GEOL 1104: WEDNESDAY - 3:00 HISTORICAL GEOLOGY LAB, SPRING 2020

Common Cretaceous bivalves found throughout Edwards Plateau. We will collect some on the Lab 8 field trip! Figure from Matthews III (1960) Texas Fossils: An Amateur Collectors Handbook

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Office hours
- Monday: 8:00 – 10:00 am, 1:00 – 3:00 pm
- Tuesday: 9:00 – 11:00 am
- Wednesday: 8:00 – 10:00 am, 2:00 – 3:00 pm
- Thursday: 10:00 – 11:00 am
- Or contact me to set up a convenient time to meet

Required Textbook
- ASU Historical Geology Lab Manual, by Heather L. Lehto (purchase from ASU Bookstore)

Grading
- 10 Lab Assignments (62%; 6.2% each)
- 8 Pre-lab Assignments completed on Blackboard (8%; 1% each)
- 2 Lab Quizzes (30%, 15% each)
- Optional field trip project (replaces lowest lab assignment grade)

Lab Expectations
1) You are expected to attend every lab meeting. Your attendance will be recorded. If you must miss a lab, you may attend another lab section the same week: Monday 1:00, Wednesday 1:00, or Thursday 1:00. Contact the lab instructor before coming to their lab.

2) Take the next big step: let’s talk in outside of lab about almost anything. My office, VIN 122, is a good place to find me or to see where I am. Topics I like to discuss: geology, hiking and backpacking trails, productive ways of learning geology, racquetball, Lord of the Rings, future careers, lame jokes, and more.

3) Do not distract yourself or others in the lab with electronic devices. Put them away. Do not text in the lab.
# Schedule: Wednesday 3:00 Lab

<table>
<thead>
<tr>
<th>Date</th>
<th>Lab Exercises</th>
<th>Lab Manual pages to read before lab</th>
<th>Deadline to complete Pre-Lab</th>
</tr>
</thead>
</table>
| I: 1/15 | Introduction  
Lab Safety Quiz details: Complete on Blackboard |                                    |                              |
| I: 1/22 | No lab this week! (MLK Holiday is Monday, 1/20)  
Complete Lab 1 Pre-Lab Assignment on Blackboard |                                    |                              |
| II: 1/29 | 1: Rock Forming Minerals                                      | Chapter 1                          | 1/28, 11:59 pm              |
| III: 2/5 | 2: Sedimentary Rocks: Describing and interpreting sedimentary environments  | Chapter 2                          | 2/4, 11:59 pm               |
| IV: 2/12 | 3: Stratigraphy and Stratigraphic Columns                            | Chapter 3                          | 2/11, 11:59 pm              |
| V: 2/19 | 4: Igneous and Metamorphic Rocks                                      | Chapter 4                          | 2/18, 11:59 pm              |
| VI: 2/26 | 5: FIELD TRIP 1 - Permian trackways, San Angelo State Park (Lab Manual Ch 5)  
LAB 5 DUE AT END OF TRIP | Chapter 5: Includes directions to meeting place at State Park | 2/25, 11:59 pm              |
| VII: 3/4 | LAB QUIZ 1: DESCRIBING ROCKS (Labs 1 – 5)                           | Study graded labs and Chapters 1-5 |                              |
| 3/9 – 3/13 | SPRING BREAK!                                      |                                    |                              |
| IX: 3/18 | 6: Paleogeographic maps                                             | Chapter 6                          | 3/17, 11:59 pm              |
| X: 3/25 | 7: Fossils, Keys to Past Life                                        | Chapter 7                          | 3/24, 11:59 pm              |
| XI: 4/1 | 8: More Common Texas Fossils                                         | Chapters 8, 7                      | 3/31, 11:59 pm              |
| XII: 4/8 | 9: FIELD TRIP 2 – Fossil Localities near Christoval  
LAB 9 DUE AT END OF TRIP | Chapter 9: Includes directions to meeting place |                              |
| XIII: 4/15 | 10: Paleo-Geoenvironments                                      |                                    |                              |
| XIV: 4/22 | Review all fossils in Lab  
Practice Quiz on Fossils |                                    | -                            |
| XV: 4/29 | LAB QUIZ 2: FOSSILS (Labs 6 – 10)                                   | Study graded labs and Chapters     |                              |
| XVI: 5/6 | Final Exams: Lab does not meet                                       |                                    |                              |
Field Trips!
On field trips you will get a chance to apply concepts discussed in class to describe and interpret outcrops of rocks and sediments. On the optional weekend trips we will travel in university vehicles. No special equipment is required but space is limited! You may go on more than one optional trip, but you can only use one field trip project to replace a single homework or lab assignment grade. Tentative schedule:

1. **Girl Scout STEM Conference:** Saturday, March 21: for Middle School and High School young women, various rooms and labs on ASU campus. Some volunteer opportunities on Friday, March 20. Leaders: Elizabeth Koeman-Shields
2. **Waco Mammoth National Monument:** March 28, [Waco Mammoth Information](#) Leader: Elizabeth Koeman-Shields
3. **Art and Science Day at the San Angelo Museum of Fine Art:** Saturday, April 11, Leader: Heather Lehto
4. **Elementary School Science Nights:** evenings to be announced. Opportunities for sharing basics of rocks, fossils, and maps with students, their parents, and interested people of all ages.
5. **Rocker B Ranch field trip:** Saturday, May 2: Learn W. Edwards Plateau geology and collect fossils at the historic Rocker B Ranch outside Mertzon and Barnhart. Leaders: Cody Webb, Joe Satterfield,

**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 meteorite impacts, volcanoes, earthquakes, river flooding, oil and gas resources, groundwater, and plate tectonics. Many examples will be from West Texas and western North America. Problem-solving techniques that you will learn and practice:

- Use multiple working hypotheses
- Be skeptical: look for ways to test hypotheses
- Make sketches: they help in visualizing the world in three dimensions
- Quantify events and processes when possible
- Apply the Principle of Uniformitarianism
- Study and work together
- Get as much practice or experience as you can
- Carefully defend your thinking when answering questions.
- Learning outcomes will be evaluated by lab assignments and lab quizzes

**Course Webpages**
The [Angelo State Blackboard site](#) contains PowerPoint slides, web links to scenic areas mentioned in class, practice problems, answers to lab assignments, and your official grades.

**Geoscience Careers**
See Geoscience BS requirements in the [Angelo State Catalog](#). A Geoscience 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!


GEO, the student organization for all interested in geology, meets Wednesdays at 6:00 pm. The first meeting will be January 22. GEO is a Student Chapter of the [American Association of Petroleum Geologists](#).
Core Curriculum Objectives and related ASU Student Learning Outcomes

<table>
<thead>
<tr>
<th>Student Learning Outcome</th>
<th>Assessment Method</th>
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<tbody>
<tr>
<td>1. Gather, analyze, evaluate, and synthesize information relevant to a question or issue.</td>
<td>Lab Quiz</td>
</tr>
<tr>
<td>2. Develop, interpret, and express ideas through effective visual communication.</td>
<td>Lab Assignment</td>
</tr>
<tr>
<td>3. Manipulate and analyze numerical data and arrive at an informed conclusion</td>
<td>Homework/In-class Assignment</td>
</tr>
<tr>
<td>4. Manipulate and analyze observable facts and arrive at an informed conclusion</td>
<td>Average Lab Grade</td>
</tr>
<tr>
<td>5. Work effectively with others to support and accomplish a shared goal.</td>
<td>IDEA Forms</td>
</tr>
</tbody>
</table>

Academic Integrity
Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU. The College of Science and Engineering adheres to ASU’s Statement of Academic Integrity.

Plagiarism
Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list. Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy are at the ASU Writing Center.

Copyright Policy
Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

Accommodations for Students with Disabilities
ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA), and subsequent legislation.

Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford, Director of Student Disability Services
Office of Student Affairs, Houston Harte University Center, Room 112
325-942-2047
dallas.swafford@angelo.edu
Title IX
The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:
Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022, michelle.boone@angelo.edu

You may also file a report online 24/7 at Title IX Incident Form 9.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit ASU Title IX webpages 10.

Student Absence for Observance 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. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day 11 for more information.

Incomplete Grade Policy
It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures 12 for more information.

General Policies Related to This Course
All students are required to follow the policies and procedures presented in these documents:
• Angelo State University Student Handbook 13
• Angelo State University Catalog 14

1 https://www.nps.gov/waco/index.htm
2 https://blackboard.angelo.edu
3 https://www.angelo.edu/catalogs/
5 https://www.aapg.org/students
6 https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
7 https://www.angelo.edu/dept/writing_center/academic_honesty.php
8 https://www.angelo.edu/services/disability-services/
9 www.angelo.edu/incident-form
10 www.angelo.edu/title-ix
11 https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of
12 https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
13 https://www.angelo.edu/student-handbook/
14 https://www.angelo.edu/catalogs/