
Professor: Dr. Matthew Lachniet
Office: 201-A Lilly Fong Geosciences (LFG)
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Office Hours: Tuesday/Wednesday 2:30 – 3:30pm
Required Textbook: Environmental Geology, 8th Ed., by Keller, 2000;
Lab Manual: Investigations in Environmental Geology, Foley, McKenzie,
and Utgard. 2nd Edition.

Course Background:

Geology 334 is a 3 credit, upper-level undergraduate course in the Environmental aspects of Geology. Environmental Geology is the control and use of the geological environment in modern society, and includes surface and sub-surface processes, mineral resources, and rock properties. We will cover the important and relevant geological processes and topics that affect people and civilizations. I assume knowledge of basic geological concepts like rocks and minerals, some structural geology, geomorphology, sedimentology, and common data analysis techniques such as graphing, units, conversion, basic algebra, and basic geologic terminology.

Attendance:

Attendance in lecture is required. It is your responsibility to attend and be on time for lecture. It is the student's responsibility to inform the instructor no later than the last day of late registration of classes to be missed for religious holidays. Three unexcused absences will result in you being dropped from the course.

Assignments:

We will be completing assignments periodically to supplement lecture material. If needed, I will give an introduction to the exercise in class. Lab exercises will be due the following class. These exercises will be quantitative and include equations and graphs. This material is essential for developing a thorough understanding of Environmental Geology. You may work in small groups of not more than 4 people on the lab exercises, but your answers must be in your own words. Material copied verbatim from classmates will result in a zero score on the assignment. Questions from the lab exercises will be included on exams. Additional exercises may be assigned as the semester progresses. We will also read reports and articles as case studies, followed by in class discussions, to supplement the lecture.

Lecture exams:

There will be three exams in this class. The first three will be held during class periods and will not be cumulative. The final exam (**December 11, 1:00 to 3:00 pm**) will be cumulative but weighted towards more recent material. Material covered in the laboratory exercises will be included on the exam, including equations and word problems. If you have copied a partner's lab exercises you can expect to score poorly on exam questions drawn from the lab exercises.

Grading policy:

Your grade for this class will be determined by your exam scores and exercises. Grade ranges (with + and -) will be assigned by percentage as follows: $\geq 90\%$ = A; 80 to 89% = B; 70 to 79% = C; 60 to 69% = D, < 60 = F. For example. The exams and exercises/quizzes will be weighted 2/3 and 1/3, respectively, in determining your final grade.

Cheating

Cheating and plagiarism will result in a failing grade for this course and may result in your expulsion from the University. We work on an honors system. If you are aware of cheating, please inform me.

Special Assistance:

If you have a documented disability that requires assistance, you will need to go to Disability Services (DS) for coordination in your academic accommodations. DS is located within the Learning Enhancement Services office in the Reynolds Student Services Center, room 137. The DS phone number is 702-895-0866, or TDD 702-895-0652.

–OVER–

Topic List: To be modified based on student interest!

Intro

Soils

Hazards overview

Rivers and flooding

Mass movement

Earthquakes

Volcanic Hazards

Coastal Hazards

Water Supply

Water Pollution

Waste Management

Geologic aspects of environmental health

Mineral resources

Energy and environment

Air pollution