

Sedimentary Rocks (GEO f416M)

Summer 2012

Lecture: Meets MTWTHF 10-11:30 AM, EPS 4.104

Instructors: Dr. Wonsuck Kim, delta@jsg.utexas.edu
Office: EPS 3.154, Office hours: M 11:30-12:30 & F 11:30-12:30 & by appointment

Teaching Assistant:

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Laboratory: Meets in EPS 2.136. There are two laboratory exercises each week. TA will hand out laboratory manual in each session.

Date	Lecturer	Topic	Reading*
31-May	WK	Class Intro: Overview of Sedimentary Deposits	B (Intro), B6
1-June	WK	Sediment Production (Weathering) Grain Parameters	B3 B1
4-June	WK	Grain Mineralogy	B5
5-June	WK	Sediment Transport	B2
6-June	WK	Bedform	B4
7-June	WK	Other Sedimentary Structures	B4
8-June	WK	Aeolian Systems	B8.3
11-June	WK	Rivers and Alluvial Fans	B8.2
12-June	WK	Deltas	B9.2
13-June	WK	Shoreface and Deepwater Sedimentation	B10
14-June	WK	Stratigraphic Concepts 1	B13, B16
15-June	WK	Stratigraphic Concepts 2	B13 & 16
18-June	WK	EXAM 1 (Siliciclastic Sedimentary Rocks)	
19-June	WK	Chemical Sediments	P&S 13 & 14
20-June	WK	Carbonates Mineralogy and Geochemistry Carbonate Factory	T&W 1.3; P&S 12.1
21-June	WK	Carbonate Constituents: Skeletal Grains	T&W 1.2
22-June	WK	Carbonate Constituents: Non-skeletal Grains Carbonate Mud & Porosity	T&W 1.4 & 1.9 T&W 1.7
25-June	WK	Carbonate Classification and Facies	B11, T&W 2
26-June	WK	Modern Carbonate Facies and Depositional Systems Carbonate Depositional Systems: Peritidal	T&W 4; S 14 T&W 4.3; S 14
27-June	WK	Carbonate Depositional Systems: Slopes	T&W 2.10
28-June	WK	Carbonate Depositional Systems: Reefs Modern Carbonates	T&W 4.5 T&W 3
29-June	WK	Carbonate Sequences	S 6, 7, & 8
2-July	WK	EXAM 2 (Carbonate Sedimentary Rocks)	

LABS

Date	Topic
31-May, 1-June	No Lab
4-June	1. Grain Parameters
5-June	2. Grain Mineralogy
6-June	3. Bedform Sedimentary Structures
7-June	4. Other Sedimentary Structures
11-June	Review

12-June	1 LAB Exam
13-June	5. Reconstruction of Sediment Transport Conditions in Waller Creek (field trip)
14-June	6. Sandstone Diagenesis
18-June	7. Stratigraphic Correlation
19-June	8. Core Logging
20-June	9. Deep-water Stratigraphy (seismic)
21-June	10. Carbonate Rocks and Classification
25-June	11. Carbonate Rocks in Thin Sections
26-June	Review
27-June	2 LAB EXAM

Final Exam: none

***Required course materials:**

- **B: Boggs, *Principles of Sedimentology and Stratigraphy (4th edition)***

- **Hand lens** (10X triplet recommended), a ruler, and colored pencils are required for lab.

Both the textbook & hand lens are available at the University Coop.

- **iClicker: version 1 or 2**

***Other texts (library reserve):**

T&W: Tucker, M.E. and Wright, V.P. (1990), *Carbonate Sedimentology*.

S: Wolfgang Schlager, (2005), *Carbonate Sedimentology and Sequence Stratigraphy*

P&S: Prothero, D.R. and Schwab, F. (2004), *Sedimentary Geology*.

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 attendance.

- There will be two lecture exams; each will consist of multiple-choice questions and will be worth 100 points. These two lecture exams will constitute 50% of the final class grade.
 - o There are no make-up lecture exams in this class. Please look at the exam schedule above and make sure that you do not miss any exams.
- There will be one or two iClicker questions each class. Each is a multiple-choice question and will be worth 100 points. A correct answer will give 100 points otherwise 50 points. The iClicker questions will make up 20% of the final class grade.
 - o There are no make-up iClicker quizzes in this class. This is also for improving attendance. You will get at least 50 points per question even though your answer is wrong.
- There will be 2 laboratory exams worth a total of 100 points. The lab score will constitute 30% 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 3 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.
- Whole letter grades (no +/-) are assigned at the end of the semester based on the following:
 - o ≥ 80 : A
 - o < 80 & ≥ 70 : B
 - o < 70 & ≥ 60 : C
 - o < 60 & ≥ 50 : D
 - o < 50 : F

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>