GEOL 1303.500 Syllabus Fall 2021  
Introduction to Physical Geology

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Office Hours: As this is a web-based course, office hours will be offered electronically.

Course Description

4 semester hours. Designed for the student with no geology background. Introduction to the study of minerals, rocks and the processes that modify and shape the surface features of the Earth. Focus on energy, mineral and water resources; volcanism; and other practical aspects of geology. Required lab fee.

Program Learning Outcomes:

There are no specific program learning outcomes for this major addressed in this course. It is a general education core curriculum course and / or a service course.

Student Learning Outcomes for Lecture and Lab:

After successful completion of this course students will be able to:

SLO 1. Demonstrate an understanding of fundamental geologic concepts as it relates to Earth processes and landscape evolution through geologic time.
SLO 2. Use quantitative reasoning to interpret geologic data (tables, figures, graphs) from primary research, data assimilation and models to assess the differences in competing scientific theories associated with rock formation.
SLO 3. Demonstrate knowledge on the interdependence of science and technology and the influences geologic reasoning associated with identifiable and testable hypotheses of geologic processes.
SLO 4. Critically assess the interrelationships between geologic phenomena and communicate the resulting conclusions in visual and written formats.
SLO 5. Demonstrate an understanding of the skills and attitudes necessary for effective teamwork in collaborative learning activities.

General Education Core Curriculum

The Texas Higher Education Coordinating Board has identified six core learning objectives: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives.

By enrolling in GEOL 1103 you are also enrolling in a Core Curriculum Course that fulfills the Physical and Life Sciences Core Curriculum requirement. The chart below indicates: (a) The core objectives that are required to be taught in this course per the Texas Higher Education Coordinating Board (THECB), (b) How the required core objectives will be addressed.
<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>How the Core Objective Will be Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information</td>
<td>Identification and evaluation of unknown rock and mineral samples through pre-defined methods; analysis of trends and projection of future events concerning climate and resource usage</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas through written, oral, and visual communication</td>
<td>Discussion of various current events concerning geologic phenomenon and resources</td>
</tr>
<tr>
<td>Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>Interpretation of resource usage data and impact on society; analysis of topographic map data;</td>
</tr>
<tr>
<td>Teamwork</td>
<td>To include the ability to consider different points of view and to work effectively with others to support a shared purpose or goal</td>
<td>Group identification of unknown rock and mineral samples, analysis of topographic maps</td>
</tr>
</tbody>
</table>

**Time**

Remember, you are expected to spend the same amount of time on online courses that you would spend for F2F (face to face) courses. That is, expect to spend three hours per day on the lecture portion and two hours per day on the laboratory portion. In addition, reports for success indicate that two to three additional hours (per credit hour) be spent—indeed, independent of whether the class is online or F2F. In other words, 16 hours/week should be spent on lecture content and 16 hours should be spent on lab content. Many of you are working, have families, or taking other classes, so your time is limited. I have experienced the same, so I understand your position.
# GEOL 1303.500 Introductory Geology Lecture
## Fall 2021

## Unit 1: Atoms & Minerals

<table>
<thead>
<tr>
<th>Week</th>
<th>Module</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/23 - 8/27</td>
<td>Getting Started &amp; Unit 1 Module 1: Introduction to Geology</td>
<td>Read syllabus, semester calendar, and week's content. Take Get Started Quiz and Cheating &amp; Plagiarism Quiz by August 27th at midnight. Note: These assessments will not count toward your final grade. However, you will be unable to advance in the course until you complete them. Getting Started Quiz Due 8/27 @ 11:59 PM Cheating &amp; Plagiarism Quiz Due 8/27 @ 11:59 PM Student Introduction Due 8/27 @ 11:59 PM</td>
</tr>
<tr>
<td>8/30 - 9/3</td>
<td>Unit 1 Module 2: Atomic Review</td>
<td>Quiz 1 Due 9/3 @ 11:59 PM</td>
</tr>
<tr>
<td>9/6 - 9/10</td>
<td>Unit 1 Module 3: Mineral Physical Properties</td>
<td>Discussion 2: Texas Minerals Due 9/10 @ 11:59 PM</td>
</tr>
<tr>
<td>9/13 - 9/17</td>
<td>Unit 1 Module 4: Mineral Compositional Groups</td>
<td>Quiz 2 Due 9/17 @ 11:59 PM</td>
</tr>
<tr>
<td>9/20 - 9/24</td>
<td>Unit 1 Review &amp; Unit 1 Exam</td>
<td>Review Unit Material Unit 1 Exam Due 9/23 @ 11:59 PM</td>
</tr>
</tbody>
</table>

## Unit 2: Rocks

<table>
<thead>
<tr>
<th>Start Date</th>
<th>Module</th>
<th>Assignments</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/27 - 10/1</td>
<td>Unit 2 Module 1: Igneous Rocks</td>
<td>Discussion 3: East Texas Earthquakes Due 10/1 @ 11:59 PM</td>
</tr>
<tr>
<td>10/4 - 10/8</td>
<td>Unit 2 Module 2: Weathering</td>
<td>Quiz 3 Due 10/8 @ 11:59 PM</td>
</tr>
<tr>
<td>Date Range</td>
<td>Module</td>
<td>Assignment</td>
</tr>
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</tr>
<tr>
<td>10/11 - 10/15</td>
<td>Unit 2 Module 3: Sedimentary Rocks</td>
<td>Discussion 4: Black Gold, Texas Tea Due 10/15 @ 11:59 PM</td>
</tr>
<tr>
<td>10/18 - 10/22</td>
<td>Unit 2 Module 4: Metamorphic Rocks</td>
<td>Quiz 4 Due 10/22 @ 11:59 PM</td>
</tr>
<tr>
<td>10/25 - 10/29</td>
<td>Unit 2 Review &amp; Unit 2 Exam</td>
<td>Review Unit Material Unit 2 Exam Due 10/28 @ 11:59 PM</td>
</tr>
<tr>
<td>10/25 - 10/29</td>
<td>Unit 2 Review &amp; Unit 2 Exam</td>
<td>Review Unit Material Unit 2 Exam Due 10/28 @ 11:59 PM</td>
</tr>
<tr>
<td>10/25 - 10/29</td>
<td>Unit 2 Review &amp; Unit 2 Exam</td>
<td>Review Unit Material Unit 2 Exam Due 10/28 @ 11:59 PM</td>
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<tr>
<th>Start Date</th>
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<th>Assignments</th>
</tr>
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<tbody>
<tr>
<td>11/1 - 11/5</td>
<td>Unit 3 Module 1: Gravity and Aridity</td>
<td>Quiz 5 Due 11/5 @ 11:59 PM</td>
</tr>
<tr>
<td>11/8 - 11/12</td>
<td>Unit 3 Module 2: Rivers</td>
<td>Quiz 6 Due 11/12 @ 11:59 PM</td>
</tr>
<tr>
<td>11/15 - 11/19</td>
<td>Unit 3 Module 3: Groundwater</td>
<td>Discussion 5: Water, Water Everywhere Due 11/19 @ 11:59 PM</td>
</tr>
<tr>
<td>11/22 - 11/26</td>
<td>Thanksgiving Break - No Class</td>
<td>No Lecture Assignments for this module</td>
</tr>
<tr>
<td>11/29 - 12/3</td>
<td>Unit 3 Module 4: Glaciations and Shorelines</td>
<td>Field Project and Course Survey Due 11/29 @ 11:59 PM</td>
</tr>
<tr>
<td>12/6 - 12/10</td>
<td>Unit 3 Exam</td>
<td>Unit 3 Exam Due 12/8 @ 11:59 PM</td>
</tr>
</tbody>
</table>

Dates may change at the discretion of the instructor. Should a date change be required, it will be announced on the course homepage or on the discussion board. Print the Semester Calendar and check it frequently to review daily/weekly assignments and to avoid missing deadlines.

Text and Materials

Optional: No textbook is required, but the following texts are excellent. I recommend that you purchase a textbook if your learning style benefits from having a textbook for reference, but there are no required textbook assignments. The textbook editions are all very similar.

  - current edition on reserve in Steen Library
- *Physical Geology* by Leet, Judson, Kauffman, any edition
- *Earth* by Tarbuck, Lutgens, & Tasa, any edition
- *Putnam’s Geology* by Larson & Birkeland, any edition

Grading and Evaluation

Grades are determined from a variety of assignments:
- Examinations: 3 @100 points (300 points total)
- Quizzes: 5 highest out of 6 given @20 points (100 points total)
- Discussions: 5 @ 5 points (25 points total)

TOTAL = 425 pts

Grades will break down as follows:

A = 381-425
B = 338-381
C = 297-338
D = 253-297
F = 253 and below

The laboratory is a separate 1-hour credit, and lecture is a separate 3-hour credit. However, they are co-requisites (meaning the initial attempt requires simultaneous enrollment). You must pass both (≥ 60 average) to receive credit for a laboratory science. For example, if you have an 85 average in lecture, you would receive a B for completion of the 3-hour lecture portion. However, if you have a 55 average in lab, you would receive a F for non-completion of the required 1-hour lab. University requirements are that both (lab and lecture) be successfully completed. Check the requirements of your College to determine if you should repeat only the portion that was failed or both portions (lab and lecture).

You must take the Get Started Quiz and Cheating & Plagiarism Quiz in the lecture content and the Get Started Quiz in the lab content by August 27th at midnight. These assessments do not count toward your average grade, but you will be unable to advance in either until you complete them.

On the weeks indicated on the Semester Calendar, a quiz is designed to test your knowledge of Module content. Quizzes typically contain ten objective questions and have a brief duration. As with the examinations, time limit is strictly enforced with a penalty of five points per extra minute taken. These quizzes can be completed in the time allotment if you are prepared, and you can view the correct quiz answers after completion.

**Dependable internet connection**

Especially when taking quizzes or exams, always rely on a dependable internet connection. I do not recommend taking an assessment via your phone or any unstable wireless connection (McDonalds, Starbucks, etc).

**Examinations**

These exams will consist of objective questions on the material covered in Units 1, 2, and 3 (respectively). There are 50 questions each on Exams #1 & #2, and you will be given 60 minutes to complete each exam. There are 100 questions on Exam #3, and you will be given 120 minutes to complete the exam. The exams are not cumulative, but they are timed. The penalty for taking more time than allotted is five points per minute, so be prepared when you begin the assessment. You will not have adequate time to refer back to Unit/Module content. Questions on lecture and lab quizzes/exams are written by the instructor, and the assessment content has been presented in the online content. D2L randomly selects questions from a question bank, and they appear one question at a time. However, you may return to any question and change your response within the prescribed time allotment. It is recommended that you save your responses as you complete each question because of unknown timing of computer or power failure. I cannot help you if questions have not been saved. Also, all exams can be taken up to two times and the highest attempt will be saved in the gradebook.
LabPaq Kit

The labkit can be purchased from HandsOnLabs

Go to the following link to purchase:
https://myhol.holscience.com/purchase/be89152b7e1953897df0a57e01200c35

Discussion Board

The Discussion Board *(Course Tools in Navigation Bar)* can be used as a place to exchange information amongst classmates. Please keep your comments on a professional level, and I will try to respond quickly when a question is asked. But remember, I have 150+ students taking online classes, and there is only one of me. If I miss your question in Discussions, email and give me a gentle reminder. I respond to a lot of email, so it takes a bit of time to answer all of them. Always, please let me know if you have any questions.

Field Project - *for extra credit in lab or lecture 15 points added Due November 29th at midnight*

*Information concerning alternate field project will be available in D2L. The alternate project is a written assignment that takes into consideration COVID-19 precautionary measures.*

You’ll learn in this course that geology surrounds us. The purpose of the Field Project is:

1) to help you become more aware of the uses of various rocks and

2) to help you learn to accurately identify those rocks.

This project has several components:

First, you must locate and identify **10 different rocks** in your surroundings. The samples you identify must have:

- formed naturally in the Earth (i.e. you cannot claim concrete or man-made products as samples)
- been refined (see explanation below) but still be identifiable by physical properties (that is, you cannot take a photo of a piece of drywall and count it as gypsum because you cannot identify gypsum by looking at a piece of drywall).
- please do not submit photos of:
  - chalk used on a blackboard (b/c most of it is a mixture of clay)
  - chalkboards (blackboards) (b/c most are synthetic)
  - rocks in the rock garden outside Miller Science
  - gravel-sized fragments (along train tracks, trail you walked along, or from your yard)
  - samples from the LabPaq or from a personal collection
  - minerals because the field project is focused on rock identification
- a refined rock sample would be ornamental stone sculptures, tombstones, countertops, walls, building stones, etc. in use today. Samples sold at Lowe's, Earth 'N' Stone, Kiva Floors, Home Depot, etc. are not acceptable for this project.

The purpose of this field project is to look around your surroundings and notice how many rocks have been used in a refined sort of way and how easy they are to identify by using the physical properties that you have learned in lab.

For each sample:

- take two photos (see below) of the sample and include a personal object in every photo
- personal object should not be a penny, ruler, or rock hammer. Instead, use something small and unique like a keychain, ring, toy, etc.
- personal object should not include confidential information (social security card, driver’s license number, personal address, etc.)
  - purpose of including a personal object is to prevent photos from being downloaded from an internet site

- *two* photos:
  - one view *zoomed out* that displays the refined structure (tombstone, statute, etc.)
  - one view *zoomed in* so that I can observe physical properties and identify the sample
- photos should be *clear* (does not require the purchase of a quality camera)
- identify the sample and describe physical properties in photo that you used to identify
  - *i.e.*, not generic like mineral composition, texture, etc. that could be used for a variety of rocks
- give location of sample (be as specific as possible!) so that it could be re-traced (include name of city and location where it was found, but do not include confidential information). However, you should be more specific than saying "in the creek behind my house in Dallas, Texas" or "along the railroad tracks in Nacogdoches, Texas."
- Only one example of each rock may be used. That is, if you identify granite used for a countertop for one of your samples, don't use granite on a tombstone as another sample.
- cannot use variations of one rock for multiple samples. That is, don't count red granite and grey granite as separate samples.

A word to the wise: You may want to begin this assignment early, but you will not learn all of the rocks and their physical properties until around mid-semester. You should be able to find 7-8 rock samples quickly, but the last 2 or 3 may take more time. However, 10 different rock types can be found on the SFASU campus, so this project is not impossible nor does it require a visit to campus. Refined rocks are everywhere! This project does not take exorbitant amounts of time, but don't expect to complete it the day before it is due.

You may submit your project using *any* format. Some students prefer:

- **Google Sites**
  - you can build a site without writing a single line of code, and the building process is very easy. There are many pre-built templates available, though I encourage you to keep it simple. With Google Sites, there’s no need to buy or download software. It’s free, simple, and easy to use! If you have never used it, there are multiple YouTube tutorials you can visit.
  - D2L will not allow you to submit a Google Sites to the Dropbox, but you can submit the URL to the site to the Dropbox. I will open it separately.

- Prezi
- Document (only submit .docx, .doc, or .pdf files)
- Power Point
- other ways not listed.

Samples of Field Projects are posted as well as the rubric used to grade them. Each posted project has strengths, yet none of them followed all of the guidelines listed. I just wanted you to observe different posts before creating your own, and you will have access to your scored rubric once all projects have been graded.

Submit your Project in the Dropbox (*Course Tools in Nav Bar*). **A few projects are so large that they need to be submitted in parts**, but 99% of them are not that large. Check the Semester Calendar for the due date. **If you wish to obtain the extra credit points for the lecture section, submit the project to the lecture section dropbox. If you wish to obtain the points for the lab section, submit the project to the lab section dropbox.**

**Access to Content**
I give access to the week's content on that morning (12:01 a.m.) prior to when it is listed on the Semester Calendar. You are given your score on assessments immediately upon submission provided there are no Fill-In-The-Blank or Short Discussion questions. Time is needed to review the assessments and make sure questions were asked and graded fairly. Answers to quiz and exam questions will be available once every classmate has submitted their assessment, but that day is usually the day after assessments are taken. If you have issues accessing the exams or need to reschedule, please contact me ASAP.

Understanding D2L Email

- D2L Email is not only secure, but spam-free as well. Keeping it secure and spam-free, though, requires keeping it a closed system.
- D2L Email is an internal (closed) system which means that you must log into D2L to read and to reply to messages.
- Users do have a "forward" option which will forward copies of messages to an external email account such as Gmail, Yahoo, mySFA, and others. HOWEVER, beware that...
  - users may not reply to a message from an external account. An example would be that Amy has her D2L Email forwarded to her Gmail account. She reads her messages from her Gmail account, and if she wishes to reply, she must enter D2L to reply to the message. If she attempts to reply to the D2L message from inside her Gmail account, the message will fail to send.
- D2L limits attachment size to 600kb due to server size limitations.
- Email questions should be sent to turnerwl@d2l.sfasu.edu.

Home page

Be sure and check (and read!) the Home Page frequently because announcements and information may be posted.

Final Exam Exemption

If your final semester average is ≥93, you will be exempt from a final exam. You may be exempt from the lecture final exam and not the lab final exam (or vice versa). You must complete all of the assessments (in lecture and in lab - except for the optional Field Project) to be exempt. Check with the instructor before assuming exam exemption.

University Policies

Definition of Academic Dishonesty
Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one's own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one's paper without giving the author due credit. Please read the complete policy at http://www.sfasu.edu/policies/4.1-student-academic-dishonesty.pdf.

Withheld Grades Semester Grades Policy 5.5)
Please copy and paste the following information regarding Withheld Grades into your syllabus. Add additional information as needed to meet your departmental or course needs.
Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. For additional information, go to http://www.sfasu.edu/policies/course-grades-5.5.pdf.

**Students with Disabilities**

*Please copy and paste the following statement and place in your course syllabus.*

To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to http://www.sfasu.edu/disabilityservices/.

SFASU values students' mental health and the role it plays in academic and overall student success. SF A provides a variety of resources to support student's mental health and wellness. Many of these resources are free, and all of them are confidential.

On-campus Resources:
SF ASU Counseling Services
www.sfasu.edu/consultingservices
3rd Floor Rusk Building
936-468-2401

SFASU Human Services Counseling Clinic
www.sfasu.edu/humanservices/139.asp
Human Services Room 202
936-468-1041

Crisis Resources:
Burke 24-hour crisis line 1(800) 392-8343
Suicide Prevention Lifeline 1(800) 273-TALK (8255)
Crisis Text Line: Text HELLO to 741-741