GEOMORPHOLOGY

GEOGRAPHY 322, SPRING 2024, CRN: 31906 (4cr.)

In-Person Class Lectures: Mondays and Wednesdays 2:00pm – 3:20pm, 125 McKenzie Hall
Instructor: Mark Fonstad, fonstad@uoregon.edu, Condon 107F, 541-346-4208,
Instructor Office Hours: Mondays 12pm – 1pm

Labs: In-Person labs, 206 Condon Hall, Thursdays 9:00am-9:50am (CRN: 31909), Thursdays 10:00pm-10:50pm (CRN: 31910), Thursdays 11:00am-11:50am (CRN: 31907), Thursdays 12:00pm-12:50pm (CRN: 31908)
Graduate Employees:
James Maze (9am, 10am Labs) – jmaze@uoregon.edu
Maddie Huelbig (11am, 12pm Labs) – mhuelbig@uoregon.edu

Required Prerequisites: GEOG 141 (The Natural Environment) or instructor-approved alternate

Lab Requirement: To take this class, you must enroll in both the lecture section (CRN: 31906) as well as one of the lab sections (CRNs 31909, 331910, 31907, 31908).

Content Management System: University of Oregon's Canvas System (GEOG 322)
The Canvas site will contain:
(1) Announcements
(2) Syllabus
(3) Modules – a) Lecture Stuff [Slides, Class Outlines], b) Weekly Labs, c) etc.
(4) Grades

Textbook: Key concepts in geomorphology, 2nd Edition (2020) by Paul Bierman and David Montgomery. This will be available through the University Book Store; there is also an ebook version available for purchase or rental online which is fine. Do NOT use the 1st edition – many things have been changed with the introduction of the 2nd edition.

Course Description and Learning Objectives: Geography 322 covers surficial geomorphic processes (including landslides, rivers, glaciers, wind, and coastal processes), landform development, and landscape evolution. By the end of the course, you should be able to:
1) explain how geomorphic processes, such as river flow, waves on a beach, wind, and glaciers, create specific landforms;
2) recognize and interpret landforms on maps, air photos and in the field; and
3) use basic quantitative techniques of geomorphology to measure and compare landform characteristics and to determine rates and magnitudes of processes.
This course provides a foundation for GEOG 427: Fluvial Geomorphology, as well as other related classes in Geography and Earth Sciences.

Division of Labor:
Instructor (Fonstad): Class presentations, Exam management & general questions
Graduate Employees (Maze & Huelbig): Lab instruction, Lab evaluation, Lab Content Development

Tentative Class Schedule (Subject to Change):
Week 1 (April 1 & April 3): Weekly Topics – Intro, History, and Nature of Geomorphology (Ch. 1, 2)
Week 2 (April 8 & April 10): Weekly Topics – The Geomorphic Toolkit, Geomorphic Hydrology (Ch. 3, 4)
Week 3 (April 15 & April 17): Weekly Topics – Weathering, Soils, and Geomorphology (Ch. 5, 6)
Week 4 (April 22 & April 24): Weekly Topic – Hillslopes (Ch. 7)
Week 5 (April 29 & May 1): Weekly Topic – Channels (Ch. 8)
Week 6 (May 6 & May 8): Exam 1 (Monday); Weekly Topic – Drainage Basins (Ch. 9)
Week 7 (May 13 & May 15): Weekly Topics – Coastal, Submarine, and Wind Geomorphology (Ch. 10, 11)
Week 8 (May 20 & May 22): Weekly Topics – Volcanic, Glacial Geomorphology (Ch. 12, 13)
Week 9 (May 27 & May 29): Weekly Topics – NO CLASS MONDAY, Periglacial, Climate (Ch. 13, 14)
Week 10 (June 3 & June 5): Weekly Topic – Tectonics & Geomorphology, Landscape Evol. (Ch. 15, 16)
Final Exam: June 10 (Monday), 2:45pm – 4:45pm

Lab Topics (Subject to Change):
Lab 1: Angle of Repose, Part 1 (Introduced Week 1)
Lab 2: Angle of Repose, Part 2 (Introduced Week 1)
Lab 3: Tombstone Weathering, Part 1 (Introduced Week 3)
Lab 4: Tombstone Weathering, Part 2 (Introduced Week 3)
Lab 5: Hillslopes (Introduced Week 5)
Lab 6: The Disconnection of the Willamette River and its Floodplain, Part 1 (Introduced Week 6)
Lab 7: The Disconnection of the Willamette River and its Floodplain, Part 2 (Introduced Week 6)
Lab 8: Dune (Introduced Week 8)
Lab 9: Glacial Changes (Introduced Week 9)

Weekly Labs: Labs provide practical experiences for completing geomorphic analyses. The labs will be introduced in-person and many parts of individual labs will be using in-person materials, but some labs will have portions to be completed by students on their own time. You are free to work with others on these exercises, but make sure that you do your own calculations and your own write-ups for these exercises. Do not copy each others' written answers. I expect the exercises to be written up with a professional level of writing quality and presentation. The lab instructors will provide a detailed schedule of when labs are due to each lab section.

Evaluation and Grading:
(1) Weekly Labs -- 60% (9 total, drop lowest score lab, each of remaining 8 worth 7.5%)
(2) Exams – 40% (2 total, each worth 20%)

Late weekly labs are deducted 25% of total possible after the deadline, +25% deducted for each additional week late.

Exams are on May 8 and June 13. Exams are closed-book and in-person. If you have an official AEC request for this (for example, longer time for exams), let me know at the beginning of term and I will work to accommodate these requests. No make-up tests will be given unless you provide documentation in advance and for a reason that is valid in the instructor's judgment.

The final grade scale is as follows: A+: >98; A: 92-98; A-: 90-92; B+: 88-90; B: 82-88; B-: 80-82; C+: 78-80; C: 72-78; C-: 70-72%; D+: 68-70; D: 62-68; D-: 60-62; F: <60.

Grade Bump Requests Will NOT be Honored

Participation: While attendance at lecture is not mandatory (other than exams), you are strongly encouraged to attend every lecture in order to gain the knowledge crucial for understanding the course material and for doing well on lab exercises and exams. While lab attendance is technically not required, both the introductions to the labs and many of the materials (and instructor aid) to complete the labs will be during the lab periods, so from a practical standpoint you will need to attend lab. During lectures and labs please be respectful of everyone's learning experience. This includes having phones turned off, computers to be used only for class-related activities, extraneous noise kept to a minimum, etc.

Contacting us: The fastest way to contact us is via email. When asking questions about the policies of the class, remember that the exercise and exam dates, as well as policies on late/make-up work, are clearly stated in this syllabus. We may not be able to be contacted on evenings, weekends, and holidays.

Academic Dishonesty: We will not tolerate cheating or academic misconduct/dishonesty in my courses; examples of these behaviors include (but are not limited to):

- Plagiarism (passing off the work of another as that of your own)
- Any other actions that might give you an unfair advantage over your classmates.

All cases of academic dishonesty/misconduct will be referred immediately to the Student Judicial Affairs Office. The penalties for engaging in academic dishonesty and/or misconduct can range from a grade of "F" for an exercise or quiz to an automatic failure of the course. Please consult the university policy at https://dos.uoregon.edu/social-misconduct

Disability Services Notice: I work hard to ensure a quality learning experience for all students. If you need specific accommodations to get the most out of this class, please let me know by (1) informing me of your particular needs, and (2) providing the appropriate documentation from the university's AEC office. I will make every effort to accommodate your needs, but you must notify me by the first week of class if you need special arrangements.

Note: I consider this syllabus a contract between myself and the students in this course. In writing this syllabus, I have obligated myself to follow the policies and procedures contained herein. You are responsible for understanding and following these policies as well. I reserve the right to make changes to this syllabus. You will receive verbal and written notification of major changes to course policies, procedures and content.