

Geo202 – Earth System Science Syllabus – Winter 2005

Instructor	Stephen Lancaster E-mail: lancasts@geo.oregonstate.edu		Office: WLkn 202D ph: 737-9258								
Office Hours	M 1:00-1:50, W 12:00-12:50; other times by appt.										
Textbook	The Blue Planet – An Introduction to Earth System Science 2 nd Edition										
Lab Text	A lab packet is available from the OSU bookstore										
WWW Homepage	http://my.oregonstate.edu/webapps/portal/frameset.jsp?tab=courses&url=%2Fbin%2Fcommon%2Fcourse.pl%3Fcourse_id%3D_109116_1										
Mtg. Time/Room	Class meets in COVL 216 MWF 11:00-11:50 a.m. Labs in WLKN 010.										
Field Trip	There is a required all-day field trip to the Oregon Coast on February 26 th and March 5 th . Sign up for only <u>one</u> of the two dates. A research paper will be required from those unable to attend the field trip.										
Lab Instructors	Denise Giles (gilesd@geo.oregonstate.edu) Christina Darr (darrc@geo.oregonstate.edu) Brent Goehring (goehrinb@geo.oregonstate.edu)										
Grading	100 pts 70 pts 50 pts 100 pts 100 pts <u>30 pts</u> 450 pts	8 graded labs + lab quizzes Blackboard quizzes on readings (10 points each) Field trip or research paper Exam #1 Exam #2 Lecture quizzes and assignments Total points possible									
Final Exam	100 pts	The final exam will be comprehensive. The best two exam scores will be used to calculate your final grade.									
Extra Credit	20 pts max.	Blackboard discussion, on-line projects, etc.									
Blackboard Quizzes	Blackboard quizzes will be made available each week from noon Friday to 11:00 am the following Monday. You will have 30 minutes to complete each quiz. You must take the quizzes within the allotted times to receive credit. Blackboard quizzes are open book.										
Academic Honesty	Work on all quizzes, tests, and lab assignments should be your own with the exception of group labs. Plagiarism and cheating on exams, on-line quizzes, and labs will be pursued through the Academic Affairs Office. See http://success.oregonstate.edu/study/honesty.cfm for more info.										
Class Attendance	Attending lectures and labs is the easiest part of success in this course. Lectures will include: (a) unannounced quizzes and assignments and (b) information necessary for the weekly Blackboard quizzes.										
Letter grades will be assigned based on the following percentage of total points (or a more favorable statistical curve, at my discretion):											
100 – 95	94 – 90	89 – 88	87 – 82	81 – 80	79 – 78	77 – 72	71 – 70	69 – 68	67 – 62	61 – 60	< 60
A	A -	B+	B	B-	C +	C	C -	D+	D	D -	F

Geo202 Course Objectives and Learning Outcomes

Objective: Teach students about the major “actors” near the Earth’s surface, geosphere, hydrosphere, atmosphere, and biosphere, and how they interact as components of an integrated Earth system.

Learning outcomes: Students should understand

1. the formation of the Earth and other planets and Earth’s similarities and differences to those planets;
2. how the Earth’s external and internal heat engines drive the Earth system;
3. how the geosphere (main topic of Geo201) is integral to the Earth system;
4. the components of and processes active in the hydrosphere and how it is integral to the Earth system;
5. the components of and processes active in the atmosphere and how it is integral to the Earth system;
6. the components of and processes active in the biosphere and how it is integral to the Earth system;
7. how the components shape and influence one another and act as an integrated Earth system;
8. how humans influence and depend on the proper functioning of the Earth system.

If you leave this course with these specific learning outcomes, then it is likely that your experience in Geo202 will have been a success.

How to Succeed in Geo202

Be curious and ask questions. Satisfy your curiosity by:

- ✓ Attending class and labs.
- ✓ Reading about the topics to be covered in the textbook before we talk about them in class.
- ✓ Using the class web site and surfing the WWW for information.
- ✓ Observing the Earth system all around you and thinking about how it relates to the topics in class.
- ✓ Participating in class discussions and/or on-line discussions.

Field trip make-up research papers

If it is necessary for you to miss the field trip you are required to do a research paper. All papers are due March 7th. The paper is worth a maximum of 50 points. Papers should be typed (double-spaced) and a minimum of six pages of text (not including figures), using standard margins (1" or less) and a 12-point font (this handout uses 12-point font). You may earn 5 points of extra credit if you submit your paper for review and comment two weeks prior to the final due date (Feb 21st). I will review the draft paper and return comments to you so that you can make the corrections. The paper should be related to the topics covered in class this term such as glaciers, mass wasting, or other aspects of the surface processes of the earth. Papers will be evaluated on:

- Originality - the words must be your own. Direct quotes should be short and attributed to the source. Be careful with cutting and pasting (I use Google too).
- Thoroughness – three or more sources must be consulted and properly referenced. WWW sources only count for ½ source. That is, if you are using only the WWW make sure you have at least six references. An example citation for a WWW page can be found below:

World Wide Web Consortium (W3C) (1995, May 15). About the World Wide Web [WWW document]. URL <http://www.w3.org/hypertext/WWW/WWW/>

- Presentation - the paper should be legible, written with proper grammar and spelling, and provide illustrations that support the text.

Geo202 Class and Lab Schedule

DATE	Class Meeting Topic	READING	Lab
3-January	Logistics, overview and introduction		No lab this week
5-January	The earth as a system	Chapter 1	
7-January	Earth's origins and neighbors	Chapter 2	
10-January	The external heat engine of earth	Chapter 3	Sedimentary rocks and sediments
12-January	The internal heat engine of earth	Chapter 4 (p. 65-71)	
14-January	Sedimentary rocks and minerals	Chapter 8 (p. 157-168)	
17-January	No Class (OSU Holiday)		Rivers and hydrology on the WWW
19-January	Rivers and sediment transport	Chapter 9	
21-January	Groundwater and karst landforms		
24-January	Rivers of ice (glaciers)	Chapter 10	Glaciers and topographic maps
26-January	Maps and glacial landforms		
28-January	Exam 1		
31-January	Structure of earth's atmosphere	Chapter 12	Climate change on the WWW
2-February	Weather and moisture in the atmosphere		
4-February	Wind, weather, and deserts	Chapter 13	
7-February	Climate change and the geologic record	Chapter 14	Origins of Life on Earth
9-February	Regulators of climate change		
11-February	Life: A planetary perspective	Chapter 15	
14-February	Life: A planetary perspective		Biodiversity and Extinction
16-February	Geochemistry and life	Chapter 16	
18-February	Geochemistry and life		
21-February	Evolution and biosphere history	Chapter 17	Coastal processes
23-February	Evolution and biosphere history		
25-February	Oceans and coastal processes	Chapter 11	
26-February	All-day field trip to Oregon coast*	Field Trip Handout	
28-February	Erosion and mass wasting	Chapter 19	Slope stability and geologic hazards
2-March	Landscape evolution		
4-March	Exam 2		
5-March	All-day field trip to Oregon coast*	Field Trip Handout	
7-March	Uplift and denudation		No lab this week
9-March	The human footprint on the earth	Chapter 20	
11-March	Review for final exam		
18-March	Final Exam, 7:30 to 9:20 AM, COVL 216		

* Attend only one field trip. A sign up sheet will be circulated.

Geo202 Lab Sections

Labs for the course are worth approximately 25% of your grade. There are no labs during the first week of class (Jan 3-7) or dead week (March 7-11). All labs meet in the basement of Wilkinson Hall, Room 010. Lab sections and times are:

CRN #	Section	Instructor	Time
22724	10	TBA	T 1800-1950
22725	11	TBA	W 1300-1450
22726	12	TBA	W 1500-1650
22727	13	TBA	T 1000-1150
22728	14	TBA	W 0800-0950
22729	15	TBA	R 1000-1150
25610	16	TBA	F 1300-1450

Preparing for Labs

You are responsible for reading each lab prior to coming to the lab section and being prepared to answer several questions based on the lab preparation. Pay attention to the lab schedule—it is different from the order in the manual—and prepare for the correct lab. There will be a 10 to 15 minute quiz at the beginning of some labs. The quiz questions may vary between different lab sections. Quizzes will be given at the beginning of lab.

Philosophy of Labs

The goal of labs in Geo202 is to provide a chance to “get dirty” and do real science. There are limitations to what can be done with a large class during the winter in terms of outside activities, but many of the labs will have hands-on components. Several labs require that you work in groups. These groups should have no less than 3 people and no more than 5 people. It will be up to the discretion of the lab instructors how to choose groups.

Lab Schedule

Week	Dates	Lab topic
1	3-Jan t o 7-Jan	No lab this week
2	10-Jan t o 14-Jan	Sedimentary rocks and sediments
3	17-Jan t o 21-Jan	Rivers and hydrology on the WWW
4	24-Jan t o 28-Jan	Glaciers and topographic maps
5	31-Jan t o 4-Feb	Climate change on the WWW

6	7-Feb	t o	11-Feb	Origins of life on Earth
7	14-Feb	t o	18-Feb	Biodiversity and extinction
8	21-Feb	t o	25-Feb	Coastal processes
9	28-Feb	t o	4-Mar	Slope stability and geologic hazards
10	7-Mar	t o	11-Mar	No lab this week