Environmental Technology 207

APPLIED GEOMORPHOLOGY

Winter 2003

Chris Ayles

In case you're worried about how thin this manual is, relax: you'll be getting reams of free labs handed to you all term long. What a deal!

The price of this wee volume will help defray the cost of printing those labs and keep the ET program afloat financially. And you can watch proudly (or cringe) as it slowly grows…

Environmental Technology 207

APPLIED GEOMORPHOLOGY

Course Outline, Winter 2003

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COURSE DESCRIPTION

Geomorphology is the study of landforms and the processes that shape them. This course will provide you with an opportunity to practically apply some aspects of theoretical geomorphology. It will (hopefully) be a lively mix of theory and practice. Topics will include processes, landforms and sediment properties associated with the geomorphic agents of water, ice, snow and gravity. Through a variety of both lab and field-based activities, students will learn a range of geomorphological and related skills.

MY ATTITUDE

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 if you are confused! Still, I take the material seriously and expect you to do the same. It is especially critical that you be punctual, careful and responsible during field-based labs – field work is unpredictable, and we don't want anyone getting 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.

LECTURES

The format for this class is lectures on Monday, labs on Thursdays. Lectures will generally set up the following lab, either directly or by presenting useful theory. I use printed overheads a lot, and I will make these available at www.camosun.bc.ca/schools/artsci/envirotech/ayles.php. (I know it's a long URL; I had no choice…) I will also place a reserve binder in the library, which will contain extra readings, sample tests, and so on.

When possible, I will try to diversify the lectures with videos, slides or guest speakers.

LABS AND GEAR

You must purchase a lab manual from the book store! It is exceedingly thin, but will function as a proof-of-purchase when I hand out labs throughout the term.

Four of our labs are field-based. On field days, both transportation and equipment will be provided by the Environmental Technology program. The ET van will leave at 8:30 and 1:30 sharp, so don't be late unless you have made alternate arrangements with me. Also, don't break the gear – it costs way more than it should! On field days, students are responsible for bringing: waterproof paper for field notes, snacks, rain and cold gear, camera (shared or own),

sturdy, waterproof boots, ruler, protractor, pens, pencils, and basic first aid supplies. On regular lab days, you should bring pencils, paper, graph paper, calculator, ruler and protractor.

READING

There is no required textbook for this course! Woohoo! But there will be required readings from number of 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., 1998. *Geomorphology: A Canadian Perspective*. Don Mills, ON: Oxford University Press Canada, 340 pp.

Yorath, C.J. and H.W. Nasmith, 1995. *The Geology of Southern Vancouver Island – A Field Guide*. Victoria, BC: Orca Book Publishers, 172 pp.

All of these books are available in the book store, and there will also be reserve copies in the library. Required readings from other sources will be placed in the reserve binder. Do not steal the originals! You will probably wish to photocopy quite a few readings throughout the term, but this will surely cost less than a whole new textbook…

Specific reading requirements will be assigned during the term.

EVALUATION

Lab performance will be evaluated based on thoroughness, neatness, accuracy, and participation / enthusiasm. Attendence during the lab time is mandatory; illness must be proven with a note from a doctor. Unexcused late assignments will have 10% deducted per day late, and will not be accepted at all after I have returned them.

Assignment	*Value*
1. Tools of the Trade	4%
2. Surveying	10%
3. Satellite Imagery	6%
4. Glacial Driving Tour Report	10%
5. Cliff Erosion	12%
6. Stream Flow	6%
7. Streamkeepers Certification	15%
8. Airphoto Interpretation	6%
9. Terrain Classification	6%
Final Exam	25%
	100%

The final exam will be a combination of multiple choice, short answer and long answer questions. It will emphasize the lecture material, though lab material will also be drawn upon.

COURSE SCHEDULE

schedule is subject to change

Week of:	Monday Lecture Topic	Thursday Lab
Jan 6	Introduction	1. Tools of the Trade
Jan 13	Project Management	2. Surveying **Interurban Campus**
Jan 20	Volcanic and Tectonic Landforms	*Lab Writeup*
Jan 27	Glacial Processes	3. Satellite Imagery
Feb 3	Glacial Landforms	4. Glacial Driving Tour **Greater Victoria**
Feb 10	*Lab Writeup*	*Reading Break*
Feb 17	Coastal Geomorphology	5. Cliff Erosion **Dallas Road**
Feb 24	Mass Wasting	*Lab Writeup*
Mar 3	Rivers	6. Stream Flow
Mar 10	Stream Assessment	7. Streamkeeper Certification **Mt. Doug Creek**
Mar 17	Avalanches	*Lab Writeup*
Mar 24	Air Photo Interpretation	8. Air Photo Interpretation
Mar 31	Terrain Classification	9. Terrain Classification
Apr 7	Ground Water	*Lab Writeup*
Exam Week	**FINAL EXAM**	

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