

Instructor: Dr. Robert Mahon, Department of Earth and Environmental Sciences

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Office Hours: _____

Meeting times: Thursday 17:00-19:45, online

Final exam: Tuesday December 8, 17:30-19:30 online

Aim: What processes shape the Earth's surface through time? Geomorphology is the study of processes that form the observable landscapes on Earth's surface. In this course, you will develop observational skills to describe and measure landforms at a range of scales. You will learn to interpret those landscapes in the context of the processes that formed them as well as the magnitudes and timescales associated with these processes. You will develop skills in the use of maps, digital elevation models, aerial photography, as well as written, oral, and graphical communication.

Learning Objectives: Upon completion of this course, you will be able to:

- observe and describe landscapes using a variety of tools:
 - o observe using maps, aerial imagery, digital elevation models, experiments
 - o describe using qualitative, map-based, and quantitative methods
- understand the dynamics of processes that shape the Earth's surface:
 - o glacial and periglacial processes
 - o coastal processes
 - o weathering, soil, and hillslope processes
 - o river processes
- understand the role of climate on geomorphic processes and landscape evolution
- understand the role of tectonics on geomorphic processes and landscape evolution
- present interpretations of geomorphic processes from landscapes using maps, and graphical tools, through written and oral reports

Course Delivery

Course material will be delivered through the following online tools:

Lectures: Lectures will be asynchronous, pre-recorded. They will typically be posted Thursday evenings for you to view during the course of the week. Short quizzes or assignments will be given at the end to record that you viewed the material.

Discussions: We will have short, synchronous discussions weekly on Thursday beginning promptly at 17:15 to discuss readings, the past week's lectures, and any class business. Attendance at and participation in these meetings is mandatory.

Labs: Labs will be delivered online in Moodle, and typically will involve a short introductory video, a dataset, and a set of instructions on how to analyze and present your findings. Labs will require the use of software including Google Earth Pro, Microsoft Excel, Word and PowerPoint, and possibly

more advanced software optional (QGIS, Python). All of these programs are free to download for UNO students.

Exams: Exams will be conducted via Moodle and will be timed. You will be given a window of time (usually a 5 or 6-hour time window) over which you will have a shorter time period (usually ~2 hours) to complete the exam.

Course Evaluation

Grading: Total class grade: over 90% = A, 80-89.9% = B, 70-79.9% = C, and 60-69.9% = D.

All grades and course material will be made available through the course page on Moodle. Please check this site and your student email regularly.

Extra Credit: No extra credit will be offered under any circumstances.

Labs (35%): The laboratory will be a significant part of your overall course grade. There will be approximately 10 laboratory assignments. You will be encouraged to work with partners if possible, using any number of online communication tools (such as Zoom), but you will be expected to turn in your own work, in your own words for every assignment.

Exams (25%): There will be two exams throughout the semester. The first exam will take place midway through the semester and will cover any material discussed up to that point; likely rates, timescales and magnitudes, historical geomorphology, as well as glacial, periglacial, hillslope, soil, and hydrologic processes. It will be worth 10% of the course grade. The final exam will be summative and will be worth 15% of the course grade. Final exam will be according to the UNO Examination schedule, **Tuesday December 8, 17:30-19:30**. Expect exams to include questions on topics covered in lectures, labs, and assignments. Exam format will be short answers and essay type questions, and some drawing or graphing will be expected, which you may upload to the Moodle site using a scanner or smartphone image. I will have further detailed instructions for this when exam time comes.

Assignments and participation (10%): While most lectures will be delivered asynchronously, we will start each class week with a synchronous discussion of the reading topic via Zoom. Attendance for these discussions is considered mandatory and your participation, either through chiming in on zoom or by using the chat feature and online forum in Moodle will be recorded for points each week. In addition, there may be several smaller scale assignments throughout the course of the semester. Some will be given as in-class exercises during discussions, others as take-home tasks. Their point value will be individually determined based on scope.

Concept Sketches (10%): You will be required to keep a concept sketch notebook throughout the course. Concept sketches are drawings that capture the essence of both landforms and processes by distilling the key components down to a single image. For each week, you should draw a concept sketch or two that depicts a landform and the key processes at play. These will be turned in electronically at the midterm and final exam dates.

Final project and report (20%): You will work, over the course of the semester, towards a final project and report. This project can be on any topic in geomorphology of your choosing, with instructor consent. The timeline for this project is prescribed in the course schedule below, but will consist of the following: choosing a topic and dataset to evaluate in discussion with the instructor,

submitting a short abstract (<1 page, plus one to two figures) to demonstrate progress, a 5 minute presentation at the end of the semester which you will pre-record, and a short ~5 page paper with figures and references. Every student will be expected to view the class presentations and ask the presenters questions in the course online forum.

Textbook

The textbook for this course is Bierman and Montgomery, Key Concepts in Geomorphology, ISBN-10: 1319059805, available through your UNO Follett Access account. You will not be required to purchase this text if you did not opt out of Follett Access fees this semester. If you did opt out, you may still purchase the text separately.

Late Assignment Policy

Any assignment turned in after the specified due date will be considered late. An assignment not handed in by the time it is due will not be accepted without a valid University excuse. Make-ups will only be given for verifiable written excuses specifically recognized by the University (illness of the student, or of an immediate family member, death of an immediate family member, participation on trips related to certain University functions, major religious holidays). If you miss any classes, you must promptly notify me to make up the material. Make-ups after one week has passed will be permitted only under extenuating circumstances.

Class Attendance

Class attendance for the synchronous reading discussions are considered mandatory, except in the case of University approved absence.

Academic Honesty

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Academic Dishonesty Policy (<http://www.uno.edu/student-affairs/documents/academic-dishonesty-policy-rev2014.pdf>) for further information. The University policies and procedures regarding academic dishonesty are clearly defined in the University Code of Conduct: <http://www.uno.edu/student-affairs/documents/Student-Code-of-Conduct-rev-7-16.pdf>

Students with disability

It is University policy to provide, on a flexible and individual basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirement. Like so many things this fall, the need for accommodations and the process for arranging them may be altered by the COVID-19 changes we are experiencing and the safety protocols currently in place. Students with disabilities or needs for access accommodations should contact the Office of Disability Services (LIB 120) as well as their instructors to discuss their individual needs for accommodations. See the UNO Policy for Students with Disabilities at <http://www.ods.uno.edu/>