**GEOG 322: Geomorphology, Summer 2019**

**Instructor:** Devin Lea (dlea@uoregon.edu)
**Office:** Condon 105
**Office Hours:** 1pm-2pm on Tuesdays and Wednesdays (or by appointment)

**Lecture:** Mondays through Thursdays, 10am-12:50pm in Condon 106

**Course Website:** canvas.uoregon.edu

**Prerequisites:** GEOG 141, or GEOL 102 or 202 (or equivalent, with permission of the instructor)

**(Optional) Textbook:** “Key Concepts in Geomorphology” (2013) by P.R. Bierman and D.R. Montgomery.

The textbook is OPTIONAL, although it is STRONGLY ENCOURAGED for those students who know they learn and reinforce their knowledge by reading about topics also covered in lecture. For those who prefer to not use a textbook because of learning and/or financial reasons, audio/video recordings will be provided covering the equivalent material.

**Course Overview and Objectives:** Geomorphology is the study of the landforms at or near the Earth’s surface, and the processes that create and modify landforms over time. In this class, we will investigate the composition, structure, function, and spatial distribution of landforms both descriptively and quantitatively. General topics covered will include, though are not necessarily limited to:

* Weathering and soils
* Geomorphic hydrology
* Hillslope processes and mass wasting
* Rivers and fluvial landscapes
* Coastal geomorphology
* Glaciers and periglacial landscapes
* Aeolian geomorphology
* Volcanic geomorphology
* Quaternary climate change and geomorphology
* Humans and geomorphology

**General structure of course:** This class will be a mix of lecture and lab exercises. See the tentative class schedule at the end of this syllabus. Goals for this class include developing your skill at interpreting maps, air photos, and other types of imagery, learning the fundamentals of geomorphic mapping and ways of thinking, and the measurement and analysis (statistical and physics-based) of geomorphic variables. Specific goals and learning outcomes will also be finalized in the first week of the course based on student goals.

**Attendance:** While attendance is not required and will not be taken for class points, missing class is strongly discouraged because the fast pace this course must take being only four weeks and because you are likely to miss activities in class that contribute to the course grades (quizzes, reflections, labs). Because of the course pace and structure, I discourage students to register if they will not be able to attend regularly and devote the necessary effort and attention required to make the class worthwhile.

**Evaluation:**

* Quizzes – 15% of total class grade
* Reflection and thinking exercises – 5% of total class grade
* Labs – 40% of total class grade
* Exam or equivalent (to be discussed more in first week) – 40% of total class grade

**Students with Disabilities:** To encourage an inclusive environment, I will make the accommodations I am able to provide all students with the resources to participate in class activities. Students with disabilities who require accommodations to participate in class or meet course requirements are encouraged to first contact the Accessible Education Center (http://aec.uoregon.edu/,164 Oregon Hall, 3461155) and then contact and discuss with me the issue as soon as possible to make sure you get the support you need for your best learning environment in the class.

**Academic Honesty:** While you will work together with classmates in elements of this class, students are expected to complete their own work on assignments unless otherwise instructed to do so. Students may discuss lab assignments with other classmates, but each student is responsible for completing their own work. Work done by others must be appropriately cited. Please review the student conduct code for more information on academic honesty: <https://policies.uoregon.edu/vol-3-administration-student-affairs/ch-1-conduct/student-conduct-code>

**Class schedule:** For those using the textbook, reading that matches with class lecture material are shown below by page numbers. Please do these readings (or review equivalent) materials **before** the class period. You will be provided with guided questions relevant for in-class discussions and exercises.

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| **Week** | **Date** | **Lecture topic** | **Reading** |
| 1 | Mon. 6/24 | What is geomorphology, establishing class knowledge, how to think like a geomorphologist | Chapter 1 |
| Tues. 6/25 | Thinking and tools of a geomorphologist | Chapter 2 |
| Weds.6/26 | Geomorphic theory, landscape evolution | Chapter 14 |
| Thurs. 6/27 | Lab 1: time, space, and landscape change |  |
| 2 | Mon. 7/1 | Hillslopes and mass movement | Chapter 5 |
| Tues. 7/2 | Hydrology and geomorphology | Chapter 4 |
| Weds. 7/3 | Fluvial geomorphology | Chapter 6 |
| Thurs. 7/4 | Lab 2: interactions of hillslopes, hydrology, and rivers |  |
| 3 | Mon. 7/8 | Aeolian processes and landforms | Chapter 10 |
| Tues. 7/9 | Glacial processes and landforms | Chapter 9 |
| Weds. 7/10 | Coastal processes and landforms | Chapter 8 |
| Thurs. 7/11 | Volcanic and tectonic geomorphology | Chapters 11 & 12 |
| Fri. 7/12 | Lab 3: Field trip to the coast? |  |
| 4 | Mon. 7/15 | Geomorphology, humans, and climate | Chapter 13? |
| Tues. 7/16 | Geomorphology in the Anthropocene |  |
| Weds. 7/17 | ?????? |  |
| Thurs. 7/18 | Class review and take-aways, Final Exam or Equivalent DUE |  |