

Geology 101 – Physical Geology, Fall 2001

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Office hours will be scheduled as necessary during the semester.

Text: Earth's Dynamic System, 9th. Ed., by Hamblen & Christiansen
Lab Manual: Laboratory Manual in Physical Geology, 5th. Ed. R. M. Busch, editor

<u>Class Date</u>		<u>Topic</u>	<u>Text Reference</u>	<u>Lab</u>
August	20	Introduction, Planet Earth, Rock Cycle	Chapter 1	1, minerals
	22	Igneous Rock Field Trip		trip handout
	27	Sedimentary Rock Field Trip		trip handout
	29	Metamorphic Rock Field Trip		trip handout
September	3	LABOR DAY - NO CLASS		
	5	Geologic Systems/Atomic structure, ions	Chapter 2	7, minerals
	10	Minerals	Chapter 3	2, minerals
	12	Igneous Rocks	Chapter 4	2/3, minerals
	17	Sedimentary Rocks	Chapter 5	3, minerals
	19	Metamorphic Rocks	Chapter 6	4, minerals
	24	Geologic Structure & Geologic Time	Chapter 7 & 8	5, rocks
	26	Exam #1		14, rocks
October (Last Drop Date)	1	Atmosphere and Oceans	Chapter 9	6, rocks
	3	Weathering and Slope Systems	Chapter 10 & 11	10, rocks
	8	FALL BREAK – NO CLASS		
	10	River Systems	Chapter 12	11, rocks
	15	Groundwater Systems	Chapter 13	Review
	17	Glacial Systems	Chapter 14	11/8, QUIZ
Reading Reviews Due	22	Shoreline Systems	Chapter 15	8/9
	24	Eolian Systems	Chapter 16	9
	29	Exam #2		
	31	Plate Tectonics		10/12
November	5	Earth's Interior	Chapter 17	12
	7	Divergent Plate Boundaries	Chapter 18	13
	12	Transform Plate Boundaries	Chapter 19	14
	14	Convergent Plate Boundaries	Chapter 20	Earthquake
	19	Hotspots & Mantle Plumes	Chapter 21	Earthquake
Geo-News Paper Due	21	THANKSGIVING – NO CLASS	Chapter 22	15
	26	Tectonics & Landscapes	Chapter 23	Review
	28	Earth Resources & Other Planets	Chapter 24 & 25	QUIZ
December	3	Exam #3	Review	Review
	5	READING DAYS – NO CLASS		
	10	FINAL @ 8 PM		

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Class Objectives and Information

My objectives for this class are for you to learn the basics about earth processes, earth systems, earth materials and the techniques used to study the physical world. I want you to learn “survival” geology so that when you hear of earthquakes, landslides, mineral discoveries, new scientific breakthroughs, etc., on CNN or in the paper, you understand why and how they occurred. I also want to make sure that you understand the fundamental earth sciences and have the ability to use that information in whatever career you choose.

Geology is both an applied and research science and ‘hands-on’ experience is necessary. Elements of biology, chemistry, mathematics and physics are required to understand earth concepts. Laboratory exercises will stress the application of geological problem solving as well as present new information. We will transition into our lab time during the second half of each class meeting. There are no makeup labs and absence from two or more labs may result in your being dropped from the role. It is important to see geology in the field and to touch the rocks, sediments and structures so field trips will be a part of this course. For the field trips, dress for outdoor activities and according to the weather. I recommend bug spray, sunscreen, etc., as appropriate. All field trips involve walking!

Geology is often a topical concern in the news because it routinely affects people, therefore, you will need to complete a brief paper (1-2 printed pages, double-spaced) about a geological event, reported in the news, during the course of the class. Your paper must include information on what happened, where it happened, when it happened, how or why it happened (the geological causes), and suggestions on changes that might have prevented loss of life, human injury or property loss.

Geology is also one of the older scientific disciplines and one of the more interesting global topics, therefore, there is a lot of published material. You will need to skim two geology references (from the attached reading list) and explain the ‘gist’ of the material (minimum of 1 double spaced page each, and must include the title, author, who published the material, when it was published, why it was published, what topics were discussed, the authors opinion or approach, a brief description on what the book was about, and did you like it, why, why not, etc.).

If you have a physical, psychological, and/or learning disability which might affect your performance in this class, please contact the Office of Disability Services, 126A B&E, (803) 641-3609, as soon as possible. The Disability Services Office will determine appropriate accommodations based on medical documentation.

Good writing and communication is valued in this course and critical to you presenting yourself as an educated person. You must use correct spelling and grammar. All USCA computers have a grammar and spell checking option in Word. Please remember the written work you produce in this class can be included in your rising junior writing portfolio. For further information on the portfolio requirement please consult your USCA Undergraduate and Graduate Bulletin or visit Dr. Lynn Rhodes, Director of Writing Assessment or Mr. Karl Fornes, Director of the Writing Room.

Generally, there is no work for this course outside of the classes, labs, news review and reading review. However, the Hamblin and Christiansen text is excellent **and you will be expected to read about the information presented in class and listed on this syllabus.** Expect exam questions from the text.

Grading

There will be three (3) exams each lasting about an hour and a final exam. The final exam will be comprehensive. All exams will be multiple choice, true/false, label the figure and short answer. Each exam will be worth 50 points and the final 100 points. There will be 10 labs completed for grades, although elements from up to 13 labs and our field trips will be completed during the course. Each lab will be worth 10 points and there will be two (2) lab quizzes worth 25 points each. The news event report will be worth 25 points. The reading reference reviews will be worth 25 points each. Your participation in class is worth 25 points.

3 exams	=	150 points	
Final exam	=	100 points	TOTAL Class Score Possible = 500 points
10 Labs	=	100 points	Letter Grade Ranges:
2 lab quizzes	=	50 points	A = 451-500, B+ = 426-450, B = 400-425, C+ = 376-399,
geo-news report	=	25 points	C = 351-375, D+ = 326-350, D = 300-325, 300 or less = F
reading reviews	=	50 points	
participation	=	25 points	