



Virtual Campus – Spring 2009  
Feb. 23, 2009 – May 16, 2009

*Mission: Wayland Baptist University exists to educate students in an academically challenging, learning focused and distinctively Christian environment for professional success, lifelong learning and service to God and humankind.*

COURSE NUMBER AND TITLE: **GEOL 1401 - Earth Science 1**  
Campus: Virtual

INSTRUCTOR: Mark Bryan  
Email: [bryanm@wbu.edu](mailto:bryanm@wbu.edu)

CATALOG DESCRIPTION: The Earth's materials, constructive and destructive processes are discussed, including an introduction to plate tectonics.

PREREQUISITE: none

TEXTBOOK: Earth: An Introduction to Physical Geology (ISBN 0-13-156684-9, 9<sup>th</sup> ed., by Tarbuck & Lutgens; Prentice Hall Publishing Co. (CD included w/text is required for some labs).

LAB KIT: WBU Geology Lab Kit (only available through Wayland Baptist University bookstore-kits from previous semesters CANNOT be used)

OUTCOME COMPETENCIES: Upon completion of the course the student will

1. understand current theories of the origin of the solar system and planetary differentiation
2. be able to identify common rocks and minerals
3. have knowledge of the current state of Plate Tectonics theory
4. understand major concepts used in study of the history of the earth
5. have knowledge of surface and subsurface geologic processes (e.g. volcanism, earthquakes)
6. be able to relate these processes to a plate tectonics reference frame

DISCRIMINATION POLICY: It is university policy that no otherwise qualified disabled person be excluded from participating in, be denied the benefits of, or be subject to discrimination under any educational program or activity in the University.

COMPUTER REQUIREMENTS: Software required includes current versions of Microsoft Word, Internet Explorer, JAVA and Apple Quicktime. A broadband DSL connection is *highly recommended* due to large file sizes and streaming media. Limited proficiency with the graphic tools in Microsoft Word is also necessary (**you need to already have the software and know how to draw lines, etc. so you do not have to spend time learning the software in addition to learning earth science!**)

ATTENDANCE: All class activities should be completed in a timely manner.

\*Students who do not complete any labs prior to the end of the first test will automatically fail the course or should drop the course.

\*Students who do not pass at least half the labs will automatically fail the course.

COURSE REQUIREMENTS: Students will be evaluated by examinations, class participation and lab activities as described in this syllabus under the heading "Evaluation".

## Earth Science 1

### EVALUATION:

University Grading System: A=90-100, B=80-89, C =70-79, D=60-69, F=below 60.

The final class grade will be based on the average of grades that are earned as listed below.

Tests	4	(150 points each)	600	60%
Labs	10	(25 points each)	250	25%
Participation (discussions, etc.)		(150 points)	<u>150</u>	<u>15%</u>
			1000	100%

Tests: The 4 online tests will have specific dates for completion (to be announced). Tests not completed by that date will be graded as 0.

Online forums/discussion: Several questions/discussion topics will be posted during the term. Students are expected to respond to these postings *and* to each other's responses. The topics may be of current events, new discoveries or any variety of earth science related items. Student responses may require some additional reading and extensive thought or may be just asking for an opinion.

Labs: With the exception of the first lab, all labs are due on the date listed under DUE DATES, no later than 6:00 p.m., Central Time Zone U.S. Late labs are graded as 0. The first lab may be turned in by the second week deadline. (This is to allow all students ample time to obtain the materials.) Students should allow *at least* 3 hours per week to complete lab activities.

Labs may be completed in advance of the week assigned but should be completed in the order listed (all materials are available 2 weeks prior to due date). Labs will not be graded before their due date.

### COURSE OUTLINE:

Date	week	subject	chapter
Week of	#		
02/23	1	Geologic concepts & cartography	1
03/02	2	Matter and minerals	3
03/09	3	Igneous rocks and Volcanism	4 & 5
03/16	Spring Break!!	March 16 <sup>th</sup> - March 20 <sup>th</sup>	
03/23	EXAM 1	4 Sedimentary rocks and their environments, weathering	6 & 7
03/30		5 Metamorphism, metamorphic rocks and mass wasting	8 & 15
04/06		6 Crustal deformation- Structural Geology	10
04/13	EXAM 2	7 Geologic time	9
04/20		8 Earthquakes and Earth's interior	11 & 12
04/27		9 Plate tectonics, mountain building & sea floor	2, 13 & 14
05/04	EXAM 3	10 Running Water and Groundwater	16 & 17
05/11	EXAM 4	11 Glaciers & deserts	18 & 19

### EXAM 4 is a proctored exam.

EXAM 1 covers weeks 1-3.

EXAM 2 covers weeks 4-6.

EXAM 2 covers weeks 7-9

EXAM 4 covers weeks 10-11 and key concepts from previous exams.

All coursework **MUST** be completed by **05/15/09**

### NOTES:

The instructor expects emails with questions or other concerns about the class and any activities.

Communication with the instructor regarding due dates should be done **BEFORE** items are due.

Late tests, labs and discussions will receive a grade of 0.

This outline and other syllabus items are subject to change at university or instructor discretion.