

Professor:	Dr. Matthew Lachniet	
Office and Hours:	3240 SEB, Tuesday 2:00 to 3:00 pm and by appointment	
Contact info:	matthew.lachniet@unlv.edu; 702-895-4388	
Lecture room and time:	WRI C239, T/Th 4:00 – 5:15 pm.	
Required books:	Text: Ritter et al., 2011, Process Geomorphology, 5 th Edition. Waveland Press, 652 pages. Waveland Press, ISBN: 1-57766-669-0 Lab manual: FREE Exercises available on Canvas iClicker: we will use the mobile phone-based app iClicker REEF. It is available for purchase \$14.99 for the semester, at https://www.iclicker.com/pricing . We will not use the stand-alone iClicker remotes.	
Laboratory:	LFG 101, Sect. 2: Friday 8:30-11:15 am and Sect. 3: 2:30-5:15 pm.	
Laboratory TA:	Kelsy Konkright, TEC 110, 702-895-1531	
Class Website:	All course materials will be on Canvas: https://unlv.instructure.com/courses/39069	
Final Exam:	<table border="1"><tr><td>Tuesday, May 14, 2019, 6:00-8:00 pm, WRI C239.</td></tr></table>	Tuesday, May 14, 2019, 6:00-8:00 pm, WRI C239.
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UNLV Course Policy:

Please read and familiarize yourself with UNLV Policies at <https://www.unlv.edu/about/policies/current-policies>

Course Background

Geology 333 is a 4 credit, intermediate-level undergraduate course with laboratory on the principles of Geomorphology. I assume knowledge of basic geological concepts covered in typical introductory geology courses, such as rocks and minerals, some structural geology, sedimentology, and basic geologic terminology, in addition to knowledge of scientific units, conversion, and basic algebra and trigonometry.

Course Objective and Assignments

The objective of this course is for students to understand and be able to discuss the origin and morphology of landforms in diverse environments, including the ability to recognize landforms on photographs, aerial stereo photographs, and topographic maps. Lecture material will be supplemented with laboratory exercises and analysis of aerial stereo photographs and topographic maps.

Topic List:

1. Introduction to geomorphology (Chapters 1 and 2)
2. Chemical Weathering and Soils (Chapter 3)
3. Physical Weathering, mass movement, and slopes (Chapter 4)
4. Drainage Basins (Chapter 5)
5. Fluvial processes (Chapter 6)
6. Fluvial landforms (Chapter 7)
7. Wind processes and landforms (Chapter 8)
8. Glaciers and Glacial Mechanics (Chapter 9)
9. Glacial erosion, deposition, and landforms (Chapter 10)
10. Karst processes and landforms (Chapter 12)
11. Coastal processes and landforms (Chapter 13)

Learning Outcomes:

By the end of this class, students will have demonstrated proficiency in the following learning outcomes: 1) a competent level of ability to read, interpret, and make topographic maps, and understand coordinate systems and scale; 2) a competent level of ability to read and interpret aerial photographs; 3) apply knowledge of physical and chemical weathering processes to interpret landforms; 4) understand the concepts of dynamic equilibrium in geomorphology; 5) identify intrinsic and extrinsic thresholds in geomorphic systems; 6) identify common landforms visually, on topographic maps, and on aerial photographs; 7) discuss the role of tectonics, time, and climate on geomorphology; 8) comprehend and recall an in-depth vocabulary of geomorphic terms; 9) apply critical thinking

skills to solve Earth surface problems; 10) understand the concept of recurrence intervals in climate and geomorphology; 11) link understanding of geomorphic processes to landforms.

Student responsibilities

Students' responsibilities will include a) attending lectures and laboratories, including field trips, b) taking lecture notes to supplement assigned readings, c) taking exams, and d) completing exercises. Examinations will cover material from classroom lectures, laboratories, and assigned readings.

Attendance

Attendance in lecture and laboratory is required. You may be removed from the class if you have more than five unexcused absences. It is your responsibility to attend and be on time for class. Please inform me no later than the last day of late registration of classes to be missed for religious holidays.

Grading policy

Your grade for this class will be determined by your exam scores.

Exam 1 (not cumulative)	25%
Exam 2 (not cumulative)	25%
Laboratory	25%
<u>Final Exam (cumulative)</u>	<u>25%</u>
Total	100%

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.

What do the grades mean?

"A" = exceptional performance and demonstration of expertise (I would probably hire you)

"B" = above average but not exceptional, proficient but not expert (I might hire you)

"C" = average; basic competency in course material (probably not competitive for hiring)

"D" = below average (not hireable)

"F" = the student has not demonstrated a basic level of competency in the course material.

To earn an "A" in this class, you should demonstrate exceptional knowledge of the course material. An "A" typically requires that you should: 1) understand all of the assigned readings, 2) attend class every day and arrive on time, 3) know all of the terminology and be able to identify all of the landforms we discuss in lecture and lab, 4) perform well on exams, and 5) attend all laboratory classes. **Most importantly, students who are naturally curious and ask questions are more likely to perform well.** A fundamental requirement of doing well in this class is knowing how to create and read topographic maps.

How much time should you spend studying to get an "A"? Six to nine hours a week! A general rule of thumb is 2 to 3 hours of studying for each credit hour you are taking.