

**SYLLABUS**  
**HISTORICAL GEOLOGY, GEOL1402-060 (Majors)**  
**SPRING 2016**  
**TR 11AM-12:15 PM VIN 139**

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

**E-mail:** [Fawn.Last@angelo.edu](mailto:Fawn.Last@angelo.edu)

**Office Hours:** Monday-Friday 8:00-9:00 AM, Monday 1:00-2:00 PM, Wednesday 12:00-1:00 PM Thursday 1:00-2:00 PM, Friday 12:00-2:00 PM  
Or by appointment.

**Required Textbooks:**

*Evolution of the Earth, Eighth Edition*, by Donald Prothero and R.H. Dott

*Historical Geology, Interpretations and Applications, Sixth Edition* by Jon M. Poort and Roseann J. Carlson

**Grading:**

2 exams (10% each)  
2 lab quizzes (10% each)  
1 Book review (10%)  
10 graded lab projects (2% each)  
1 comprehensive final exam (20%)  
1 Mandatory Field trip (5%)  
Group project participation (5%)

1 Extra Credit Project (+ 0 - 5%), Brief, illustrated report about a Historical Geology topic that you choose. Detailed instructions will be distributed in class after Exam 2.

1 optional field trip project, replaces your lowest lab project See field trip descriptions on page 2.

**Attendance Policy**

You are expected to attend every class meeting! Attendance will be recorded each day. We will discuss many topics of that are not in the textbook. If you must miss class or lab, contact Dr. Last for help in obtaining assignments or notes.

**Cell phones and other electronic devices**

Please do not use your cell phone or any other mobile device during class. That means no texting, no surfing the web, no gaming, etc. Doing this during class is

disrespectful to me and to the students around you; if I see someone violating this policy I will stop the class and ask that person to leave. During an exam it is considered cheating and will result in the forfeiture of your grade for that test.

### **Course Web pages**

<http://blackboard.angelo.edu> contains lots of extra information, readings, answers to lab assignments and class projects, as well as your official grades.

### **Field Trips**

On field trips you will get a chance to apply concepts discussed in class to describe and interpret outcrops of rocks, fossils, and sediments. We will go on 2 required field trips during lab time (see course schedule for dates). You are responsible for getting to the field trip locations. You will be provided with detailed information before each trip.

On optional weekend trips we will travel in university vans and most expenses will be covered.

- 1) Saturday, March, 5: Girl Scouts STEM Conference for Middle School and High School young women, various rooms and labs on ASU campus. Some volunteer opportunities Leaders: Dr. Heather Lehto
- 2) Saturday April 2, Dinosaur Valley State Park field trip. Dinosaur Trackways! Leaders Drs. Heather Lehto and Fawn Last
- 3) Thursday April, 14-Sunday April, 17. Guadalupe Mountains field trip. Largest exposed reef in the World. Leaders: Drs. Fawn Last, Joe Satterfield, James Ward.
- 4) Saturday, May, 7: Western Edwards Plateau field trip. Fossil collecting at Rocker B Ranch, Barnhart. Leaders: Dennis Webb, James Ward, Heather Lehto, Joe Satterfield, and Fawn Last

### **Notes**

**No late assignments!** Lab and homework assignments cannot be turned in after graded assignments are returned and answers are posted.

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 print and web versions of the Student Handbook.

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.

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.

Please see the lab/ tentative lecture schedule on the following page. I recommend that you read over the pages in your lab textbook before coming to lab. The lectures are a tentative schedule.

### **Student Learning Objectives**

- 1) To practice solving problems in order to learn the history of Earth by:
  - a. Using multiple working hypotheses
  - b. Being curious, and finding ways to test hypotheses
  - c. Applying geological principles
  - d. Working with colleagues as a team to solve a problem
- 2) To be able to think critically, and be able to understand and follow the scientific method
- 3) To be able to defend your reasoning when answering questions
- 4) To recognize and interpret rock types, fossils, and landforms.

These learning objectives will be evaluated by exams, lab projects, lab quizzes and homework assignments.

<b>Week</b>	<b>Tentative Lecture/Discussion topics</b>	<b>Lab</b>
I: 1/19, 1/21	Time and terrestrial change (Ch. 1)	LABS DO NOT MEET (MLK HOLIDAY ON MONDAY)
II: 1/26, 1/28	Describing sedimentary rocks, fossils (Ch. 2) Interpreting ancient sedimentary environments <b>1/28 Title of book for report due (see list of possible books)</b>	1: Rock-forming minerals (not in lab manual)
III: 2/2, 2/4	The theory of organic evolution (Ch. 3) Depositional environments (Ch. 4) The geologic time scale (Ch. 4)	2: Sedimentary rocks: Describing and interpreting sedimentary environments (Lab Manual, p. 8-37)
IV: 2/9, 2/11	Concepts of stratigraphy (Ch. 4) How to estimate the age of a rock (Ch. 5)	3: Stratigraphic column (Lab Manual p. 92-95, 123-125)
V: 2/16, 2/18	<b>2/18: EXAM 1</b> Mountain building and plate tectonics (Ch. 7)	4: Igneous and metamorphic rocks (Lab Manual, p. 66-67)
VI: 2/23, 2/25	Precambrian history (Ch. 8)	5: FIELD TRIP 1 - Permian trackways in San Angelo State Park  LAB 5 DUE AT END OF TRIP
VII: 3/1, 3/3	Early life on Earth (Ch. 9)	Review all rocks in lab Practice Quiz on describing rocks
VIII: 3/8, 3/10	Early Paleozoic (Ch 10)	<b>LAB QUIZ 1:</b> DESCRIBING ROCKS (Labs 1, 2, 3, and 5)

3/14 – 3/18

SPRING BREAK – GET OUTSIDE!

IX: 3/22, 3/24	Ordovician (Chapter 11) <b>03/25 GOOD FRIDAY HOLIDAY</b>	6: Paleogeographic and geologic maps (Lab Manual p. 100-104)
X: 3/29, 3/31	Mid Paleozoic (Ch 12)	7: Paleozoic fossils (Lab Manual p. 142-198)
XI: 4/5, 4/7	Late Paleozoic (Ch13) <b>4/7: EXAM 2</b>	8: Mesozoic and Cenozoic fossils (Lab Manual p. 142-198)
XII: 4/12, 4/14	Mesozoic (Ch 14) (DINOSAURS!) <b>GUADALUPE FIELD TRIP 4/14-4/17</b>	9: FIELD TRIP 2: Fossil collecting near Christoval LAB 9 DUE AT END OF TRIP
XIII: 4/19, 4/21	Cenozoic (Ch 15)	10: Paleo-environment interpretation Lab

XIV: 4/26, 4/28	The Pleistocene Epoch: the first humans, Ice Ages, and woolly mammoths (Ch. 16) <b>4/28 Book report due</b>	Review all fossils in lab Practice Quiz on fossils
XV: 5/3, 5/5	Dead Week Review of Historical geology <b>5/6: All make-up exams</b>	<b>LAB QUIZ 2: FOSSILS</b> (Labs 6, 7, 8, and 9)
XVI: 5/10	<b>May 10, 10:30am-12:30pm FINAL EXAM</b>	Lab does not meet!