Stratigraphy of the Guadalupe Mountains, western Permian basin. San Angelo is on the eastern shelf of the basin (Prothero and Dott, 2009).

Course Description
Covers the processes that create, deposit, and diagenetically alter sediments, as well as the description of sedimentary rocks and related sedimentary structures. Includes a required field trip.

Course Delivery Style: Normal On-campus class and lab
Sedimentology lecture and lab will be run as normal classes taught face-to-face in Vincent 146. Each person will sit at their own table to maintain social distancing. You will sit at the same table each class. Short videos made by your professor and posted on Blackboard coupled with extensive reading in our two textbooks will introduce terms and basic concepts. We will spend much time in class and lab applying terms and concepts to solve problems.

Professor: Dr. J.I. “Joe” Satterfield
Office: VIN 122
Office phone: 325-486-6766
Physics and Geosciences Department Office: 325-942-2242
E-mail: joseph.satterfield@angelo.edu

On-campus Face-to-face Office hours (meet in my office, VIN 122)
- Monday: 8:00 – 9:00 am, 2:00 – 3:00 pm
- Tuesday: 2:00 – 4:00 pm
- Wednesday: 1:00 – 3:00 pm
- Friday: 8:00 – 9:00 am
- Or contact me to set up a convenient time to meet

Virtual Office Hours via Blackboard Collaborate (use guest link on Blackboard in Office Hours tab)
- Monday: 3:00 – 4:00
- Wednesday, Thursday: 8:00 – 9:00 am

Required Textbooks

Required Lab and Field Equipment
1. Geology field book (Dr. Joe will order)
2. Hand lens, 10x, for lab and field trips (Bausch & Lomb Hastings Triplet recommended)
3. Grain size template (Dr. Joe will order)
Grading

- 9 Weekly Quizzes (1% each)
- 2 exams (10.5% each)
- 1 comprehensive final exam (12%)
- 1 hand-sample quiz over rock and mineral identification and description (10%)
- 12 graded lab projects, including weekend field trip and paper summary, 4% each (48% total)
- Each student will schedule a brief individual meeting with Dr. Joe after Exam 1!

Schedule

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture/Discussion topics and Required Reading in Texts</th>
<th>Labs</th>
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<tbody>
<tr>
<td>I: 8/17, 8/19, 8/21</td>
<td>Flipgrid introductions Introduction: Sedimentology, Stratigraphy (Ch 1, p 1-4) Graphic logs (Lab Manual (LM), Ch 2, p. 9-23) 8/21: Review and discussion, Weekly Quiz 1</td>
<td>1: Review common minerals in sedimentary rocks</td>
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<tr>
<td>II: 8/24, 8/26, 8/28</td>
<td>Terrigenous Clastic Sediments: Gravel, Sand, Mud (Ch 2, p. 5-24; LM, p. 38-47) Sandstone Classification (Ch. 2, p. 12-13) Sandstone textures (video: Ch 2, p. 23-26) 8/28: Review and discussion, Weekly Quiz 2</td>
<td>2: Constructing a cross-section and stratigraphic column from geologic map of Big Bend National Park</td>
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<tr>
<td>V: 9/14, 9/16, 9/18</td>
<td>Transport Processes and Sedimentary Structures (Ch 4) 9/16 Field Trip to Engineering Lab Flume (Dr. Pinyon) 9/18: Exam Review</td>
<td>5: Sedimentary Petrography: Introduction to the petrographic microscope</td>
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<tr>
<td>VII: 9/28, 9/30, 10/2</td>
<td>Rivers and Alluvial Fans (Ch 9) 10/2: Review and discussion, Weekly Quiz 5</td>
<td>7: Cretaceous measured section, Divide Road Cuts, Day 1</td>
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<td>VIII: 10/5, 10/7, 10/9</td>
<td>Deltas (Ch 12) 10/9: Review and discussion, Weekly Quiz 6</td>
<td>7: Cretaceous measured section, Divide Road Cuts, Day 2</td>
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<tr>
<td>IX: 10/12, 10/14, 10/16</td>
<td>Carbonate and Evaporite Environments (Ch 15) 10/16: Review and discussion, Weekly Quiz 7</td>
<td>8: Other sedimentary rocks in hand sample</td>
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</table>
Course Expectations
1) You will attend every class meeting, unless you are sick. Do NOT come if sick! If you cannot attend, the class meeting or lab introduction will be recorded and posted on Blackboard.

2) You will take the next big step: let’s talk outside of class about almost anything. Topics I like to discuss: geology, hiking and backpacking trails, productive ways of learning geology, racquetball, Lord of the Rings, future careers, lame jokes, and more.

3) You will not distract yourself or others with electronic devices in lecture or lab. **You will put your phone away during class and lab.** During lab, you will step outside the room if you must text or take a call. Penalties: a) Friendly warning for forgetting the first time, b) After the first time, you will be asked to leave the lab or class.

4) Lab projects and class projects submitted after the due date will receive a 10-point deduction!

5) Work turned in after graded work is returned to others will not be graded. (professional ethics issues)

Field Trips!
The Saturday field trip project will be your Lab 12. On field trips you must travel in your own car alone, or with your roommates. You must bring facemask and observe social distancing. No special equipment is required but space is limited! Our schedule:
- Saturday, September 12: San Angelo to Sweetwater
- Saturday, October 17: TBA

Learning Objectives
1. To study in more detail sedimentary rocks introduced in Physical and Historical Geology, such as how to describe and measure them, how to interpret the ancient environments they formed in, and how to correlate rocks and time across long distances. The geology of sedimentary rocks is the single most important topic to petroleum geologists.

2. To get hands-on experience in describing and interpreting rocks so that you will have a solid background when taking summer field camp, a 5-week field course (GEOL 3600), when working on your own research project (GEOL 4391), when taking geology courses in graduate school, and when employed as a professional geologist or engineer. The ultimate goal: a good working knowledge of how to describe and interpret whatever sedimentary rocks you encounter anywhere in the world. We will emphasize what can be done in the field with outcrops and hand samples.
3. To learn how to use standard geology tools in the field and the classroom. Tools used include: geophysical logs from oil wells, hand lens, sieves, petrographic microscopes (an introduction), Brunton Compass, and Jacob’s Staff.

4. Learning outcomes will be assessed by exams, a lab practical, and graded lab projects

Join GEO and the AAPG!
One of your most rewarding responsibilities as a Geoscience major or minor is the chance to participate in activities of GEO, our organization of geology students at ASU, and the AAPG, the American Association of Petroleum Geologists, an international professional organization. GEO is a Student Chapter of the AAPG. GEO has supper meetings Wednesdays at 7:00 in VIN 139. The last Wednesday of the month we meet together with the San Angelo Geological Society (SGS) and host a significant geology talk by an outside speaker. GEO dues are $15.00 / semester. AAPG student membership is free! To join AAPG fill out membership application at AAPG website. AAPG membership is a course requirement.

Course Webpages
The Angelo State Blackboard site contains PowerPoint slides, web links to scenic areas mentioned in class, practice problems, answers to lab assignments, and your official grades.

Geoscience Careers
See Geoscience BS requirements in the Angelo State Catalog. A Geoscience Minor requires 18 hours of geology courses. Sedimentology is a requirement for a major and will count towards a minor in Geoscience. Rewarding careers exist for geologists, geophysicists, hydrogeologists, and secondary science teachers. Talk to your professors!

The US Department of Labor Occupational Handbook contains information on geology careers, salaries, education needed, and future job outlook in geology.

Academic Integrity
Students are expected to maintain complete honesty and integrity in all work. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU. The College of Science and Engineering adheres to the Statement of Academic Integrity.

Plagiarism
Plagiarism is a serious topic covered in ASU’s Academic Integrity policy in the Student Handbook. Plagiarism is the action or practice of taking someone else’s work, idea, etc., and passing it off as one’s own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word-for-word without quotation marks and the source of the quotation. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list.

Papers are subject to be evaluated for originality via Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center.

Accommodations for Students with Disabilities
ASU is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments of 2008 (ADAAA) and subsequent legislation.
Student Disability Services is located in the Office of Student Affairs, and is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability. It is the student’s responsibility to initiate such a request by contacting an employee of the Office of Student Affairs, in the Houston Harte University Center, Room 112, or contacting the department via email at ADA@angelo.edu. For more information about the application process and requirements, visit the Student Disability Services website. The employee charged with the responsibility of reviewing and authorizing accommodation requests is:

Dallas Swafford
Director of Student Disability Services, Office of Student Affairs
325-942-2047
dallas.swafford@angelo.edu
Houston Harte University Center, Room 112

Title IX at Angelo State University
Angelo State University is committed to providing and strengthening an educational, working, and living environment where students, faculty, staff, and visitors are free from sex discrimination of any kind. In accordance with Title VII, Title IX, the Violence Against Women Act (VAWA), the Campus Sexual Violence Elimination Act (SaVE), and other federal and state laws, the University prohibits discrimination based on sex, which includes pregnancy, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination and unwelcome behavior of a sexual nature. The term includes sexual harassment, nonconsensual sexual contact, nonconsensual sexual intercourse, sexual assault, sexual exploitation, stalking, public indecency, interpersonal violence (domestic violence or dating violence), sexual violence, and any other misconduct based on sex.

You are encouraged to report any incidents involving sexual misconduct to the Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator, Michelle Boone, J.D. You may submit reports in the following manner:

Online: www.angelo.edu/incident-form
Face to face: Mayer Administration Building, Room 210
Phone: 325-942-2022
Email: michelle.boone@angelo.edu

Note, as a faculty member at Angelo State, I am a mandatory reporter and must report incidents involving sexual misconduct to the Title IX Coordinator. Should you wish to speak to someone in confidence about an issue, you may contact the University Counseling Center (325-942-2371), the 24-Hour Crisis Helpline (325-486-6345), or the University Health Clinic (325-942-2171).

For more information about resources related to sexual misconduct, Title IX, or Angelo State’s policy please visit: www.angelo.edu/title-ix.

Student Absence for Observance of Religious Holy Days
A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence. See ASU Operating Policy 10.19 Student Absence for Observance of Religious Holy Day for more information.
Title IX at Angelo State University
The University prohibits discrimination based on sex, which includes pregnancy, sexual orientation, gender identity, and other types of Sexual Misconduct. Sexual Misconduct is a broad term encompassing all forms of gender-based harassment or discrimination including: sexual assault, sex-based discrimination, sexual exploitation, sexual harassment, public indecency, interpersonal violence (domestic violence and/or dating violence), and stalking. As a faculty member, I am a Responsible Employee meaning that I am obligated by law and ASU policy to report any allegations I am notified of to the Office of Title IX Compliance.

Students are encouraged to report any incidents of sexual misconduct directly to ASU’s Office of Title IX Compliance and the Director of Title IX Compliance/Title IX Coordinator at:

Michelle Boone, J.D.
Director of Title IX Compliance/Title IX Coordinator
Mayer Administration Building, Room 210
325-942-2022
michelle.boone@angelo.edu
You may also file a report online 24/7 at www.angelo.edu/incident-form.

If you are wishing to speak to someone about an incident in confidence you may contact the University Health Clinic and Counseling Center at 325-942-2173 or the ASU Crisis Helpline at 325-486-6345.

For more information about Title IX in general you may visit www.angelo.edu/title-ix.9

Required Use of Masks/Facial Coverings by Students
As a member of the Texas Tech University System, Angelo State University has adopted the mandatory Facial Covering Policy10 to ensure a safe and healthy classroom experience. Current research on the COVID-19 virus suggests there is a significant reduction in the potential for transmission of the virus from person to person by wearing a mask/facial covering that covers the nose and mouth areas. Therefore, in compliance with the university policy students in this class are required to wear a mask/facial covering before, during, and after class. Faculty members may also ask you to display your daily screening badge as a prerequisite to enter the classroom. You are also asked to maintain safe distancing practices to the best of your ability. For the safety of everyone, any student not appropriately wearing a mask/facial covering will be asked to leave the classroom immediately. The student will be responsible to make up any missed class content or work. Continued non-compliance with the Texas Tech University System Policy may result in disciplinary action through the Office of Student Conduct.

Modifications to the Syllabus
This syllabus, including grade evaluation and course schedule, is subject to modification. The COVID-19 pandemic may require significant changes in course delivery and content on potentially short notice.

Incomplete Grade Policy
It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required. See ASU Operating Policy 10.11 Grading Procedures11 for more information.

Copyright Policy
Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.
General Policies Related to This Course
All students are required to follow the policies and procedures presented in these documents:

- **Angelo State University Student Handbook** ¹²
- **Angelo State University Catalog** ¹³

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¹ https://www.aapg.org/
² https://blackboard.angelo.edu
³ https://www.angelo.edu/catalogs/
⁵ https://www.angelo.edu/student-handbook/community-policies/academic-integrity.php
⁶ https://www.angelo.edu/dept/writing_center/academic_honesty.php
⁷ https://www.angelo.edu/services/disability-services/
⁸ https://www.angelo.edu/content/files/14206-op-1019-student-absence-for-observance-of
⁹ https://www.angelo.edu/services/title-ix/
¹⁰ http://www.texastech.edu/downloads/ttus-policy-face-coverings.pdf
¹¹ https://www.angelo.edu/content/files/14197-op-1011-grading-procedures
¹² https://www.angelo.edu/student-handbook/
¹³ https://www.angelo.edu/catalogs/