

GEOS-112-02

Physical Geology

Fall 2007

Lecture: Wednesday 5:30 to 8:00, Mallory 353

Lab: Tuesday 8:15 to 10:05, Mallory 353

Professor: Dr. Josh Galster

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Email: galsterj@mail.montclair.edu

Office hours: Tuesdays, 10-11

Wednesdays, 2-3

Or other times of the week. Please stop by or make an appointment.

Teaching Assistant: Matthew Doherty

Office: Mallory 358

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Office hours: 1 hour before and after lab

Class Summary and Course Goals: Physical geology is an introduction to the basic principles and processes that govern the planet Earth. The properties of rocks and minerals and earth systems such as the atmosphere, lithosphere, and hydrosphere are all presented, as well as how they interact with each other. This is all done to give you a fundamental idea how the Earth functions as a planet. By the end of the course, you will hopefully understand basic concepts such as:

- The age of the Earth
- Plate tectonics
- The composition of the planet
- History of the earth
- The different types of rocks and minerals
- How form is shaped by process
- Humans interacting with the Earth

Required Texts: There are **two**: Essentials of Geology, author Stephen Marshak, second edition. You may purchase the traditional version of this book or the purely electronic version. The lab manual is the Physical Geology Lab Manual, author Dr. Matt Gorrington.

Materials: Notebooks and pencils/pens required for lab and lecture. Bring your lab book to lab. Other materials will be provided.

Class attendance and activities: I don't technically take attendance in class. However, there will be several in-class activities, some of which are graded, that you can't participate in if you're not there. Readings are meant to supplement, not replace, the lectures, so you will miss valuable material if you miss class. Can you pass this class and not come to lecture? Probably. Will you do well? Probably not. However, missing lab is different. Exercises done in lab almost always involve material physically in the classroom; if you're not there, you can't do it. If you need to rarely miss lab for a pre-excused absence, arrangements can be made. However, rescheduling will not become a routine and will only be done on a case-by-case basis.

Exams: There will be 2 in-class exams and a final. The final will focus on the material covered in the last part of the course but will include other material presented throughout the semester.

Grading: The total points for the class are:

Labs:	180	(12 labs x 15 pts. each)	30%
Exams:	200	(2 x 100 each)	38%
In-class participation:	70		7%
Final:	<u>150</u>		<u>25%</u>
TOTAL:	600		100%

Final grades are determined on the standard system:

A:	>93%
A-:	90 to 93%
B+:	87 to 89%
B:	83 to 86%
B-:	80 to 82%
C+:	77 to 79%
C:	73 to 76%
C-:	70 to 72%
D+:	67 to 69%
D:	63 to 66%
D-:	60 to 62%
F:	<60%

Academic honesty: I expect your final grade in this course to reflect the effort and thought **you** put into it. I further expect each of you to hold yourself to the highest standard when it comes to academic integrity. On group assignments I encourage sharing and collaborating, but there are certain exercises when you and you alone are responsible for the work. If you have any questions about this policy, please just me or the TA.

This is directly from the university's code of conduct: *"Academic dishonesty is any attempt by a student to submit as his/her own work that which has not be completed by him/her or to give improper aid to another student in the completion of an assignment, i.e., plagiarism. No student may intentionally or knowingly give or receive aid on any test or examination, or on any academic exercise, that requires independent work."*

For a complete list see: <http://www.montclair.edu/deanstudents/regulations1.html#violations>

Physical Geology Schedule
Subject to change

Week	Date	Topic	Readings
1	September 5	Welcome to the course, Introduction to the planet	Marshak prelude, Ch. 1
	<i>No lab</i>		
2	Lab: Sept. 11		
	September 12	Plate tectonics; Minerals	Marshak Ch. 2 & 3
3	Lab: Sept. 18		
	September 19	Rock types: Igneous & Sedimentary	Marshak Ch. 4 & 5
4	Lab: Sept. 25		
	September 26	Rock types: Metamorphic; Rock Cycle; review for test	Marshak Ch. 6, Interlude B
5	Lab: Oct. 2		
	October 3	Test	
6	Lab: Oct. 9		
	October 10	Volcanoes; Earthquakes	Marshak Ch. 7 & 8
7	Lab: Oct. 16		
	October 17	Inside the Earth; Mountain building; Fossils	Marshak Interlude C, Ch. 9, Interlude D
8	Lab: Oct. 23		
	October 24	Deep time; Earth's biography; Energy and Earth Resources;	Marshak Ch. 10, 11, & 12
9	Lab: Oct. 30		
	October 31	Online test through Blackboard	
10	Lab: Nov. 6		
	November 7	Landscapes; Hydrologic Cycle; Landslides; Running Water	Marshak Interlude E, Ch. 13 & 14
11	Lab: Nov. 13		
	November 14	Oceans; Groundwater	Marshak Ch. 15 & 16
12	Lab: Nov. 20	No lab	
	November 21	NO CLASS: Thanksgiving Break	
13	Lab: Nov. 27		
	November 28	Deserts; Oceans	Marshak Ch. 17 & 18
14	Lab: Dec. 4		
	December 5	Global change & Humans; Review for final	Marshak Ch. 19