

## **EARTH SCIENCE 110: Introduction to Geology**

Dr. Christopher Woltemade

Spring 2012

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OFFICE HOURS: Tuesday 8:30 - 9:30 AM 1:00 – 2:00 PM  
Wednesday 1:00 – 2:00 PM  
Thursday 8:30 - 9:30 AM 1:00 – 2:00 PM  
(or by appointment)

GOALS: The goals of Earth Science 110 are to inform and excite you about geology and to build on your writing, mathematical, and problem-solving skills. The course will provide an understanding of both the field of geology as a science and how geology influences and helps to explain the world around us. Equally important, the course provides opportunities to work on group projects, interpret data, and prepare laboratory reports.

TEXT: Lutgens, Tarbuck and Tasa. 2012. *Essentials of Geology*. 11<sup>th</sup> edition. Prentice Hall.

You also need to purchase a copy of the USGS topographic map for Shippensburg, PA available in the SU bookstore.

WEB PAGE: [webspace.ship.edu/cjwolt/geology/](http://webspace.ship.edu/cjwolt/geology/)

Use this web page extensively--it contains a great deal of useful information.

CLASS PROFESSIONALISM: Disturbance of class—including any distraction from cell phones—will not be tolerated. Students using cell phones or other electronic devices in class will be given one warning. Each subsequent use will result in the final grade for the course being lowered one letter grade, regardless of performance, at the instructor's discretion.

EXAMS: If classes are cancelled on an exam day, the exam will be given during the first meeting when classes resume. Students are expected to take exams at the scheduled time. Only very unusual circumstances (e.g. family emergency, serious illness) are acceptable reasons for missing an exam. You MUST notify me prior to the exam date if you will miss an exam, IN ANY EVENT. Failure to notify me prior to a missed exam will result in a zero for that exam grade. Make up exams may differ from the original.

HELP: The Learning Assistance Center ([webspace.ship.edu/learning](http://webspace.ship.edu/learning)) provides professional aid for you to improve your studies. Please feel free to come to my office to ask questions about course matters, geology, the Department of Geography-Earth Science, etc.

GRADING: 420 points are possible.

<u>Points</u>	<u>Item</u>
100 points	Exam 1
100 points	Exam 2
100 points	Final exam
120 points	Lab assignments

Grades will be based on a minimum of 90% (A), 80% (B), 70% (C), 60% (D). Plus/minus grades may be given to scores  $\pm 3\%$  from these values.

**LABS:** Several lab assignments will be given to help you understand and learn the material. These should be prepared carefully and completely; they will be graded on content (geology), organization and clear presentation of ideas—including quality of writing and editing. You cannot pass this course without completing these assignments. Late policy: Assignments are due at the beginning of class on the due date; 50% of possible points deducted for assignments up to 24 hours late; additional 25% of possible points deducted for each additional day late--this includes weekends.

**ATTENDANCE:** Attendance and participation in class are required. If you miss class, you are responsible for obtaining missed material and/or assignments from other students or the instructor. I understand reasonable absences--see me and I will help you get back up to date.

Class attendance will be taken 6 days during the semester without prior notice. You are allowed two “free” absences—even excused absences count toward these two. Thereafter, 5 points will be deducted from your semester total for each additional unexcused absence. Official excused absences must be documented.

**NOTE:** The instructor is willing to make any reasonable accommodations for students with limitations due to disability, including learning disability. Please see me during the **first week of class** to discuss any special needs you have. Also, any expected religious holiday absences must be provided to the professor in writing **by January 24**.

## **COURSE OUTLINE:**

<b><u>Date</u></b>	<b><u>Reading</u></b>	<b><u>Topic</u></b>	
JAN	17	Ch. 1	Course introduction
	19	Ch. 2	Crystalline and physical characteristics of minerals
	24	Ch. 2	Mineral classification
	26	LAB	Minerals lab
	31	Ch. 3	Rock cycle, igneous rocks
FEB	2	Ch. 6	Sedimentary rocks
	7	Ch. 7	Metamorphic rocks
	9	LAB	Rocks lab
	14		<b>EXAM 1</b>
	16	Ch. 15	Plate tectonics
	21	Ch. 17	Mountains and geologic structures
	23	Ch. 14	Earthquakes
	28	Ch. 4	Volcanoes and lava features
MAR	1	Ch. 4	Cascades volcanoes case study
	6	Ch. 5	Weathering and soils
	8	Ch. 8	Erosion and mass wasting
			<b>SPRING BREAK</b>
	20		Review
	22		<b>EXAM 2</b>
	27	App. B	Topographic maps
	29	LAB/Web	Topographic maps lab
APR	3	Ch. 9	Hydrologic cycle and stream processes
	5	Ch. 9	Stream erosion, sediment transport and deposition
	10	Web*	Streams field exercise * Read the Woltemade and Wood article on Burd Run available on the Internet – link from course home page
	12	Ch. 9	Floods and stream landforms
	17	LAB	Streams and associated landforms lab
	19	Ch. 11	Glacier movement, erosion, deposition
	24	Ch. 11	Glacial landforms
	26		Alaska glaciers case study
APR 30-MAY 4			<b>FINAL EXAM</b>