

Introduction to Field Geology—Spring, 2026

Lecture: TBA

Instructor: Dr. Tom Shiller

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Office Hours: MWF, 9-10:00 am; or by appointment

Course Description: This purpose of this course is to prepare upper level geology students for rigorous field work during summer field camp. Students will have four mapping projects in Big Bend region through which they will learn and practice fundamental techniques in geologic field work: using a Brunton compass, mapping surface geology, and constructing geologic cross sections.

Required Materials: Sturdy hiking boots, loose-fitting clothes suited for field work, a wide-brimmed hat, water containers, clipboard, map pencils, protractor.

General Objectives: Each student will develop:

1. Knowledge of field techniques used in the geological sciences
2. Knowledge of proper conduct in the field
3. Practical skills in wilderness first aid and survival
4. Knowledge of reporting observations made in the field
5. Skills in processing data collected in the field

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

1. Identify rocks and geologic features in the field
2. Measure geologic structures using a Brunton compass
3. Construct detailed geologic maps
4. Measure stratigraphic sections
5. Measure and calculate paleocurrent directions

Learning Outcome: Students will have an understanding of geologic field methods and will be well prepared for summer field camp.

Grades: Students will be required to construct geologic maps and cross sections for mapping areas. Maps and cross sections will be assessed based on the correct placement of formation contacts, geologic structures, and based on the quality of the product. There will be a final exam at the end of the semester comprising 20% of the total grade.

3 Geologic Maps—20% each (60% total grade)

3 Cross Sections—10% for each (30% total grade)

Final Exam—10% (10% total grade)

Attendance: Attendance in lecture is expected and will not be counted toward the final grade. Attendance of field trips, is required.

Plagiarism and Cheating: Plagiarism and cheating will not be tolerated. Anyone caught copying the work of others will receive an automatic zero on the assignment or exam. A second occurrence will warrant expulsion from the course.

ADA Statement

SRSU Accessibility Services. 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. Students seeking accessibility/accommodations services must contact Mrs. Mary Schwartze Grisham, LPC, SRSU's Accessibility Services Director or Ronnie Harris, LPC, Counselor, at 432-837-8203 or email mschwartze@sulross.edu or ronnie.harris@sulross.edu. RGC students can also contact Alejandra Valdez, at 830-758-5006 or email alejandra.valdez@sulross.edu. Our office is located on the first floor of Ferguson Hall, room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine, Texas, 79832.

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.

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.