

Geology 5315-003/6315-004 Carbonate Petrology and Depositional Systems

Lecture: Monday & Wednesday: 12:30 -1:20pm; Geological Sciences 320

Lab: Wednesday: 1:30 - 3:20pm; Geological Sciences 320

Instructor: Dr. Kate Giles

Office: Geological Science 201

Office Phone: 747-7075; E-mail: kagiles@utep.edu

Office Hours: MW 9:00-11:00am, TTH 9:00 - 10:00am, or by appointment.

Assignments and Grading

Grades will be based on performance on the following:

Weekly Lab (10 labs at 20pts each)	200 pts
Practical Lab Exam I (Week of October 22)	100 pts
Field Trip 1 Exercise: Shelf margin facies, Sacramento Mountains (Nov. 17)	40 pts
Field Trip 2 Exercise: Permian Reef Complex (Dec. 1&2)	60 pts
Written Research Project (Due Dec. 10)	100 pts

Total: 500 pts

Readings

There is no required textbook for this course. However, I strongly suggest purchasing Scholle, P. A. and Ulmer-Scholle, D. S, 2003, A Color Guide to the Petrography of Carbonate Rocks: AAPG Memoir 77, 474 p. Referenced readings will be kept in a file folder box in Geological Sciences 201. Books can be checked out overnight only after 5:00pm and must be returned by 8:00am the following morning. Please do the reading assignment prior to class.

Weekly Lab Assignments

To be worked on during the Wednesday lab time period and turned in the following Wednesday by the end of lab. Late labs are not accepted.

Research Project

You are each responsible for a written report of a carbonate research project involving:

1. Computer drafting a measured and described stratigraphic section
2. petrographic analysis of thin sections and hand samples
3. depositional and diagenetic facies interpretation
4. stratigraphic analysis
5. background literature research.

The project will focus on Pennsylvanian units exposed in the Gypsum Valley megaflap. You will each be responsible for petrographic and depositional analysis of a composite measured section from Kyle Deatrick & Allison Mast taken there. The write up of the research project will be turned in by 1pm Monday, Dec. 10, 2018. Follow the description of "Components of Carbonate Petrographic Research Paper" for format style.

Required Field Trips

Two field trips are required for this course. The field trips will be graded based on participation in discussions and quality of your field notes/exercises. Field notes and exercises will be handed in at the end of each field trip.

Field Trip 1: Saturday Nov. 17 Required

Shelf margin facies Sacramento Mountains. Depart Geological Sciences at 8:00am and return by 5:00pm.

Fieldtrip 2: Saturday & Sunday Dec. 1 & 2 Required

Permian Reef Complex, Guadalupe Mountains, and Carlsbad Caverns. Depart Geological Sciences at 8:00am and return by 5:00pm each day.