

GEO 316P: Sedimentary Rocks (Unique # 27395)

Spring 2022

Lecture: Meets TTh 8-9.30 AM, RLP 0.112, in-person

Instructor: Dr. Cornel Olariu, cornelo@jsg.utexas.edu
Office: JGB 6.136, Office hours: T&Th 10AM – 12PM

Teaching Assistant:

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Office hours: W: 9 AM – 11 AM or by appointment
Via Zoom: Meeting ID: 952 9683 2296; Passcode: SedRocks

Laboratory: No labs

Date	Lecturer	Topic	Reading*
T, 18-Jan	CO	Class Intro: Overview of Sedimentary Deposits; <u>INTRO1 to Source to Sink EXERCISE</u>	B3, B6, B12
Th, 20-Jan	CO	Sediment Production (Weathering)	B1
T, 25-Jan	CO	Styles of Sediment Transport & controls on patterns of sediment deposition <u>INTRO2 to Source to Sink EXERCISE</u>	B2
Th, 27-Jan	CO	Sedimentary Structures	B4
T, 1-Feb	CO	Classification of Siliciclastic Rocks	B5
Th, 3-Feb	CO	Sandstone Diagenesis	B5
T, 8-Jan	CO	Aeolian Systems & Alluvial Fans	B8.2, B8.3
Th, 10-Feb	CO	EXAM 1	
T, 15-Feb	CO	Rivers	B8.2
Th, 17-Feb	CO	Deltas	B9.2
T, 22-Feb	CO	Lacustrine	
Th, 24-Feb	CO	Shore zone and Shelf	B9, B10
T, 1-Mar	CO	Slope	B10
Th, 3-Mar	CO	Litho -, Bio- & Chrono-Stratigraphy, Facies Models	B12, B14, B15
T, 8-Mar	CO	Seismic Stratigraphy & Sequence Stratigraphy	B13, B16
Th, 10-Mar	CO	EXAM 2	
14-19 Mar	No Class	Spring Break, No Classes	
T, 22-Mar	CO	Chemical & Biogenic Sediments	B6, B7.2, B7.3
Th, 24-Mar	CO	Carbonate Mineralogy, Chemistry & Carbonates Factories	B6
T, 29-Mar	CO	Carbonate Constituents: Skeletal Grains	B6
Th, 31-Apr	CO	Carbonate Constituents: Non-Skeletal Grains	B6, B7.3
T, 5-Apr	CO	Carbonate Mud, Porosity, & Cements	B6
Th, 7-Apr	CO	Carbonate Rocks and Classification	B6
T, 12-Apr	CO	EXAM 3	B6
Th, 14-Apr	CO	Modern Carbonates	
T, 19-Apr	CO	Near Shore Carbonates	B1, T&W 3
Th, 21-Apr	CO	Reefs & Carbonate Slopes	B11, T&W 4, 5
T, 26-Apr	CO	Dolomite, Diagenesis, and Evaporites	B6, B7, T&W 7-8
Th, 28-Apr	CO	Fundamentals of Reservoirs – Geology and Engineering	
T, 3-May	CO	Clastic Depositional Systems and Clastic Reservoirs & Carbonate Depositional Systems and Carbonate Reservoirs	
Th, 5-May	CO	EXAM 4	

Final Exam: none

***Required course materials:**

- B: Boggs, *Principles of Sedimentology and Stratigraphy* (4th edition or 5th edition)

***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*

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

Class policy, procedures and grading: Historically, there is a very strong correlation between exam grades and attendance.

- There will be **4 lecture exams**; each will consist of multiple-choice and/or short answer questions and will be worth 100 points. The **four exams together will constitute 90 %** of the final class grade.
 - o There are no make-up lecture exams in this class. If you miss an exam, that exam grade becomes 0. Make-ups are permitted only with physician-certified illness report or if the posted exam date conflicts with a religious holy day.
- There will be **an on-line Sedimentary Source-to-Sink exercise** (based on University Experience Learning Initiative) that will be worth 20 points and constitute **20% of the final class grade**.

Note that Source-to-sink exercise contain 10 additional points over 100 points (100%) of the final grade.

Complete Source to Sink exercise Report Due: March 24.

Course grades will be curved, but the boundaries between letter grades are determined by the instructors' judgment and are very different every semester. Recently the A/B boundary has been in the high 80 %s and the B/C boundary in the high 70 %s, etc.

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 Canvas

This course uses Canvas, a Web-based course management system in which a password-protected site is created for each course. Canvas 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 Canvas 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 Canvas 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.

Canvas is available at <http://canvas.utexas.edu>. Support is provided by the ITS Help Desk at 512-475-9400 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.php>.

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 Canvas is your employee address.