

**Geology 5315/6332**  
**Carbonate Geochemistry, Petrography, and Depositional Systems**

**Lecture:** Monday & Wednesday: 12:30 -1:20pm; GS 404

**Lab:** Monday: 1:30 - 3:20pm; GS 320

**Instructors:**

Drs. Kate Giles and Ben Brunner

E-mail: Kate- kagiles@utep.edu and Ben- bbrunner@utep.edu

Office Hours: By email appointment.

**Assignments and Grading**

Grades will be based on performance on the following:

Weekly Quiz, Group Exercise / Discussion (7 at 10pts each)	70 pts
Weekly Lab (10 labs at 10pts each)	100 pts
Practical Lab Exam CO <sub>3</sub> Grain Types (Week of October 20)	50 pts
Field Trip 1 Exercise: Permian Reef Complex (Nov. 5&6)	50 pts
Field Trip 2 Exercise: El Paso area TBD (Nov. 19)	30 pts

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Total: 300 pts

**Readings**

There is no required textbook for this course. However, We 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 for both Lecture and Lab are found folders on Blackboard marked "Carbonate Readings". Please do the Lecture reading assignment prior to class for best success.

**Weekly Quiz/Group Assignments/Discussion**

Quizzes and assignments will be made available to you either via Blackboard or direct email. We will set deadlines after consulting with you, so that everybody can submit their assignment on time. Late submissions will not be accepted (i.e. 0 points). The group assignment will be graded for the entire group, unless group members raise concerns about the performance of the peers. Grading of your contribution and activity in discussions will be done by both instructors, and averaged. The recipe to obtain a good grade in such discussion is to be prepared.

**Weekly Lab Assignments**

To be worked on in GS 320 during scheduled Lab time. After hours you can use either your assigned scope in GS 320 when the room is open or the research scope GS 201 if no one is using it. Turn lab in via email the following Monday before the end of lab time. All the lab specimens & thin section bxes will remain in GS 320 on a counter until after the Lab Practical Exam.

**Practical Lab Exam**

A suite of 20 thin sections will be housed in GS 201. You will schedule a 3 hour time slot to come into 201 and use the microscope to take the exam. We will email you the exam (Word document) in the morning of the day prior to your exam timeslot. You will fill in the answers on the word document and email completed exam to Kate. The exam will be focused on determination of common carbonate grain types in thin section.

**Fieldtrip Exercises**

This will be a handout with questions and observations made at a series of stops on the fieldtrips. To be completed and turned in at the end of each fieldtrip.

**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.

**Fieldtrip 1: Saturday & Sunday Nov. 5 & 6 Required**

Permian Reef Complex, Guadalupe Mountains, and Carlsbad Caverns. Marine carbonate platform depositional facies, processes, stratal architecture, and sequences; karst processes.

**Field Trip 2: Saturday Nov. 19 Required**

El Paso area. Focus TBD.