

GEOL 1304 – Historical Geology

Spring - 2023

Section: 001

Lecture Times: MWF: 12:00-12:50 pm, WSB 210

Instructor: Dr. Tom Shiller

Office: WSB 319

Office Hours: Tuesday and Wednesday, 2-5:00 pm; Thursday, 3:30-5:00 pm; or by appointment

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Materials Required:

Earth System History 4 th ed. by S. Stanley. ISBN: 9781429255264

Lab Manual (if you are taking the lab): None. Handouts will be provided.

Course Purpose:

Historical geology covers several aspects of Earth history including plate tectonics, history of life, and interpretation of the rock record.

General Objectives: Each student will develop:

1. Knowledge about how the plates of the Earth's lithosphere move;
2. Knowledge of sedimentary rock classification;
3. An understanding of the history of geological science;
4. Knowledge of the geologic time scale, evolution, extinction and the origin of life;
5. An understanding of paleoenvironments and paleoecology.

Student Learning Objectives: Each student will demonstrate the ability to:

1. Classify sedimentary rocks;
2. Memorize and recall the geologic time scale;
3. Know the major extinction events in Earth's history;
4. Be familiar with the major tectonic events in Earth's history;
5. Identify different lithofacies based on fossil and lithologic evidence;
6. Understand prehistoric life.

Exams: There will be four total exams covering sections discussed following the previous exam. These exams will comprise primarily short answer and essay questions. You may **not** use your notes for exams. Special arrangements will need to be made for make-up exams. Exams will be curved at the professor's discretion. Students with two or fewer unexcused absences may drop their lowest exam score.

Homework: There will be four take-home assignments given during the semester requiring independent research, critical thinking, and technical writing. Assignments will be given **during class** and will not be available on Blackboard. A due date will be given on the day homework is assigned. Late projects will be accepted at 50% of your earned point value by 6 pm. on the due date (including immediately after class); 25% value by the end of the following day, and 0% after that. Each homework assignment is worth about 8% of your total grade. If you are planning on missing class for a Sul Ross sanctioned event or other valid reason, homework must be turned in early (prior to the absence).

Class Presentation: Near the end of the semester students will research a topic related to the history of the Earth and give a short presentation in class.

Time Scale Quizzes: Five unannounced quizzes will be given during the semester at the beginning of class (so don't be late for class!). You will be required to memorize a simplified version of the geologic time scale and recall it for each of the unannounced quizzes.

Field Trip: There will be a one-day required field trip to Big Bend National Park on **Saturday, April 15th**. There will be a follow-up assignment given worth 10% of the total grade.

Grading System:

Points:

- 4 Exams = 60% (15% each)
- 5 Quizzes = 10% (2% each)
- 2 Homework assignments = 10% (5% each)
- 1 Class presentation = 10%
- 1 Field trip exercise = 10%

Your grades will be recorded on Blackboard in the Grade Center.

Letter Grading: Final course grade will be based on a percentage of the total points as follows:

- 90.00-100% = A
- 80.00-89.90% = B
- 70.00-79.90% = C
- 60.00-69.90% = D
- Less than 60.00% = F

Attendance and Make-up Policy:

The only acceptable excuses for missing class are those due to illness, approved Sul Ross sanctioned events, and observation of religious holidays. All excused absences **must** be documented on paper. Please inform the professor at least 1 week prior to missing class (e-mail, note on office door, etc...). With an appropriate excuse, you must make up missed quizzes/exams **within 10 days** of the last day of the absence or you have failed to meet your course responsibilities and will receive a zero. Attendance is expected, but does not count towards the final grade. Students with 2 or less unexcused absences may drop an exam grade. **Arriving 10 minutes or later to class will be considered an unexcused absence.**

Student athletes: You are given a full week to return the completed documentation: your progress (attendance and grade) to your coach, so when you present that card to me, I will take it and return it to you the following class period. Alternatively, you can bring it to my listed office hours and I will look up your progress then. I will not complete them at the beginning or end of class. No exceptions.

Classroom Conduct:

The Student handbook states under Student Misconduct, number 21, "Such prohibition includes disorderly classroom conduct that obstructs, interferes with, inhibits and/or disrupts teaching and/or classroom activities." Behavior which is included in this category: 1) persistent talking to ones' neighbors during lecture, 2) coming to class late or leaving early, 3) the use of cellular phones or MP3 devices in the classroom. **CELL PHONES MUST BE TURNED OFF IN CLASS.** This includes texting, emailing and social networking. (*If you are a member of an EMS/VFD group or have a child in day care and they must be able to reach you, let me know and we will discuss.*) Offenders of this policy will be asked once to stop and 5 points will be taken from their grade. If it occurs a second time, the offender will be instructed to leave the classroom, and there will be a meeting with the Dean of Student Life. If there are further incidents, UDPS will be called and offenders will be physically ejected from the classroom and will likely be expelled from the University.

CHEATING AND PLAGIARISM WILL NOT BE TOLERATED:

Any student caught cheating on an exam or quiz will receive an automatic **zero** on that assignment. If a student is caught cheating second time, additional disciplinary actions will be taken. Any student plagiarizing information on an assignment will receive an automatic zero for that assignment.

Students Needing Special Accommodations:

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with 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. Alpine students seeking accessibility/accommodations services must contact Mary Schwartz Grisham, M.Ed., LPC, SRSU's Accessibility Services Coordinator at 432-837-8203, or email mschwartz@sulross.edu Our office is

located on the first floor of Ferguson Hall – room 112, and our mailing address is P.O. Box C-122, Sul Ross State University, Alpine, Texas, 79832.

Lecture and Lab Schedule for the Spring 2023 Semester:

This calendar is subject to change with prior notice, at the instructor's discretion.

Week of...	Lecture Topics	Lab
1/16	Review of plate tectonics	
1/23	General classification of sedimentary rocks	Introduction and Review of Plate tectonics
1/30	History of geological science	Rocks and Minerals Review
2/6	The geologic time scale	Time Scale
2/13	Fossils, Exam 1	Relative Ages and Unconformities
2/20	Evolution, extinctions	Depositional Environments 1
2/27	Origin of life	Depositional Environments 2
3/6	Earliest history of the earth, Exam 2	Lab Exam (covers first 6 weeks)
3/13	SPRING BREAK	SPRING BREAK
3/20	Paleozoic, lithofacies, paleoenvironments, fossils,	Facies and Correlation
3/27	Paleozoic	Fossil Record and Preservation
4/3	Mesozoic	Paleozoic Fossils
4/10	Lithofacies, paleoenvironments, fossils, dinosaurs, Exam 3 , FIELD TRIP (4/15)	No Lab
4/17	Cenozoic, lithofacies, paleoenvironments	Mesozoic Fossils
4/24	Cenozoic, paleoenvironments	Cenozoic Fossils
5/1	the Ice Ages	LAB FINAL EXAM
5/8	the Ice Ages, FINAL EXAM (TBA)	

Personal Responsibility

Students will develop principles of personal responsibility for living in a diverse world; to include intercultural competency, knowledge of civic responsibility, and the ability to engage effectively in regional, national and global communities.

Social Responsibility

Students will develop principles of social responsibility for living in a diverse world, to include the ability to connect choices, actions, and consequences to ethical decision-making.

Geology BS marketable skills:

1. Student will be able to conduct field work.
2. Student will be able to use field equipment.
3. Student will be able to use lab equipment.
4. Student will be able to use library resources.
5. Student will be able to communicate in written and oral format.

Geology BS 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.