

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

Dr. Christopher Woltemade

Spring 2009

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OFFICE HOURS: Tuesday 8:30 - 9:30 AM  
Wednesday 1:00 - 4:00 PM  
Thursday 8:30 - 9:30 AM (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 and Tarbuck. 2009. *Essentials of Geology*. 10<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: [webpace.ship.edu/cjwolt/geology/](http://webpace.ship.edu/cjwolt/geology/)

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

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. Students with more than three (unexcused) absences may receive a lower grade for the course, regardless of their performance, at the instructor's discretion. Disturbance of class—including any distraction from cell phones—will not be tolerated and may result in expulsion from the course and/or "F" final 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.

**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. Up to two people may work together and hand in one lab report. 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 1 day late; additional 25% of possible points deducted for each additional day late-- this includes weekends.

**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.

**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 16**.

**GRADING:** 400 points are possible.

<u>Points</u>	<u>Item</u>
100 points	Exam 1
100 points	Exam 2
100 points	Final exam
100 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.

### **COURSE OUTLINE:**

<u>Date</u>	<u>Reading</u>	<u>Topic</u>
JAN 13	Ch. 1	Course introduction
15	Ch. 2	Crystalline and physical characteristics of minerals
20	Ch. 2	Mineral classification
22	LAB	Minerals lab
27	Ch. 3	Rock cycle, igneous rocks
29	Ch. 6	Sedimentary rocks
FEB 3	Ch. 7	Metamorphic rocks
5	LAB	Rocks lab

<u>Date</u>	<u>Reading</u>	<u>Topic</u>
FEB 10		<b>EXAM 1</b>
12	Ch. 15	Plate tectonics
17	Ch. 17	Mountains and geologic structures
19	Ch. 14	Earthquakes
24	Ch. 4	Volcanoes and lava features
26	Ch. 4	Cascades volcanoes case study
MAR 3-5		<b>SPRING BREAK</b>
10	Ch. 5	Weathering and soils
12	Ch. 8	Erosion and mass wasting
17	App. B	Topographic maps
19	LAB/Web	Topographic maps lab
24	LAB/Web	Topographic maps lab
26		<b>EXAM 2</b>
31	Ch. 9	Hydrologic cycle and stream processes
APR 2	Ch. 9	Stream erosion, sediment transport and deposition
On your own	Web*	Streams field exercise
7	Ch. 9	Floods and stream landforms
9	LAB	Streams and associated landforms lab
14	Ch. 11	Glacier movement, erosion, deposition
16	Ch. 11	Glacial landforms
21		Alaska glaciers case study
23	LAB	Glacier lab
30		<b>FINAL EXAM</b> 8:00 AM (for 9:30 class) 10:30 AM (for 11:00 class)

\* Read the Woltemade and Wood article on Burd Run available on the Internet – link from course home page.