

**SYLLABUS**  
**Physical Geology GEOL 1401**  
**Summer II, 2016**  
**MTWRF 12:00 PM- 1:45 PM VIN 139**  
**Lab 3-4:45 PM TR VIN 139**

**Professor:** Dr. Fawn M. Last   **Office:** 130 VIN   **Phone:** 325-486-6987

**E-mail:** Fawn.Last@angelo.edu

**Office hours:** Tuesday and Thursday 2-3 PM or by appointment

**Required Texts:**

1. *Earth: Portrait of a Planet, Fifth Edition, Stephen Marshak*
2. *Laboratory Manual in Physical Geology, Tenth Edition, edited by R. M. Busch*

**Grading:**

- 3 exams (12% each)
- 1 comprehensive final exam (20%)
- 2 lab quizzes (10% each),
- 6 graded lab exercises (4% each)
- Extra Credit Project (+ 0 - 5%), Brief, illustrated report about a scientific paper on a geology topic of your own choosing. Details to be provided after Exam 1.

**Student learning outcomes**

You will learn about rocks and minerals that make up Earth and the sometimes subtle and often destructive processes that shape it. You will learn and test fundamental concepts about volcanoes, earthquakes, river flooding, oil and gas resources, groundwater, and plate tectonics.

Problem-solving techniques that you will learn and practice:

1. Use multiple working hypotheses
2. Be skeptical: look for ways to test hypotheses
3. Make sketches: they help in visualizing the world in three dimensions
4. Quantify events and processes when possible
5. Apply the Principle of Uniformitarianism
6. Study and work together
7. Get as much practice or experience as you can
8. Carefully defend your thinking when answering questions.

## **Attendance Policy**

You are expected to attend every class meeting. Your attendance will be recorded. We will discuss many topics that are not in the textbook. If you must miss a class, contact me if you need help in obtaining assignments or notes. Although showing up for class is not directly part of your grade (see Grading section above), you will find it extremely difficult to pass this class if you do not attend regularly and participate!

## **Cell Phones and Other Electronic Devices**

Cell phones must be turned off while in class. In addition, it is unacceptable to engage in text messaging during the class meeting time. If you are using any electronic devices other than a calculator (not your phone in calculator mode), a voice recorder, or a laptop computer to take notes, you may be asked by the instructor to leave the classroom for the remainder of the class period. The use of any electronic device not authorized by the instructor during a test may result in the forfeiture of your grade for that test. All electronic devices should be turned off and stored out of sight during tests.

## **Course Webpage**

<http://blackboard.angelo.edu> contains Powerpoint slides, web links to scenic areas mentioned in class, practice problems, answers to lab assignments, and your official grades.

## **Know the ASU Honor Code**

Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.

## **Student Organizations**

GEO, the student organization of all interested in geology, meets Wednesdays at 7:00 pm. The first meeting will be in September. GEO is a student chapter of the American Association of Petroleum Geologists ([www.aapg.org](http://www.aapg.org)). Sigma Gamma Epsilon, the national honor society of the earth sciences is also active at Angelo State University.

## **YOU CAN MAJOR OR MINOR IN GEOLOGY at ASU!**

See Geoscience BS requirements at

[https://www.angelo.edu/dept/physics/geoscience\\_degree.php](https://www.angelo.edu/dept/physics/geoscience_degree.php) An Earth

Science Minor requires 18 hours of geology courses. Physical Geology is a requirement for a major or a minor.

Rewarding careers exist for geologists, geophysicists, hydrogeologists, and secondary science teachers. Talk to your professors! Read <http://www.bls.gov/ooh/life-physical-and-social-science/print/geoscientists.htm>.

**Statement of Persons with disabilities**

Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request such accommodations prior to any accommodations being implemented. You are encouraged to make this request early in the semester so that appropriate arrangements can be made.

**Statement of religious holy days**

A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. A student who is absent from classes for the observance of a religious holy day shall be allowed to take an examination or complete an assignment scheduled for that day within a reasonable time after the absence.

## Tentative schedule

<b>Date</b>	<b>Lecture/discussion topics</b>	<b>Lab Exercises</b>
<b>July 11</b>	Chapter 1 Introduction and Syllabus	
<b>July 12</b>	<i>Chapter 2 Earth's interior</i>	1. Topographic maps and aerial photos (p.227-249)
<b>July 13</b>	<i>Chapter 5 Minerals</i>	
<b>July 14</b>	Chapter 3-4 Plate tectonics	2. Rock-forming minerals (p.73-100)
<b>July 15</b>	Chapter 6 Magma and igneous rocks	
<b>July 18</b>	<b>Exam 1 CH 1-6</b>	
<b>July 19</b>	Chapter 7. Sedimentary rocks	3. Igneous Rocks (p129-142)
<b>July 20</b>	Chapter 8. Metamorphic rocks	
<b>July 21</b>	Chapter 9. Volcanoes	4. Sedimentary Rocks (P153-170)
<b>July 22</b>	Chapter 10. Earthquakes	
<b>July 25</b>	<b>EXAM 2 CH 7-10</b>	
<b>July 26</b>	Chapter 11. Mountain building and crustal deformation	5. Metamorphic Rocks (p 187-198)
<b>July 27</b>	Chapter 12. Geologic time	
<b>July 28</b>	Chapter 14. Energy Resources	Lab Quiz 1 Review
<b>July 29</b>	Chapter 16. Mass movement	
<b>August 1</b>	<b>Exam 3 CH 11,12,14,16,</b>	
<b>August 2</b>	Chapter 17. Streams	Lab Quiz 1 Minerals and rocks (Labs 2-5)
<b>August 3</b>	Chapter 18 Coasts	
<b>August 4</b>	Chapter 19 Groundwater	7. Block Diagrams of folded and faulted rocks (p.259-272)
<b>August 5</b>	Chapter 21 Deserts	
<b>August 8</b>	<b>Review for Final Exam and Lab Quiz 2</b>	
<b>August 9</b>	<b>Lab Quiz 2</b>	
<b>August 10</b>	<b>Final Exam</b>	

