

PRELIMINARY SYLLABUS
GEOMORPHOLOGY

Geog 322

Winter 2009

Meets at 10:00 – 11:20 on Tuesday and Thursday, plus a 1-hour lab (various times)

COURSE CONTENT: This course covers surficial geomorphic processes, including landslides, rivers, glaciers, wind, and coastal processes. The goals of the course are to give you

- 1) an understanding of how geomorphic processes work;
- 2) the ability to recognize and interpret landforms on maps, air photos and the actual landscape;
- and 3) an introduction to the techniques of geomorphology.

This course provides a foundation for Geog 427: Fluvial Geomorphology, and Geog 422: Advanced Geomorphology.

PREREQUISITE: Geog 141 or Geol 102 or Geol 202. Recommended: Math 111 and 112. Geog 322 is a challenging course that requires a substantial amount of work on your part. You must be able to do basic algebra and trigonometry.

INSTRUCTOR: Pat McDowell, office at 152 Condon Hall, phone: 346-4567, e-mail: pmcd@uoregon.edu. Office hours: to be announced; other times by appointment. Make an appointment in class, by phone or by e-mail.

TEXTBOOK: Ritter and others, *Process Geomorphology*, 4th ed, 2002 (Waveland Press). Book is available at UO Bookstore.

GRADING: Your final course grade will be based on your total course score, which has a maximum possible value of 100 points. Your total course score is the sum of scores on test 1 (20 pts.), test 2 (20 pts.), test 3 (10 pts.) and lab exercises (50 pts.).

<u>WEEK</u>	<u>TOPIC</u>	<u>READING</u>
1	Introduction to geomorphology; Watersheds	Ch. 1, 2
2	Mass movement; Slope stability	Ch. 4
3	Water and erosion on slopes; stream hydrology	Ch. 5
4	Stream channel processes; floodplains and terraces	Ch. 6, 7
	TEST 1	
5	Riparian zones and stream management	Ch. 6
6	Groundwater and karst processes	Ch. 12
7	Glacial processes and landforms	Ch. 9, 10
8	Quaternary glacial history; coastal processes	Ch. 10, 13
	TEST 2	
9	Coastal landforms; Quaternary coastal history	Ch. 13
10	Eolian processes and landforms; Quaternary history of arid landscapes	Ch. 8
	TEST 3 will be given during lab meetings in week 10	

LAB EXERCISES: In the one-hour weekly lab meeting, the GTF will provide an introduction to the lab materials and techniques, and you will start work on the lab. Lab materials will be available throughout the week on line, in the lab room (206 Condon) or Knight Library for your use in completing the lab exercise.

Lab exercise topics will include: Geomorphic measurement and analysis on topographic maps; Soil and sediment size and analysis; Flood frequency analysis; Interpretation of fluvial landforms on maps and aerial photos; Drainage network analysis; Interpretation of karst, glacial, and coastal landforms on maps and aerial photos