

	<p>School of Arts & Science ENVIRONMENTAL TECHNOLOGY DEPARTMENT</p> <p>ENVR 207-01 Applied Geomorphology 2006F</p>
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COURSE OUTLINE

The Approved Course Description is available on the web @ _____

Ω Please note: this outline will be electronically stored for five (5) years only.
It is strongly recommended students keep this outline for your records.

1. Instructor Information

(a)	Instructor:	Chris Ayles		
(b)	Office Hours:	TBA		
(c)	Location:	Fisher 342B		
(d)	Phone:	370-3393	Alternative Phone:	
(e)	Email:	cayles@camosun.bc.ca		
(f)	Website:			

2. Intended Learning Outcomes

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

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

1. Use a wide variety of scientific instruments common to field-based geomorphological investigations.
2. Set up and carry out a field-based geomorphological project, including proposal, data collection and analysis, and reporting.
3. Describe the major mechanisms of initial landform building through volcanic and tectonic processes.
4. Perform field-based topographic surveys, including data analysis and presentation.
5. Identify the main physical processes and landforms associated with glaciers.
6. Identify glacial features and landforms on air photos and satellite imagery.
7. Describe the Quaternary glacial history of southwestern BC, including the origin of local glacial landforms.
8. Interpret sedimentary deposits based on their texture, sorting, and structure.
9. Identify active mass wasting processes based on theory and field observations.
10. Infer coastal processes based on theory, coastline appearance, and the collection and analysis of beach sediment.
11. Perform various streamflow analyses, including discharge calculation, and the construction and use of rating curves, hydrographs and flood frequency curves.
12. Identify different river channel patterns and the processes and settings that create them.
13. Perform an unassisted Pacific Streamkeepers assessment of fish habitat quality in a small stream.

14. Use stereographic air photos to identify landforms and geomorphic processes.
15. Identify and classify distinct landscape units using the Terrain Classification System for British Columbia.

3. Required Materials

READING

There is no single textbook for this course. Required readings will come from several sources, including:

Christopherson, R.W., 2002. *Geosystems – An Introduction to Physical Geography*, 5th Ed. Upper Saddle River, NJ: Pearson Education, Inc., 660 pp. plus appendices.

Trenhaile, A.S., 2004. *Geomorphology: A Canadian Perspective*, 2nd Ed. Don Mills, ON: Oxford University Press Canada, 440 pp.

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

All of these books are available in the book store, and there will also be reserve copies in the library.

4. Course Content and Schedule

(Can include: class hours, lab hours, out of class requirements and/or dates for quizzes, exams, lectures, labs, seminars, practicums, etc.)

GENERAL POLICIES

My classes tend to be quite informal, and I encourage participation and discussion. My goal is to have you think and understand, so speak up, especially if you are confused! It is critical that you be punctual, careful and responsible during field-based labs – we don't want anyone getting left behind, injured or lost. Group work is encouraged, and you should help each other learn. But this does not mean you can copy! Each student must do their own individual lab reports, unless otherwise stated. If I catch people copying, a mark of zero will be assigned to all involved parties.

LECTURES

The format for this class is lectures on Mondays, labs on Thursdays. Lectures will generally provide the theory you need to complete later labs and pass the tests, so attendance is imperative. I use PowerPoint, and I will post lecture outlines on my web site: cayles.disted.camosun.bc.ca. Realize, though, that these notes are sparse, and no substitute for coming to class. People who skip class get worse grades!

LABS

You must purchase a lab manual from the book store!

On regular lab days, bring pencils, paper, graph paper, calculator, ruler and protractor. Students will be expected to complete and hand in individual lab reports, though cooperation is encouraged.

Four of our labs are field-based, and to be completed in small groups. This means you get each other's help, and you can hand in a single group report. On the downside, you will have to divide the job, arrange meetings, review each other's work and compromise. This can be fun, or a pain, and often both, but it is an important skill in the workplace, so it's good practice. If you are experiencing problems with your partners, talk it over and try to work it out. If you can't, come see me and I will try to help find a solution.

On field days, transportation and equipment will be provided by the ET program. The ET van will leave at 9:30 and 2:30 sharp, so don't be late unless you have made alternate arrangements with me. Also, don't break the gear – it costs a lot! On field days, students are responsible for bringing: waterproof field notebook, snacks, water, rain and cold gear, camera (ET or own), sturdy footwear, ruler and pencils.

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 very hard to reschedule. Labs will generally be due the following week, and will not be accepted at all after I have returned them. Late reports may be penalized 10% per day.

PET LANDFORM PRESENTATION

In pairs, students will be expected to research the properties and origin of a local landform of their choosing, and present their findings to the class in one of the final two lab sessions. Details are provided in a separate handout.

5. Basis of Student Assessment (Weighting)

(Should be linked directly to learning outcomes.)

EVALUATION

<u>Assignment</u>	<u>Value</u>
Lab 1. Surveying	5%
Lab 2. Slope Stability	5%
Lab 3. Geomorphic Processes at Dallas Road	10%
Lab 4. Streamkeepers Certification	5%
Lab 5. Surface Hydrology	5%
Lab 6. Fluvial and Glacial Landforms	5%
Lab 7. Glacial Driving Tour	10%
Lab 8. Terrain Classification	5%
Pet Landform Presentation	10%
Test 1	20%
Test 2	<u>20%</u>
	100%

Tests will be a combination of multiple choice, short answer and long answer questions. They will emphasize the lecture material, though lab material will also be drawn upon.

6. Grading System

(No changes are to be made to this section, unless the Approved Course Description has been forwarded through EDCO for approval.)

Standard Grading System (GPA)

Percentage	Grade	Description	Grade Point Equivalency
95-100	A+		9
90-94	A		8
85-89	A-		7
80-84	B+		6
75-79	B		5
70-74	B-		4
65-69	C+		3
60-64	C		2
50-59	D		1
0-49	F	Minimum level has not been achieved.	0

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 camosun.ca or 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.

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 E-1.5 at camosun.ca for information on conversion to final grades, and for additional information on student record and transcript notations.

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

LEARNING SUPPORT AND SERVICES FOR STUDENTS

There are a variety of services available for students to assist them throughout their learning. This information is available in the College calendar, at Student Services or the College web site at camosun.ca.

STUDENT CONDUCT POLICY

There is a Student Conduct Policy **which includes plagiarism**. It is the student's responsibility to become familiar with the content of this policy. The policy is available in each School Administration Office, at Student Services and on the College web site in the Policy Section.

ILLNESS, ETC.:

If you must miss a lab, test or presentation 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. Students who miss a test for a valid reason must

contact me within 24 hours with an explanation. In such cases, one makeup test will be scheduled, and all students needing it will be expected to attend.

COURSE SCHEDULE

schedule is subject to change

<u>Week of:</u>	<u>Monday Lecture</u>	<u>Thursday Lab</u>
Sep. 4 Formation	<i>No Class (Labour Day)</i>	Course Introduction / Land
Sep. 11	Weathering and Slope Erosion	Lab 1. Surveying Lansdowne Campus
Sep. 18	Mass Wasting	Lab 2. Slope Stability
Sep. 25 Road	Coastal Geomorphology	3. Geomorphic Processes at Dallas Finlayson Point
Oct. 2	Streamkeepers Review / Quiz	<i>No Lab (Report Writing Time)</i>
Oct. 9	<i>No Class (Thanksgiving)</i>	Lab 4. Streamkeeper Certification Douglas Creek
Oct. 16	Rivers 1	TEST 1
Oct. 23	Rivers 2	Lab 5. Surface Hydrology
Oct. 30	Glaciers 1	Lab 6. Fluvial and Glacial Landforms
Nov. 6	Glaciers 2	Lab 7: Glacial Driving Tour Greater Victoria ALL STUDENTS IN MORNING
SECTION!		
Nov. 13	<i>No Class (Remembrance Day)</i>	<i>No Lab (Report Writing Time)</i>
Nov. 20	Terrain Classification	Lab 8: Terrain Classification
Nov. 27	Watershed Assessment	Pet Landform Presentations 1 ALL STUDENTS IN MORNING
SECTION!		
Dec. 4	Guest Lecture	Pet Landform Presentations 2 ALL STUDENTS IN MORNING
SECTION!		
Exam Week	TEST 2	

NOTE: Field-based lab days are shown in bold; come prepared!