GEOLOGY 2401 – LITHOLOGY LAB SPRING 2024

Geology Program

Department of Natural Sciences

College of Agriculture, Life, and Physical Sciences

Sul Ross State University

Mon 3-5

Dr. Liz Measures

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Phone: 837-8117 Main Office: 837-8112 Mail Drop: WSB 216 Office hours:

MWF 8:30 am - 10:00 am

TuThr 2:30 pm - 4:00 pm

or by appointment; call or email to arrange

Course Description

A hands-on introduction to the basic concepts of identification, classification and origins of igneous, sedimentary and metamorphic rocks. Laboratory exercises consist of hand specimen identification and classification of suites of all three rock classes.

This class will:

- 1) provide you with the skills needed to identify and classify hand samples of all three rock types. Samples will be seen in lab and possibly in the field.
- 2) provide you with a background in the vocabulary, past and present, used in the description of all three rock types to enable you to read and understand technical literature and to be able to communicate your findings in written format.
- 3) provide you with the information to interpret the origin, history and tectonic implications of any rock sample.

Expected Student Learning/Course Objectives/Outcomes

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

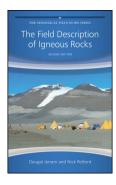
- st identify the three rock classes in hand sample using accepted classification schemes(SLO # 2 and SLO # 5)
- describe a rock and interpret and explain its origin (SLO # 1 and SLO # 2)
- * interpret the tectonic significance of a rock sample (SLO # 3)

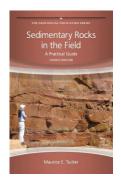
Pre-requisites/Co-requisites

Physical Geology (GEOL 1303/1103), Historical Geology (GEOL 1304/1104)

Required Texts - Wiley-Blackwell Geological Field Series books

<u>Field Description of Igneous Rocks</u>, 2nd ed. 2011. Jerram and Petford. <u>Sedimentary Rocks in the Field, A Practical Guide</u>, 4th ed. 2011. Tucker. <u>Field Description of Metamorphic Rocks</u>, 2nd ed. 2022. Jerram and Caddick.







ISBN: 9780470022368

ISBN: 9780470689165

ISBN: 9781118618752

Materials

notebook/paper

pencils

map pencils

hand lens

small stapler

Attendance/Conduct

Same as policy for lecture. See lecture syllabus.

Electronics Policy

Same as policy for lecture. See lecture syllabus.

Disabilities Accommodation

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 Schwartze Grisham, LPC, SRSU's Accessibility Services Director at 432-837-8203 (leave a message and they will get back to you as soon as possible during working hours), or email mschwartze@sulross.edu or contact Alejandra Valdez, at 830-758-5006 or email glejandra.valdez@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.

Grading/Course Requirements

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REAL	IIIPAN	nents:

Lab assignments (14)	56%
Lab practical	30%
Rock suites	14%

Standard grading scheme:

Α	≥90%
В	80-89%
C	70-79%
D	60-69%

(D does not count for majors)

F ≤ 59%

The following schedule is approximate and subject to change:

Week 1	Jan17	No lab
Week 2	Jan 22	Mineral Review
Week 3	Jan 29	Igneous Rocks
Week 4	Feb 5	Igneous Rocks
Week 5	Feb 12	Igneous Rocks
Week 6	Feb 19	Igneous Rocks
Week 7	Feb 26	Igneous Rocks
Week 8	Mar 4	Sedimentary Rocks

Mar 11 – Mar 15 Spring Break – No class

Week 9	Mar 18	Sedimentary Rocks
Week 10	Mar 25	Sedimentary Rocks
Week 11	Apr 1	Sedimentary Rocks
Week 12	Apr 8	Metamorphic Rocks
Week 13	Apr 15	Metamorphic Rocks
Week 14	Apr 22	Metamorphic Rocks
Week 15	Apr 29	Metamorphic Rocks

Lab practical by arrangement

Geology Undergraduate (Bachelor of Science) 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.

GEOLOGY UNDERGRADUATE (BACHELOR OF SCIENCE) STUDENT MARKETABLE SKILLS:

- 1. The student will be able to conduct fieldwork.
- 2. The student will be able to use field equipment.
- 3. The student will be able to use lab equipment.
- 4. The student will be able to use library resources.
- 5. The student will be able to communicate in written and oral format.

LIBRARY

The Bryan Wildenthal Memorial Library offers FREE resources and services to the entire SRSU community. Access and borrow books, articles, and more by visiting the library's website, <u>library@sulross.edu/</u>. Off-campus access requires logging in with your LobolD and password. Librarians are a tremendous resource for coursework and can be reached in person, by email (<u>srsulibrary@sulross.edu</u>) or phone (432-837-8123).

ACADEMIC INTEGRITY

Students are expected to demonstrate scholarly behavior and academic honesty in the use of intellectual property. 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.

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.

Use of AI is considered to be academic dishonesty in this course. Use of AI will result in a final grade of "F" in this course.

CLASSROOM CLIMATE OF RESPECT

This class should foster free expression, critical investigation, and open discussion of ideas. All people in the class must help create and sustain an atmosphere of tolerance, civility, and respect for the viewpoints of others.