

Earth and the Environment

GEOS-125-01, 02, 03

Spring 2009

Lecture: Tuesdays & Thursdays, 1:00 to 2:15 Mallory 155

	<u>SECTION</u>	<u>TIME</u>	<u>ROOM</u>	<u>INSTRUCTOR</u>
Lab:	Section 01: Monday	10:00 to 11:50	Mallory 353	Dave Cuomo
	Section 02: Monday	2:30 to 4:20	Mallory 351	Dave Cuomo
	Section 03: Tuesday	2:30 to 4:20	Mallory 351	Charles Usiaphre

Professor: Dr. Josh Galster
Office: Mallory 358-N, X4123
Email: galsterj@mail.montclair.edu
Office hours: Tuesdays, 11:15-12:15
Thursdays, 12:00-1:00, or by appointment

Lab instructors: Dave Cuomo (cuomod1@mail.montclair.edu)
Charles Usiaphre (usiaphrec1@mail.montclair.edu)

Class Summary and Course Goals: Earth and the Environment is an introduction to the basic processes of the Earth and how human activity has affected the planet. I will introduce the basic systems that make up the planet (biosphere, lithosphere, atmosphere, and hydrosphere) and how humans interact with those systems. By the end of the course, you will hopefully understand basic concepts such as:

- Where Earth materials and energy comes from and how they are used
- The major processes operating on Earth hazards
- How humans have affected natural systems
- How natural systems have affected humans
- Geologic hazards
- Past and future climate change

Required Text and readings: Geology and the Environment, 5th edition, by Bernard Pipkin and others, is the textbook. The custom lab book is in the bookstore. Other readings will be posted to Blackboard (www.blackboard.montclair.edu).

Materials: Notebooks and pencils/pens required for lab and lecture. For lab you need to bring the custom lab manual on your lab day. Other materials will be provided and posted to Blackboard.

Class attendance and activities: I don't take attendance in class. However, there will be many in-class activities, all 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 lecture? Probably. Will you do well? Probably not. However, missing lab is different. Exercises done in lab almost always involve material physically in the lab room; 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. If you need to miss lab arrangements must be made BEFORE lab, unless there are emergency circumstances.0-

Exams: There will be 2 in-class exams and a final exam. The final exam will focus on the material covered in the last part of the course but will include other material presented throughout the semester. Unless there are dire circumstances, make-ups will not be provided for tests or other assignments without prior arrangements. The in-class exams are worth 30% (15% each) of your total grade, and the final exam is worth 20% of your final grade.

Hometown geology assignment: You will write a 3-page report discussing an aspect of environmental geology of your hometown. The report needs to cover an example of humans interacting with the natural world, and some possible topics include wastewater treatment, landfills, drinking water, water pollution, coastal erosion, flooding, geologic\waste hazards, or some other topic that relates to what we will cover this semester. This assignment will be due the Friday AFTER you return from Thanksgiving Break (December 5th), and is worth 10% of your grade. More details will be given as we get closer to Thanksgiving Break.

Grading: Here is the breakdown for how your final grade will be calculated:

Labs:	35%
Exams:	30%
Hometown geology	10%
In-class assignments:	5%
Final EXAM:	<u>20%</u>
TOTAL:	100%

Final grades are determined on the standard system:

A:	>93%
A-:	90 to <93%
B+:	87 to <90%
B:	83 to <87%
B-:	80 to <83%
C+:	77 to <80%
C:	73 to <77%
C-:	70 o <73%
D+:	67 to <70%
D:	63 to <67%
D-:	60 to <63%
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 ask 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>

Earth and the Environment (GEOS 125): subject to change, so pay attention!

WEEK	DAY	DATE	CLASS #	TOPIC	READING
1	Tue	Jan 20	1	Welcome to the course, Humans and the Environment	Pipkin et al., Ch 1
1	Thu	Jan 22	2	Plate tectonics	Ch. 3
2	Tue	Jan 27	3	Plate tectonics	Ch. 3
2	Thu	Jan 29	4	Intro to geologic materials	Ch. 2
3	Tue	Feb 3	5	Volcanoes	Ch. 5
3	Thu	Feb 5	6	Volcanic hazards	Ch. 5
4	Tue	Feb 10	7	Earthquakes	Ch. 4
4	Thu	Feb 12	8	Earthquakes hazards	Ch. 4
5	Tue	Feb 17	9	EXAM 1	
5	Thu	Feb 19	10	Soils	Ch. 6
6	Tue	Feb 24	11	Erosion and agriculture	Ch. 6
6	Thu	Feb 26	12	Coastal Environments	Ch. 10
7	Tue	Mar 3	13	Coastal Environments	Ch. 10
7	Thu	Mar 5	14	Fresh-water resources	Ch. 8
8	Tue	Mar 10	15	Fresh-water resources	Ch. 8
8	Thu	Mar 12	16	Flooding	Ch. 9
	Tue	Mar 17		SPRING BREAK	
	Thu	Mar 19		NO CLASS	
9	Tue	Mar 24	17	Flooding	Ch. 9
9	Thu	Mar 26	18	EXAM 2	
10	Tue	Mar 31	19	Mass wasting	Ch. 7
10	Thu	Apr 2	20	Desertification	Ch. 12
11	Tue	Apr 7	21	Mineral resources	Ch. 13
11	Thu	Apr 9	22	Waste management	Ch. 15
12	Tue	Apr 14	23	Food, energy, and the environment	
12	Thu	Apr 16	24	Fossil fuels and the environment***	Ch. 14
13	Tue	Apr 21	25	The future of energy	Ch. 14
13	Thu	Apr 23	26	Glaciation and past climate-change	Ch. 11
14	Tue	Apr 28	27	Present and future climate change	Ch. 11
14	Thu	Apr 30	28	Course summary, prepare for final	
15		TBA		FINAL	

***Hometown geology assignment DUE Thursday, April 16th