, A.S., 2013. *Geomorphology: A Canadian Perspective, 5th Edition*. Don Mills, ON: Oxford University Press Canada, 575 pp.

Optional: Yorath, C.J., 2005. *The Geology of Southern Vancouver Island, Revised Edition*. Madeira Park, BC: Harbour Publishing, 205 pp.

- This can be found at Camosun and most other local bookstores.

4. Course Content and Schedule

Lectures: Thursday lectures will provide the background you need to understand the labs and pass the exams, so attendance is essential.

Readings: are an essential part of this course – they provide depth and context that are indispensable to a full understanding of the course material. Specific reading assignments are detailed below; these may be modified as the term goes on.

Labs: Labs are on Monday. Please come to your registered lab time. Download the labs from D2L and read them ahead of time. Please hand in a hard copy of your answers. On regular lab days, bring pencils, paper, graph paper, calculator and ruler. Students will be expected to complete and hand in individual assignments, though cooperation is encouraged.

Two of our labs are field-based. The bus will leave at 8:30 and 1:30 sharp, so don't be late unless you have made alternate arrangements with me. Students are responsible for bringing waterproof field notebook, snacks, water, rain and cold gear, camera, sturdy footwear, ruler and pencils. The ET program will supply the rest. Please don't break our field gear – it costs a lot! One of the field labs is to be done in pairs. This means you get each other's help and hand in a single report. On the downside, you will have to divide the job, arrange meetings, review each other's work, and compromise. This can be a pain, but is an important skill. If you are having problems with your partners, try to work it out. If you can't, come see me and I will help find a solution.

Lab performance will be evaluated based on thoroughness, neatness, accuracy, participation and, occasionally, writing quality. Attendance during the lab time is mandatory, as these labs are gear intensive and hard to reschedule. Labs will generally be due the following week, and will not be accepted at all after I have returned them marked. Late reports are subject to a penalty of 10% per day.

Field Trips: You will be expected to attend two field trips. Take notes and hand them in – 2% for the watershed trip, and 1% for the glacial landforms trip. The watershed trip will take place on a Saturday. It will be awesome, so please arrange your life around it. For those who can't, a selfguided trip to Goldstream may be completed instead.

Project: In pairs, students will be expected to research either a local landform or an applied geomorphology case study from anywhere in the world. Final reports must be in poster format. Details will be provided in a separate handout.

Exams: There will be a midterm and a cumulative final exam. The format will be a combination of multiple choice, short answer and long-answer questions. Tests will mainly emphasize the lecture material, though lab material will also be drawn upon.

Illness, etc.: If you miss a lab or exam due to illness or some other serious reason, I must ask you to provide a doctor's note or other documentation to support your story. Otherwise, a mark of zero for the missed assignment will be given. Exams and field trips are hard to reschedule, so try not to miss them unless you are too sick to perform at a reasonable level.

Students who miss a lab or exam for a valid reason must contact me within 24 hours with an explanation. In such cases, one makeup exam time will be scheduled, and all students needing it will be expected to attend.

Course Schedule

NOTE: Field-based activities are shown in bold; come prepared! Contact me ahead of time if you don't plan to travel with the class.

Week	Monday (lab)	Thursday (lecture)
3-Sep	Labour Day	Course Intro
10-Sep	Initial Landforms	Weathering and Slope Erosion
17-Sep	Lab 1: Air Photo Interpretation	Slope Stability
24-Sep	Lab 2: Slope Stability	Coasts
1-Oct	Lab 3: Erosion Management at Dallas Road	Rivers 1
8-Oct	Thanksgiving	Rivers 2
15-Oct	Lab 4: Surface Hydrology	Midterm exam
22-Oct	Lab 5: Fluvial Landforms	Glaciers 1
29-Oct	Lab 6: Glacial Processes and Landforms	Glaciers 2
5-Nov	Glacial Landforms	Periglaciation
12-Nov	Remembrance Day	Terrain Classification
19-Nov	Lab 7: Terrain Classification	River Regulation
26-Nov	Lab 8: Terrain Map Validation	Guest lecture
3-Dec	No lab – finish projects	Project Presentations

Exam Week: Review session (date and time TBD)

Final exam (date and time TBD)

5. Basis of Student Assessment (Weighting)

Evaluation will be based on accuracy, thoroughness, and neatness. As a general rule, always show your work and keep track of units of measure! When I grade your work, I am looking for proof of your understanding, so do everything clearly and carefully – that way you may get partial credit, even for wrong answers. I endeavour to mark things fairly and consistently, but if you have a question about my assessment, feel free to ask about it.

(a) Labs

Labs 1, 2, 4, 5, 6, 7, 8 = 4%

Lab 3 = 12%

TOTAL = 40%

(b) Field Trip Notes

2% + 1% = 3%

(c) Project = 12%

(d) Midterm Exam = 15%

(e) Final Exam = 30%

6. Grading System

Standard Grading System (GPA)

Competency Based Grading System

7. Recommended Materials to Assist Students to Succeed Throughout the Course

READING LIST

<i>Week of</i>	<i>Required Reading</i>	<i>Comments</i>
Sep 4	Christopherson et al. Ch. 13	Tectonic and volcanic land-forming processes. You could skip the earthquake bits. Optional : Ch. 12 in the same book, which is probably all review if you have taken GEOS 100. Also optional: Trenhaile Ch. 3 (geological formation of Canada – more complex but fascinating).
Sep. 11	Trenhaile pp. 98-116, 131-136	Weathering and slope erosion by runoff. No need to memorize the chemical reactions.
Sep. 18	Trenhaile pp. 136-163	Mass wasting
Sep. 25	Christopherson et al. Ch. 16	Coastal processes and landforms. Note: You may want to peruse the Thurber Consultants report (on reserve) before lab next week.
Oct. 2	Christopherson et al. Ch. 15	Rivers and fluvial landforms. Optional: Trenhaile Ch. 10-11 (more advanced)
Oct. 9	Hogan and Luzi, 2010: Channel Geomorphology: Fluvial Forms, Processes, and Forest Management Effects	A more sophisticated overview of stream channel morphology, written for environmental professionals – don't get bogged down, just read and absorb what you can. This is Chapter 10 of the <i>Compendium of Forest Hydrology and Geomorphology in British Columbia</i> , an incredibly comprehensive guide to watershed processes and management in this province.
Oct. 16	None	Good luck on the midterm
Oct. 23	Christopherson et al. Ch. 17	Glacial processes and landforms (with a preview of periglaciation.) Optional: Trenhaile Ch. 6-7 are more thorough. Trenhaile Ch. 8 is a fascinating but detailed glacial history of Canada.
Oct. 30	Clague, 1994: Quaternary stratigraphy and history of south-coastal British Columbia	A very nice summary of our recent glacial history, and the evidence used to reconstruct it.
Nov. 6	Trenhaile Ch. 9	Periglacial processes and landforms – could be useful if you ever work up north
Nov. 13	Terrain Classification System for British Columbia Version 2, 1997	Try to look it over before class
Nov. 20	Dam removal article	I need to pick one. Stay tuned

8. College Supports, Services and Policies



Immediate, Urgent, or Emergency Support

If you or someone you know requires immediate, urgent, or emergency support (e.g. illness, injury, thoughts of suicide, sexual assault, etc.), **SEEK HELP**. Resource contacts @ <http://camosun.ca/about/mental-health/emergency.html> or <http://camosun.ca/services/sexual-violence/get-support.html#urgent>

College Services

Camosun offers a variety of health and academic support services, including counselling, dental, disability resource centre, help centre, learning skills, sexual violence support & education, library, and writing centre. For more information on each of these services, visit the **STUDENT SERVICES** link on the College website at <http://camosun.ca/>

College Policies

Camosun strives to provide clear, transparent, and easily accessible policies that exemplify the college's commitment to life-changing learning. It is the student's responsibility to become familiar with the content of College policies. Policies are available on the College website at <http://camosun.ca/about/policies/>. Education and academic policies include, but are not limited to, Academic Progress, Admission, Course Withdrawals, Standards for Awarding Credentials, Involuntary Health and Safety Leave of Absence, Prior Learning Assessment, Medical/Compassionate Withdrawal, Sexual Violence and Misconduct, Student Ancillary Fees, Student Appeals, Student Conduct, and Student Penalties and Fines.

A. GRADING SYSTEMS <http://camosun.ca/about/policies/index.html>

The following two grading systems are used at Camosun College:

1. Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
90-100	A+		9
85-89	A		8
80-84	A-		7
77-79	B+		6
73-76	B		5
70-72	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

2. Competency Based Grading System (Non GPA)

This grading system is based on satisfactory acquisition of defined skills or successful completion of the course learning outcomes

Grade	Description
COM	The student has met the goals, criteria, or competencies established for this course, practicum or field placement.
DST	The student has met and exceeded, above and beyond expectation, the goals, criteria, or competencies established for this course, practicum or field placement.
NC	The student has not met the goals, criteria or competencies established for this course, practicum or field placement.

B. Temporary Grades

Temporary grades are assigned for specific circumstances and will convert to a final grade according to the grading scheme being used in the course. See Grading Policy at <http://camosun.ca/about/policies/index.html> for information on conversion to final grades, and for additional information on student record and transcript notations.

Temporary Grade	Description
I	<i>Incomplete:</i> A temporary grade assigned when the requirements of a course have not yet been completed due to hardship or extenuating circumstances, such as illness or death in the family.
IP	<i>In progress:</i> A temporary grade assigned for courses that are designed to have an anticipated enrollment that extends beyond one term. No more than two IP grades will be assigned for the same course.
CW	<i>Compulsory Withdrawal:</i> A temporary grade assigned by a Dean when an instructor, after documenting the prescriptive strategies applied and consulting with peers, deems that a student is unsafe to self or others and must be removed from the lab, practicum, worksite, or field placement.