

GEOLOGY 3301 - GEOLOGY OF WEST TEXAS

Fall 2025

TuThrs 9:30-10:45

Geology Program: Natural Science Dept; ALPS College; Sul Ross State University

Dr. E. Measures

office WSB 315

837-8117

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WSB 216 mail box

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OFFICE HOURS

MonTues 2:30 pm to 5 pm

Thrs 2:30 pm to 5 pm

or by appointment

call or email to arrange

schedule is posted next to office (WSB 315) door

COURSE DESCRIPTION

The class is an introduction to the geology of west Texas for geology majors and geology minors. It outlines the geologic evolution of the region and relates it to continental-scale and global-scale geologic events. Topics range from billion-year-old continental collisions, through deep sea deposition, reefs, explosive volcanism, mineral and petroleum deposits, to the evolution of present-day west Texas landscape.

PREREQUISITES/CO-REQUISITES

Historical Geology (GEOL 1304/1104)

METHODS OF INSTRUCTION/USE OF BLACKBOARD

The course consists of three hours of lecture per week. The course is delivered through interactive TV. In the rare event of a technical malfunction that prevents a daily lecture, the lecture will be recorded at a time/date soon after the malfunction and posted for viewing. Details will be posted on BlackBoard. BlackBoard will be used to post announcements, assignments, and ancillary material.

TEXTS**Required***Texas through Time*. 2016.

Thomas Ewing.

Bureau of Economic Geology Udden Series No. 6.

**Optional books/maps***Roadside Geology of Texas*

1991 Darwin Spearing

*Geo-Texas, A Guide to the Earth Sciences*

2001 Eric R. Swanson

*Geologic Atlas of Texas* (a series of geologic maps)

Bureau of Economic Geology, Austin, Texas.

Other readings

Scientific articles will be assigned and PDF's will be posted on BlackBoard

MATERIALS

notebook/paper

pencils

access to printer

access to scanner

FIELD TRIP(S)

Optional, one-day, or half-day, field trips will be offered. They will be scheduled for Thursdays, Fridays, Saturdays, or Sundays during the semester depending on what day is best. Potential field trip areas are Van Horn, Marathon Basin, Ft Stockton area, Davis Mtns, and possibly others.

STUDENT RESPONSIBILITIES STATEMENT

All full-time and part-time students are responsible for familiarizing themselves with the **Student Handbook** and the Undergraduate & Graduate Catalog and for abiding by the **University** rules and regulations. Additionally, students are responsible for checking their Sul Ross email as an official form of communication from the university. Every student is expected to obey all federal, state, and local laws and is expected to familiarize him/herself with the requirements of such laws.

CLASS ATTENDANCE AND CONDUCT – EXPECTATIONS AND REQUIREMENTS

- ★ Be on time to lecture and lab, attend all lectures and labs, and stay throughout the entire designated period.
- ★ Be engaged, awake, and on task.
- ★ Do not work on another class during this class.
- ★ Keep instructor informed either **before** anticipated absence or **soon after** unplanned absence.
- ★ Where possible, schedule routine medical/dental appointments around lecture/lab times.
- ★ If you are going to miss a lecture, or have missed a lecture, written notification (email) and documentation must be provided as soon as possible. **Be sure to get the notes from another student in the class.**
- ★ Legitimate reasons for tardiness, leaving and returning during class, or leaving class early are, but are not limited to, illness, appointment with specialist, family emergency, caregiver duties, and emergency responder calls.
- ★ Inform instructor **prior** to class if conditions exist that may cause you to leave periodically during class or leave before the end of class.
- ★ Arrangements for missed assignments must be made, and the make-up done, within one week of the scheduled due date. Points will be deducted for late work on assignments other than exams.
- ★ Late assignments will not be accepted once graded papers are returned.
- ★ **You are expected to check your SR email daily** (morning, noon, and evening at a minimum).
- ★ You are expected to observe the University's Code of Student Conduct (see the Student Handbook).

ELECTRONICS POLICY

- ★ Texting, checking email, playing games, surfing the internet, working on another class during lectures is not acceptable.
- ★ Smart phones, cell phones, i-pods, laptops, earbuds (etc.) are to be turned OFF during lectures.
- ★ If taking notes on an electronic device is your preferred method, please discuss this with the instructor.
- ★ If electronics are to be used for recording audio or for taking images of material written on the board, please discuss this with the instructor. **DO NOT** post any class recordings on any social media/web site.
- ★ If you need access to your electronics during lectures (e.g., caregiver, emergency responder), for purposes other than note taking, audio recording, or obtaining images of material written on the board, discuss this with the instructor.
- ★ Points will be deducted from exams for violation of the electronic policy during lectures.
- ★ **If electronics are accessed during an exam, then the exam will receive a grade of zero.**
- ★ If an electronic device makes an audible noise during an exam, then the exam will receive a grade of zero.
- ★ Electronics may be used during lab and for purposes of lab.
- ★ **Use of any AI on any assignment will result in a grade of zero on the assignment.**

GRADING/COURSE REQUIREMENTS

| Semester assignments & weights: | | Grading Scale: | | |
|---------------------------------------|-----|--|---|---|
| lecture exams (3) | 72% | 100-90.00 | A | |
| homework assignments | 12% | 89.99-80.00 | B | |
| term research reports | 12% | 79.99-70.00 | C | |
| misc items (class participation etc.) | 4% | 69.99-60.00 | D | ☹ |
| | | (D will not be applied to Geology degree plan) | | |
| | | <59.99 | F | ☹ |

Exams cover about 4.5 weeks of material. Last exam is comprehensive (approximately $\frac{1}{3}$ of the questions will be from exam 1 & 2 material).

Homework consists of questions over chapters in the text or assigned optional readings. Homework will be scanned and sent as email attachments. Only single documents will be accepted, multiple files are not acceptable. Photos of homework are not acceptable. Homework questions may appear in some format on exams. Points will be deducted from late homeworks.

SCHEDULE IS TENTATIVE AND SUBJECT TO CHANGE

| TUESDAY | | THURSDAY | |
|---------|---|----------|---|
| Aug 26 | Intro – Chap 2 (23 to 35) & 3 (37 to 45) | Aug 28 | Intro & Precambrian – Chap 4 (47 to 53; 58 to 60) |
| Sept 2 | Precambrian – Chap 4 (47 to 53; 58 to 60) | Sept 4 | Precambrian & Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) |
| Sept 9 | Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) | Sept 11 | Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) |
| Sept 16 | Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) | Sept 18 | Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) |
| Sept 23 | Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) | Sept 25 | Paleozoic – Chap 5 (67; parts of 68 to 73; 74 to 98; 105 to 108; 113 to 116; 118 to 131) |
| Sept 30 | EXAM # 1 | Oct 2 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) |
| Oct 7 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) | Oct 9 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) |
| Oct 14 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) | Oct 16 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) |
| Oct 21 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) | Oct 23 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) |
| Oct 28 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) | Oct 30 | Mesozoic – Chap 6 (133 to 138; 140 to 146; parts of 147 to 167; 168 to 172; parts of 173 to 180; 181 to 184; 187 to 191) |
| Nov 4 | EXAM # 2 | Nov 6 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) |
| Nov 11 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) | Nov 13 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) |
| Nov 18 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) | Nov 20 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) |
| Nov 25 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) | Nov 27 | Thanksgiving Holiday No Class |
| Dec 2 | Cenozoic – Chap 7 (193 to 201; 202 to 214; 218, 219; parts of 226 to 253) | Dec 5 | Dead Day |
| | EXAM # 3 | | |

DISABILITIES ACCOMMODATION ADA statement (Americans with Disabilities Act)

Sul Ross State University (SRSU) is committed to equal access in compliance with the Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class for accessibility services. Students seeking accessibility/accommodation services must contact Mrs. Mary Schwartz Grisham, LPC, SRSU's Accessibility Services Director at 432-837-8203 or email mschwartz@sulross.edu, or contact Ronnie Harris, LPC, Counselor at 432-837-8203 or email ronnie.harris@sulross.edu. The office is located on the first floor of Ferguson Hall, room 112. The mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

You will be provided with an accommodation letter which must be given to the instructor as early as possible in the semester.

DISTANCE EDUCATION STATEMENT

Students enrolled in distance education courses have equal access to the university's academic support services, library resources, online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website.

Students are expected to maintain appropriate equipment, software, and internet service according to the needs of the course, as outlined on the SRSU website. Smartphones or other non-computer devices are not an adequate substitute for a laptop or desktop computer.

Students are expected to correspond using Sul Ross email accounts. Students are expected to submit assignments through SRSU email, which requires secure login information to verify students' identities and to protect students' information. All lecture exams will be proctored. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook.

GEOLOGY UNDERGRADUATE PROGRAM (BS) STUDENT LEARNING OUTCOMES (SLO's)

1. The student will be able to apply a diverse body of Geologic information in the area of Earth history.
2. The student will be able to apply a diverse body of Geologic information in the area of mineralogy and petrology.
3. The student will be able to apply a diverse body of Geologic information in the area of structural geology and tectonics.
4. The student will be able to apply a diverse body of Geologic information in the area of stratigraphy.
5. The student will be able to apply a diverse body of Geologic information in the area of field techniques.

EXPECTED COURSE LEARNING OBJECTIVES

At the end of the semester, the successful student will be able to apply critical reasoning and problem-solving skills to:

- ★ Knowing the stratigraphic sequence of rocks exposed in west Texas (SLO 4).
- ★ Using the units to interpret and explain the depositional geologic history of west Texas (SLO 1).
- ★ Using the units and their geologic structure to explain the tectonic events that occurred in west Texas (SLO 3).

GEOLOGY UNDERGRADUATE (BACHELOR OF SCIENCE) STUDENT MARKETABLE SKILLS

- ★ The student will be able to conduct fieldwork.
- ★ The student will be able to use field equipment.
- ★ The student will be able to use lab equipment.
- ★ The student will be able to use library resources.
- ★ The student will be able to communicate in written and oral format.

LIBRARY

The Bryan Wildenthal Memorial Library and Archives of the Big Bend offers FREE resources and services to the entire SRSU community. The library's website, library.sulross.edu/, has information on how to borrow or electronically access books, articles, and more. Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for coursework and can be reached in person, by email (srsulibrary@sulross.edu) or by phone (432-837-8123).

ACADEMIC INTEGRITY

Students are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Students should submit work that is their own. A scholar is expected to be punctual, prepared, and focused; meaningful and pertinent participation contributes to learning.

Examples of academic dishonesty include, but are not limited to:

- ⊗ Turning in work as original that was used in whole or in part for another course and/or professor;
- ⊗ Turning in another's person's work as one's own;
- ⊗ Copying from professional works or internet sites without citation;
- ⊗ Collaborating on a course assignment, exam, or quiz when collaboration is forbidden;
- ⊗ Using AI for an assignment.

Violations of academic integrity can result in failing an assignment, failing the class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

CLASSROOM CLIMATE OF RESPECT

This class fosters free expression, critical investigation, and open discussion of ideas. Everyone in the class must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others. Similarly, all people in the class must learn how to probe, oppose, and disagree without resorting to tactics of intimidation, harassment, or personal attack. No one is entitled to harass, belittle, or discriminate against another on the basis of race, religion, ethnicity, age, gender, national origin, or sexual preference.