

Sul Ross State University

ENVIRONMENTAL GEOLOGY LABORATORY – GEOL 1105, Fall 2026; Mon 3-4:40pm

Dr. Kelsch, Office: WSB 316

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Office Hours: Mon,Tue,Wed 1:00 pm – 2:45 pm; or by appointment

GENERAL DESCRIPTION OF THE COURSE:

This course is designed to give the student opportunities to apply and further explore the concepts of environmental geology taught in the associated lecture class GEOL 1305.

Environmental geology can be thought of as applied geology, or all parts of geology with which human society interacts. This laboratory course covers Earth materials, natural hazards, water resources and pollution, and global climate change.

Materials required:

none

General Objectives: Each student will develop:

1. Knowledge about the application of the scientific method as a tool for understanding Earth's processes
2. Knowledge about the composition and formation of common rocks and minerals
3. An understanding of hazardous earth processes
4. An understanding of how the extraction and use of natural resources affects our environment
5. A general knowledge of Earth climate and changes to this climate

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

1. Identify and interpret common rocks and minerals, understand soils
2. Describe the basic concepts of the connection between the biology and geology
3. Interpret natural hazards, including these related to river systems, landslides, earthquakes, volcanoes, coasts and meteorite impacts
4. Explain current issues pertaining to water resources, water pollution, and the impacts on these from mineral and energy resource extraction and use
5. Evaluate basic issues pertaining to climate change

Grading:

- Lab exercises: There are eleven lab exercises, the best ten of which will each count for 9% of the total class grade.

- There will be a final examination taken during the last lab session that will count for 10% of the total class grade.

	points for each	number of each	total points	percent of grade
Lab exercises	90	10	900	90%
Final exam	100	1	100	10%

Letter grading:

Final course grade will be based on a percentage in the standard grading system: 100-90 (A), <90-80 (B); <80-70 (C), <70-60 (D), <60 (well, you know what, let's not have any of those...)

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 (email, note on office door, etc.). With an appropriate excuse, you must make up missed exams within TEN days of the last day of the absence or you have failed to meet your course responsibilities and will receive a zero. University policy dictates that your instructor can drop you with an F from the course after 6 absences from TR classes or after 9 absences from MWF classes.

THECB/SACS Core Curriculum Core Competencies Objectives:

Empirical and Quantitative discernment – Students will develop empirical and quantitative skills to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Teamwork – Students will develop teamwork skills to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal.

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 Schwartz Grisham, LPC, SRSU's Accessibility Services Director or Ronnie Harris, LPC, Counselor, at 432-837-8203 or email mschwartz@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.

Library Information

The Bryan Wildenthal Memorial Library and Archives of the Big Bend in Alpine offer FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, library.sulross.edu/. Off-campus access requires logging in with your LoboID and password. Librarians are a tremendous resource for your coursework and can be reached in person, by email (srsulibrary@sulross.edu), or by phone (432-837-8123). No matter where you are based, public libraries and many academic and special libraries welcome the general public into their spaces for study. SRSU TexShare Cardholders can access additional services and resources at various libraries across Texas. Learn more about the TexShare program by visiting library.sulross.edu/find-and-borrow/texshare/ or ask a librarian by emailing srsulibrary@sulross.edu.

Academic Integrity

Students in this class are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. Students should submit work that is their own and avoid the temptation to engage in behaviors that violate academic integrity, such as turning in work as original that was used in whole or part for another course and/or professor; turning in another person's work as one's own; copying from professional works or internet sites without citation; collaborating on a course assignment, examination, or quiz when collaboration is forbidden. Students should also avoid using open AI sources ***unless permission is expressly given*** for an assignment or course. Violations of academic integrity can result in failing assignments, failing a class, and/or more serious university consequences. These behaviors also erode the value of college degrees and higher education overall.

Supportive Statement

I aim to create a learning environment for my students that supports various perspectives and experiences. I understand that the recent pandemic, economic disparity, and health concerns, or even unexpected life events may impact the conditions necessary for you to succeed. My commitment is to be there for you and help you meet the learning objectives of this course. I do this to demonstrate my commitment to you and to the mission of Sul Ross State University to create a supportive environment and care for the whole student as part of the Sul Ross Familia. If you feel like your performance in the class is being impacted by your experiences outside of class, please don't hesitate to come and talk with me. I want to be a resource for you.

Semester schedule:

Week:	Lab Topic:
2	Sedimentary rocks
3	Weathering
4	Metamorphic rocks
5	Earthquakes
6	Rivers
7	Igneous rocks
8	Coastal processes
9	Ground water
10	Waste and water
11	Hazardous waste
12	Climate