

# Syllabus for Geology 416M: Sedimentary Rocks, Fall 2013

**Instructor:** Gary Kocurek, garyk@jsg.utexas.edu  
Office: EPS 3.166, Office hours: MWF 10-11 or by appointment

**Lecture:** Meets MWF 9-10, JGB 2.216

**Laboratory:** All lab sections meet in EPS 2.136

## LECTURES

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### I. Grains, Transport & Diagenesis (28 August – 4 October)

- A. Weathering & Sediment Production
- B. Grain Parameters
- C. Grain Mineralogy
- D. Flow & Sediment Transport
- E. Bedforms & Their Sedimentary Structures
- F. Other Sedimentary Structures
- G. Clay Minerals
- H. Provenance
- I. Diagenesis & Rock Classification

EXAM I – 7 October

### II. Environments & Stratigraphy (9 October – 6 November)

- A. Stratigraphy
- B. Stratigraphic Sequences
- C. Texas Geology
- D. Fluvial Systems
- E. Deltaic Systems
- F. Shoreline Systems
- G. Deep Water Systems

EXAM 2 – 8 November

### III. Carbonate & Evaporite Systems (11 November – 4 December)

- A. Chemistry & Mineralogy
- B. Carbonate Rocks & Classification
- C. Carbonate Depositional Environments
- D. Evaporite Depositional Environments

EXAM 3 – 6 December

FINAL EXAM: Comprehensive examination will be held on Monday, 16 December, 9 - 12

## LABS

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Week of 28 August: no lab

Week of 2 September: Grain Parameters

Week of 9 September: Grain Mineralogy

Week of 16 September: Bedform Sedimentary Structures

Week of 23 September: Other Sedimentary Structures  
Week of 30 September: Diagenesis  
Week of 7 October: LAB EXAM

Week of 14 October: (A) Waller Creek & (B) Santa Rita #1  
Week of 21 October: Stratigraphic Correlation  
Week of 28 October: Core Logging  
Week of 4 November: LAB EXAM

Week of 11 November: Deep Water Stratigraphy  
Week of 18 November: Carbonate Rocks  
Week of 25 November: Carbonate Thin Sections  
Week of 2 December: Lab EXAM

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**Required course materials:**

- ***Principles of Sedimentology and Stratigraphy, S. Boggs***
  - **Hand lens** is required for lab (10X triplet recommended)
- Both the text book & hand lens are available at the University CO-OP

**Assigned Class Readings** will be announced at the beginning of each lecture

**Lecture notes:** Lecture notes and readings from other texts can be found on Blackboard (<http://courses.utexas.edu/>)

**Class policy, procedures and grading:** Historically there is a very strong correlation between exam grades and class attendance. Lectures are vital for expanding the ideas and concepts outlined in the online lecture notes. You will not do well on the exams by only reading the online materials.

- There will be 3 lecture exams and 1 final exam; each will consist of multiple-choice questions and will be worth 100 points. Each exam will constitute 20% of the final class grade.
  - o Make-up exams are at the discretion of the instructor(s) and will be oral examinations.
- There will be 3 laboratory exams worth a total of 100 points. The lab score will constitute 20% of the final class grade.
  - o Make-up lab exams are at the discretion of your TA and will be oral examinations.
  - o LAB ATTENDANCE POLICY – More than 2 absences and the final lab score will be deducted 10 points; an additional 5 points will be deducted for each additional 2 absences.
- There are no extra credit assignments in this class.
- Full letter grades are assigned at the end of the semester based on the distribution of accumulated points (no +/-).

**COURSE EXPECTATIONS**

- **Laptop Use Policy** – Classroom Laptop use for taking notes related to this course only. Laptop activities unrelated to this course will lead to dismissal from class. **Repeat offenses will result in a filing of a report of academic problems.**

- **Other Electronic Devices (Cell phone, Blackberry, I-Phone, etc.) Use Policy – All devices must be turned off during class.** Any use of these devices, including texting, web-surfing, etc. will lead to dismissal from class. **Repeat offenses will result in a filing of a report of academic problems.**

## **IMPORTANT INFORMATION ON UNIVERSITY POLICIES**

### **The University of Texas Honor Code**

The core values of The University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.

**Religious Holidays** – Religious holy days sometimes conflict with class and examination schedules. If you miss an examination, work assignment, or other project due to the observance of a religious holy day you will be given an opportunity to complete the work missed within a reasonable time **after** the absence. It is the policy of The University of Texas at Austin that **you must notify each of your instructors at least fourteen days prior to the classes scheduled on dates you will be absent** to observe a religious holy day.

**Documented Disability Statement** - Any student with a documented disability who requires academic accommodations should contact Services for Students with Disabilities at 471-6259 (voice) or 1-866-329-3986 (Video Phone) as soon as possible to request an official letter outlining authorized accommodations. See Website below for more information: <http://deanofstudents.utexas.edu/ssd/providing.php>

### **Use of Blackboard**

This course uses Blackboard, a Web-based course management system in which a password-protected site is created for each course. Blackboard can be used to distribute course materials, to communicate and collaborate online, to post grades, to submit assignments, and to take online quizzes and surveys.

You will be responsible for checking the Blackboard course site regularly for class work and announcements. As with all computer systems, there are occasional scheduled downtimes as well as unanticipated disruptions. Notifications of these disruptions will be posted on the Blackboard login page. Scheduled downtimes are **not** an excuse for late work. However, if there is an unscheduled downtime for a significant period of time, we will make an adjustment if it occurs close to the due date.

Blackboard is available at <http://courses.utexas.edu>. Support is provided by the ITS Help Desk at 475-9400 Monday through Friday 8 a.m. to 6 p.m., so plan accordingly.

### **University Electronic Mail Notification Policy (Use of E-mail for Official Correspondence to Students)**

All students should become familiar with the University's official e-mail student notification policy. It is the student's responsibility to keep the University informed as to changes in his or her e-mail address. Students are expected to check e-mail on a frequent and regular basis in order to stay current with University-related communications, recognizing that certain communications may be time-critical. It is recommended that e-mail be checked daily, but at a minimum, twice per week. The complete text of this policy and instructions for updating your e-mail address are available at <http://www.utexas.edu/its/policies/emailnotify.html>.

In this course e-mail will be used as a means of communication with students. You will be responsible for checking your e-mail regularly for class work and announcements. Note: if you are an employee of the University, your e-mail address in Blackboard is your employee address.