

GLY 451**GEOMORPHOLOGY****FALL-17**

Meetings: TR, 9:30-10:45am (lecture/discussion), Science (S) 165
W, 2:00-3:50pm (labs), S165/S170/S166

Text: *Key Concepts in Geomorphology* (2014), by Bierman and Montgomery, Freeman/MacMillian
ISBN-13: 978-1-4292-3860-1

Instructor: Bill Niemann, Ph.D., P.G., E.I.T.

Office: 171 Science Building

Office Hours for GLY 451 Students:

- MWF: 11:00-11:30am
- MR 2:00-3:00pm
- TR 11:00am-12:00pm
- Other times, by chance or appointment

Phone: 696-6721 (W)

E-mail: niemann@marshall.edu

My MUOnline: Blackboard Learn, version 9.1, October 2014 Release.

Course Description

Geomorphology is the study of processes that operate at or influence the earth's surface and the landforms and surface materials that develop in response to those processes. Students will learn basic principles governing geomorphic processes and how application of this knowledge is important to human society and infrastructure.

Relationship of Course to Departmental Goals

This course addresses the major goals of the geology department at Marshall University. In particular, the department's program objective in oral communication is emphasized through group presentations.

Grading Policy

➤ **Grading scale**

A	=	90-100%	of total points
B	=	80-89%	“ “ “
C	=	70-79%	“ “ “
D	=	60-69%	“ “ “
F	<	60%	“ “ “

➤ **Grade components***

Lab Exercises (~7-8)	25%
Exams (2)	35%
Chapter Homework (Blackboard)	15%
Quizzes (2-4)	10%
Group presentation	15%

Total	100%
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Attendance (Extra credit)	-2 to +2-%
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<u>Unexcused Absences</u>	<u>Extra Credit</u>
0	+2%
1	+1.5%
2-3	0.0%
4	-1.0%
5 or more	-2.0%

*Minor adjustments may be made to the above percentages based on actual number and difficulty of assignments, amount of material covered, time required, etc. All students will be asked for input prior to any such adjustments.

Policy statement on examinations and assignments including submittal of late work

- **Major Dates:** The course schedule includes the dates for the two examinations, the group presentations and the weekend field trip. These dates will not be changed and participation in these activities is required to receive a passing grade in the course. Attendance on the weekend field trip is mandatory.
- Labs will often be scored by use of a $\sqrt{+}$ (105), $\sqrt{}$ (90), or $\sqrt{-}$ (75), $\sqrt{--}$ (50), indicating above satisfactory, satisfactory, less than satisfactory, and unsatisfactory, respectively. A general grading rubric for determining the appropriate grade is provided below.

Grade →	√ - - (50%)	√ - (75%)	√ (90%)	√ + (105%)
Criterion ↓				
Timeliness	Submitted significantly after due date/time	Submitted after due date/time	Submitted by due date/time	Submitted by due date/time
Completeness	Repeated missing answers/elements	Missing answers/elements	Complete answers/elements	Work product beyond assignment
Neatness	Illegible and/or sloppy	Difficult to read	Easy to Read	Easy to Read
Care	Obvious lack of care	Lack of care	Obvious care	Extraordinary care
Achievement	Multiple missing / incorrect answers	Incorrect answers	Reasonable answers	Correct and thorough answers
Evidence of Learning	No evidence	Lack of evidence	All objectives met	Exceeds objectives

- Lab exercises/reports and any hard-copy assignments given as part of lecture are due at the beginning of the next week's lab period or at the beginning of class on the announced due date, respectively. Late lab submittals will automatically receive a grade of √-. Late homework including Blackboard assignments will be penalized at the rate of 10% per day up until 7 days past the due date; after 7 days a zero grade will be assigned. An assignment will not be counted late as a result of an excused absence as long as it is submitted by the end of the next weekday.

Attendance Policy

- Attendance will be monitored and used as a basis for extra credit. More importantly, graded activities that occur during lecture and lab periods may not be made up unless the student obtains an official excused absence through the office of Student Affairs, which is located on the second floor of the Memorial Student Center (2W38), 304-696-3170. Request for an excused absence can be accessed at <http://www.marshall.edu/student-affairs/excused-absence-form/>
- In the case of an excused absence, any material missed can be completed, without penalty, by a later date assigned by the instructor. Failure by the student to complete the material by the assigned date will result in a zero for the assignment in question. The instructor may instead opt to assign a "no-grade," without penalty to the student, for missed material as a result of the absence.

General Statement on University Policies

By enrolling in this course, you agree to the University Policies listed below and specified at www.marshall.edu/academic-affairs/policies/.

Academic Dishonesty/Excused Absence Policy for Undergraduates/Computing Services Acceptable Use/Inclement Weather/Dead Week/Students with Disabilities/Academic Forgiveness/Academic Probation

and Suspension/Academic Rights and Responsibilities of Students/Affirmative Action/Sexual Harassment

GLY 451: GEOMORPHOLOGY
SCHEDULE--FALL SEMESTER 2017




Week	Dates	Format	Topic / Activity F = Field Trip L=Lab	Reading
1	T Aug 22	Lecture / Discussion	Introduction	
	W Aug 23	Lab	Viewing the Landscape (F)	Handout; Ch.2: 47-48, 67-68
	R Aug 24	Lecture / Discussion	Introduction	Ch. 1: 1-20
2	T Aug 29	Lecture / Discussion	Spatial and temporal scales	Ch. 1: 20-28
	W Aug 30	Lab	Viewing the Landscape II (F/L)	Handout
	R Aug 31	Lecture / Discussion	Unifying concepts	Ch. 1: 28-40
3	T Sept 5	Lecture / Discussion	Geomorphic Tools	Ch. 2: 43-52
	W Sept 6	Lab	Terrace Weathering (F/L)	Handout
	R Sept 7	Lecture / Discussion	Geomorphic Tools (cont.)	Ch. 2: 52-67
4	T Sept 12	Lecture / Discussion / <u>Quiz</u>	Weathering	Ch. 3: 77-89
	W Sept 13	Lab	Soils I: Description (F/L)	Handout
	R Sept 14	Lecture / Discussion	Weathering (cont.)	Ch. 3: 89-95
5	T Sept 19	Lecture / Discussion	Field Trip Preview	Handout
	W Sept 20	No lab meeting		
	R Sept 21	No Lecture / Discussion		
	R Sept 21	Field Trip – leave ~3pm	Shenandoah Trip (F)	Handout
	F Sept 22	Field Trip – all day	Shenandoah Trip (F)	Handout
	SA Sept. 23	Field Trip – all day	Shenandoah Trip (F)	Handout
	SU Sep. 24	Field Trip – return ~3 pm	Shenandoah Trip (F)	
6	T Sept 26	Lecture / Discussion	Soils (introduction)	Ch. 3: 89-95, 99-110
	W Sept 27	Lab	Soils II: Classification (L)	Handout
	R Sept 28	Lecture / Discussion	Soil Occurrence	Ch. 3: 101-110

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SCHEDULE--FALL SEMESTER 2017 (cont.)

Week	Dates	Format	Topic / Activity F = Field Trip L=Lab	Reading
7	T Oct 3	Lecture / Discussion / <u>Quiz</u>	Weathering	Ch. 3: 77-89
	W Oct 4	Lab	Group Assignments	
	R Oct 5	Lecture / Discussion	Review for Exam 1	
8	T Oct 10	Exam 1: Chapters 1-3		
	W Oct 11	Lab	Soils III: Classification (L)	
	R Oct 12	Lecture / Discussion	To be announced	To be announced
9	T Oct 17	Lecture / Discussion	Hillslopes (intro.)	Ch. 5: 144-158
	W Oct 18	Lab	Soils IV -- GIS Exercise (S166)	Handout
	R Oct 19	Lecture / Discussion	Hillslopes (cont.)	Ch. 5: 159-164
10	T Oct 24	Lecture / Discussion	Hillslopes (cont.)	Ch. 5: 164-178
	W Oct 25	Lab	Work on Group Presentations / Soil Summaries due	
	R Oct 26	Lecture / Discussion / Quiz	Channels	Ch. 6: 179-193
11	T Oct 31	Lecture / Discussion	Channels (cont.)	Ch. 6: 194-215
	W Nov 1	Lab	Group Presentations (Practice)	
	R Nov 2	Lecture / Discussion	Drainage Basins	Ch. 7: 217-232
12	T Nov 7	Lecture / Discussion	Drainage Basins (cont.)	Ch. 7: 233-240
	W Nov 8	Lab	<u>Group Presentations</u>	
	R Nov 9	Lecture / Discussion	Drainage Basins (cont.)	Ch. 7: 240-251

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SCHEDULE--FALL SEMESTER 2017 (cont.)

13	T Nov 14	Lecture / Discussion	Drainage Basins (cont.)	Ch. 7: 240-251
	W Nov 15	Lab	Drainage Networks (F)	Handout
	R Nov 16	Lecture / Discussion	Glacial Mechanics	Ch. 9: 289-302
Thanksgiving Break	Nov 20 - 24		Thanksgiving Break	
 <p><i>"Henceforth, let us set aside this date as a day of thanksgiving!"</i></p>				
14	T Nov 28	Lecture / Discussion	Glacial Mechanics	Ch. 9: 302-310
	W Nov 29	Lab	Glacial Landforms	Handout
	R Nov 30	Lecture / Discussion / Quiz	Glacial Landforms	Ch. 9: 302-316
15 (Dead Week)	T Dec 5	Lecture / Discussion	Glacial Landforms	Ch. 9: 316-328
	W Dec 6	No Lab		
	R Dec 7	Lecture / Discussion / Quiz	Glacial Landforms Review for Exam 2	Ch. 9: 316-328
Exams	Dec 11 - 15	Tuesday, 12 Dec, 8-10am Exam 2		