

GEOLOGY 103
INTRODUCTION TO PHYSICAL GEOLOGY
FALL, 2005

Instructor	Name:	Dr. Mara Chen
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Class	Class (location):	MW 3:00 – 4:15 (HS 148)
Time	Lab (section):	T 2:00 – 3:40 (011), R 1:00 – 2:40 (012)
	Office Hour:	T 3:40-5:10, W 4:15-5:15, R 2:40-5:10, and by appointments

Course Description:

This course is an introductory level geology course. It provides a general examination on the earth's history, composition, interior structure, geological processes and associated landforms. Topics include minerals, rocks, geologic time, plate tectonics, geologic structures, weathering and mass wasting, fluvial system, coastlines, glaciations, and seismic activities.

Learning Objectives:

- To have a fundamental understanding of earth's composition and dynamic nature
- To understand the interrelationships between earth's interior and exterior processes
- To understand and appreciate geologic processes that shape and reshape the surface landforms
- To gain essential problem-solving and critical thinking skills (apply what you learn!)

Textbook & Lab Manual (Required):

Hamblin, W.R. and Christiansen, E.H. 2004. The Earth's Dynamic Systems. 10th edition. Prentice Hall

Hamblin and Howard. 2005. Exercises in Physical Geology. 12th edition. Prentice Hall

(You must have the lab book to attend each lab)

General Education Credit:

This course may be used in partial fulfillment of Group III-A or Group III-B.

Writing across the Curriculum:

All written work will be evaluated based on the policies concerning writing across the curriculum as described in the SU catalog.

Student Responsibility:

Students are responsible for learning the materials presented and assigned. Critical thinking and active participation are highly valued.

Course Grade Evaluation:

A: Exams

2 midterm lecture exams	200	(100 points. each)
Final exam	100	(100 points.)
2 lab exams	120	(60 points. each)
10 labs	30	(maximum 3 points. each)
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Total Points	450	points.

B: Grading System

A: 90 - 100%	C: 70 - <80%	D: 60 - <70%
B: 80 - <90%		F: < 60%

C: Date of the exam

Tentative midterm tests are listed on the lecture outline, and you will always be informed of the exam date at least one week in advance.

FINAL EXAM (Dec. 14 at 1:30-4:00)

D: Exam Format

Lecture exams will consist of a combination of multiple choice, true/false, and short essay questions. With the exception of the final, the graded exams will be returned and reviewed during the subsequent class period. Following the review, exams will be recollected and kept on file for one year. Any exam that is not returned will be recorded as a zero. Persons missing the review must see me during my office hours or pre-scheduled appointment time. A person who is accused of academic dishonesty will be penalized (See student handbook and University Catalog for further information on academic dishonesty).

E: Make-up exam

Make-up exams will be given only if the student can convince me that the absence from the regularly scheduled test period was justified (emergency situations). If you do miss an exam, you must contact me as soon as possible (before the exam or before the subsequent class) so that a make-up arrangement can be made. No make-up exam will be given after a midterm exam is reviewed and no make-up exam for the final.

F: Class Attendance and Demeanor

"The faculty regards the classroom as the center of college life; accordingly, students are expected to attend all classes"(University Catalog). All students are strongly encouraged to arrive **on time** and actively participate in classroom discussion. Every student is expected to contribute to developing a positive college-learning atmosphere. Conscientious class attendance, positive professional attitude, improved performance, and teamwork spirit will be considered positively in the final determination of "borderline" grades. If you do miss a class, you are responsible for obtaining and learning the materials. Except for prior approval or emergency, **arriving 10 minutes late and leaving earlier without an approval** will be regarded as an **unaccepted professional attitude**.

TENTATIVE LECTURE OUTLINE

Week	Topic	Reading – chapter (page)
8/29 – 9/2	Introduction , Minerals	1, 2
9/5 – 9/9	Minerals & Igneous Rocks	3
9/12 – 9/16	Igneous Rocks	4
9/19 – 9/23	Sedimentary Rocks	5
9/26 – 9/30	Metamorphic Rocks & Rock Cycle	6
10/3 – 10/7	REVIEW AND EXAM #1 (Oct. 3) Geologic Time and Geologic Map	8
10/10 -10/14	Geologic Map & The Earth Interior Structure	8, 1 (12-23)
10/17 – 10/21	Plate Tectonics	17, 23
10/24 – 10/28	Plate Tectonics & Structural Geology	17,23,7
10/31 -11/4	Structural Geology	7
11/7 – 11/11	Weathering and Mass Wasting REVIEW AND EXAM #2 (Nov. 9)	10, 11
11/14 – 11/18	Fluvial Processes and Landforms	12
11/21 – 11/25	Coastal Processes and Landforms	15
11/28 – 12/2	Glaciation and Glacial Landforms	14
12/5 – 12/9	Natural Hazards: Earthquake Activity	18
	FINAL EXAM (Dec. 14 at 1:30-4:00)	

LABORATORY TENTATIVE SCHEDULE AND OUTLINE

Week	Lab Exercises
8/29 – 9/2	LAB 1: Introduction & Landforms of the United States- Exercise 8/ 103 (1, 2, 3, 5)
9/5 – 9/9	LAB 2: Minerals / Specimen Identification (Read the Exercise 2, Lab Manual)
9/12 – 9/16	LAB 3: Igneous Rocks/ Specimen Identification (Read the Exercise 3, Lab Manual)
9/19 – 9/23	LAB 4: Sedimentary Rocks /Specimen Identification (Read the Exercise 4, Lab Manual)
9/26 – 9/30	LAB 5: Metamorphic Rocks/ Specimen Identification (Read the Exercise 5, Lab Manual)
10/3 – 10/7	LAB 6: Geologic Time Dating / page 75, 77 (a, c), 78-79 & first lab test review
10/10 -10/14	Lab Test #1 (LAB 2 – 6)
10/17 – 10/21	LAB 7: Geologic Map 97 (a-e), 98 (7, CI=50'), 99-100 (contours at the multiples of 100)
10/24 – 10/28	LAB 8: Structural Geology/ 202 (a,b,d,e), 204 (a,b,c,e), 206 (a-c, g-i, k), 208 (a-e, j)
10/31 -11/4	LAB 9: Fluvial System & Landforms/109 (read), 110 (a,d,h), 111 (a-c), 112 (c, d), 113 (b,d, e), 114 (5: a-c), 115 (a, c), 121 (b, d)
11/7 – 11/11	LAB 10: Coastal Landforms/167 (4: b-c, 5:b), 168 (a, f, i), 170 (c, d, e), 172 (a-d),174(h, i, k, m), 176 (a-b), 177 (a, b, e)
11/14 – 11/18	LAB 11: Glacial Landforms/145(2:a-c,f, h, 3:a,c), 146 (4:a, 5:c), 148(d, e), 150(a,d), 155(a,d,e), 156 (b, c, e) & 2 nd lab test review
11/21 – 11/25	No Lab
11/28 – 12/2	Lab Test #2 (LAB 7 – 11)

Test #1	60 points
Test #2	60 points
Labs	30 points

Total Lab Points	150 points

You will not receive any credit for a completed lab if you have not attended and completed that lab in the lab room in person! All completed labs must be presented in person to the instructor in order to warrant the lab evaluation and to receive the credit. Unless otherwise directed, laboratory exercises are to be done entirely during the lab period. Crosscutting is only allowed for emergency situations and requires the approval from the instructor.

Completed-lab exercises are evaluated at the end of your laboratory period.