GEOL 1103.500 Maymester 2023
Introductory Geology

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Office Hours: Online office hours will be offered electronically per appointment. Physical office hours can be offered by appointment.

Lab Kit

Every student enrolled in this online course is required to purchase a GEOL 1103 – Introductory Geology Laboratory Kit from SFA Barnes & Noble. These kits will be used daily for mineral and rock content and quizzes and for lab practical exams. They will aid in learning the physical properties of minerals and rocks and in their identification. Order these kits now or pick them up on campus so that they will be available when you begin the course content. You can either search for the course materials using the lab info GEOL 1103 or search for the ISBN 13: 2818440058219

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.

**Core Curriculum Objective Table**

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>How the Core Objective Will be Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Critical Thinking Skills</strong></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><strong>Communication Skills</strong></td>
<td>To include effective development, interpretation and expression of ideas though written, oral, and visual communication</td>
<td>Interpretation of topographic maps and potential flooding hazards and communicate flood risks</td>
</tr>
<tr>
<td><strong>Empirical and Quantitative Skills</strong></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><strong>Teamwork</strong></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>

**Text and Materials**

Optional: No lab manual is required because there are no lab assignments (other than Worksheets), but the manuals listed below are excellent (any edition). Many Laboratory Manuals for Physical Geology are offered for purchase online, and any of them could be beneficial. However, purchase of a lab manual is *optional* and not a requirement because this course provides pertinent information. You will have an opportunity to interact and exchange (mineral identification / rock identification / topographic map) information with your classmates.

- *Laboratory Manual in Physical Geology*, AGI American Geological Institute
Laboratory Manual in Physical Geology, Tasa
Laboratory Manual for Physical Geology, Charles Jones, Norris Jones
Laboratory Manual for Introductory Geology, Ludman and Marshak
Laboratory Manual for Geology 131 General Geology, SFASU Dept of Geology

To aid your efforts at studying for the mineral and rock exams, I have created mineral and rock flashcards that have been formatted to fit on 3x5 inch index cards offered by Avery (product number 3588). These blank index cards can be found at office supply stores such as Office Depot, Office Max, or Staples. You can also order them here: http://www.avery.com/avery/en_us/Products/Cards/Index-Cards/. Some prior students elected to print the flashcards on 8.5x11 inch standard paper, so the choice is yours.

Grading and Evaluation

Grades are determined from a variety of assignments:

- Examinations: 3 @100 points (300 points total)
- Quizzes: 10 highest out of 11 given @10 points (100 points total)
- Worksheets: 5 highest out of 6 given @10 points (50 points total)
- Field Project: Optional 1 @15 points (15 points total)

TOTAL = 450 pts

Grades will break down as follows:

A = 405-450
B = 360-404
C = 315-359
D = 270-314
F = 269 and below

It is your responsibility to keep up with your grades, and they can always be viewed (Grades in Navigation bar). The Field Project is optional and only used as extra credit in lab or lecture (not both). Thus, you are not penalized if you elect not to submit it. Guidelines for this project are listed later in the syllabus.

The laboratory is a separate 1-hour credit, and lecture is a separate 3-hour credit. However, they are corequisites (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 the grade "B" for completion of the 3-hour lecture portion. However, if you have a 55 average in lab, you would receive the grade "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).
If you want to determine your lab average at any point in the semester or your final lab average, follow these instructions:

- **Current** lab average:
  - Get Started Quiz is not included.
  - add completed quiz grade(s), worksheet grade(s), and exam grade(s)
  - divide by number completed; for example:
    - if 3 quizzes (@10 pts), 1 worksheet (@10 pts), and 1 exam (@100 pts)
      - TOTAL = 140 points
      - divide by 1.4
    - if 7 quizzes (@10 pts), 2 worksheets (@10 pts) s, and 2 exams (@100 pts)
      - TOTAL = 290 points
      - divide by 2.9
    - etc.

- **Final** lab average:
  - Get Started Quiz is not included in final grade.
  - add 10 highest quiz grades, 5 highest worksheet grades, 3 exam grades, and optional Field Project grade
  - TOTAL =
    - 450 points
    - Divide by 4.5

Access to Content

I give access to the content when it is listed on the Semester Calendar for each unit. Answers to quiz and exam questions will be available once every classmate has submitted their assessment, but that day is usually two days after assessments are taken.

Examinations

The exams will be given on the dates listed on the Semester Calendar and will consist of objective questions on the material covered in Units 1, 2, and 3 (respectively). Like the lecture exams, the lab exams can be taken up to two times with the highest attempt being saved in the gradebook. They are not cumulative, and they will be timed. The time limit will be strictly enforced with a penalty of five points per extra minute taken.

Quizzes

You must take the Get Started Quiz by **May 8th at 11:59 PM**. This assessment will not count toward your final grade, but you will be unable to advance in the course (open Content or take assessments) until you complete this quiz.

On the days indicated on the Semester Calendar, there will be a quiz designed to test your knowledge of the content covered in the unit to that point.

The quizzes typically contain ten objective questions and have a brief duration. As with the examinations, the time limit will be strictly enforced, with a penalty of five points per extra minute taken. Quizzes can be completed in the time limit if you are prepared, and you can view the correct quiz answers after they are due.

Note that there are eleven quizzes on the Semester Calendar, and I will drop the lowest score of those eleven quizzes.
When taking quizzes and exams, it is recommended that you save your responses as you complete each question.

**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—indepenent 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.

**Due Dates**

Although the class is not entirely “work-at-your-own-pace”, each unit can be completed at your own pace. The due dates on the calendar for quizzes and discussions are suggested due dates within each unit. I would recommend completing the materials and sticking with the due dates to help structure yourself. However, I understand that students may be working or dealing with issues outside class and thus will not penalize you for completing materials after the due dates. The material within each unit will close at midnight before that unit’s exam. The materials that must be completed by the due date on the calendar is the Unit Exams, the lab’s rock and mineral worksheets, and the field project and survey.

**Discussions and Worksheets**

In the Nav Bar (Course Tools, Discussions), two Topics are of interest. Questions are designed to accommodate general questions, and it can be a great place to exchange information with your classmates. Worksheets will function much like the lab table in a physical geology laboratory classroom. There are six graded Worksheet posts in this course. You will be able to exchange information about the samples in your Lab Kit and compare notes on the physical properties of your samples. For each of the, you must post your own Worksheet in order to view other students’ Worksheets, but do not post a blank or a very incomplete WS just to view what your classmates have posted. (NOTE: If you ever observe this happening, please email and make me aware. Sometime, I overlook the duplication (b/c there are more than sixty of you and one of me!), but I want to know if you notice this occurring.) After you have posted your worksheet, you can check your answers against other students’ answers and discuss any discrepancies. Your WS will be graded on the completeness of your submission. That is, if you submit a worksheet that isn’t entirely complete, you will not receive full credit. Note: The goal of the exercise is not to get every element of the Mineral/Rock Identification Worksheet correct on the first post but is instead for you to:

1. work together collectively to evaluate the samples and determine which is which, and
2. have a firm command of the physical properties of each of the minerals and rocks covered in the course.

Worksheets are only helpful if classmates communicate and exchange ideas regarding the samples’ physical properties and identification. In order for online labs to have the same breadth and rigor as F2F labs, online group interchange with WS information is akin to F2F groups to interchange at lab tables. In both cases, students are assisting each other. The greatest results occur when information is exchanged daily, so try to post your WS as early as possible, exchange information, and don’t get behind. That way, you have time to make adjustments. I expect all posts to be professional in nature. I respond quickly when a question is asked, but if I don’t respond to a question posted to the discussion board within a day (or two days on the weekend), please
email via mySFA email (TURNERWL@sfasu.edu). I want you to always feel comfortable letting me know if you have questions.

**Field Project** - *for extra credit in lab or lecture 15 points added, Due May 22nd at midnight. An alternate written assignment will be made available with details in D2L (in the lecture section). This alternate assignment 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, statue, 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.

News on Home page

Be sure and check (and read!) News on the Home Page frequently because that is where I post announcements and information.

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. I will send out emails the day before the final exams to those students who qualify for an exam exemption.

**Deadlines posted**

I set a lot of deadlines and restrictions in online courses. If you ever note that one of the postings appears to be erroneous, please call it to my attention. I check (and re-check, and re-check, and re-check!) the postings, but I'm human and sometime overlook the errors.

**Understanding D2L Email**

- D2L Email is not only secure, but it is 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, Amy 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 or turnerwl@sfasu.edu

**UNIVERSITY POLICIES**

**Academic Integrity**

Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

**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/.

**Mental Health**
SFASU values students’ mental health and the role it plays in academic and overall student success. SFA 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:
SFASU Counseling Services • www.sfasu.edu/counselingservices
Health and Wellness Hub (corner of E. College and Raguet) • 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
## Tentative Course Calendar

**GEOL 1103.500 Introductory Geology Lab**  
**May 2023**

### Unit 1: Minerals

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<tr>
<th>Date</th>
<th>Module</th>
<th>Assignments</th>
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</thead>
<tbody>
<tr>
<td>5/8</td>
<td>Getting Started</td>
<td>Getting Started Quiz Due 5/8 @ 11:59 PM</td>
</tr>
</tbody>
</table>
|      | Unit 1 Module 1: Mineral Physical Properties Part 1 | Quiz 1 Due 5/8 @ 11:59 PM  
Mineral Identification Worksheet #1 Due 5/8 @ 11:59 PM |
| 5/9  | Unit 1 Module 2: Physical Properties Part 2 | Quiz 2 Due 5/9 @ 11:59 PM  
Mineral Identification Worksheet #2 Due 5/9 @ 11:59 PM |
| 5/10 | Unit 1 Module 3: Physical Properties Review | Quiz 3 Due 5/10 @ 11:59 PM  
Mineral Identification Worksheet #3 Due 5/10 @ 11:59 PM |
| 5/11 | Unit 1 Review & Unit 1 Mineral Exam | Review Unit Material  
Lab Unit 1 Exam Due 5/11 @ 11:59 PM |

### Unit 2: Rocks

<table>
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<tr>
<th>Start Date</th>
<th>Module</th>
<th>Assignments</th>
</tr>
</thead>
</table>
| 5/12       | Unit 2 Module 1: Igneous Rocks | Quiz 4 Due 5/12 @ 11:59 PM  
Igneous Rocks Worksheet Due 5/12 @ 11:59 PM |
| 5/15       | Unit 2 Module 2: Sedimentary Rocks | Quiz 5 Due 5/15 @ 11:59 PM  
Sedimentary Rocks Worksheet Due 5/15 @ 11:59 PM |
| 5/16       | Unit 2 Module 3: Metamorphic Rocks | Quiz 6 Due 5/16 @ 11:59 PM  
Metamorphic Rocks Worksheet Due 5/16 @ 11:59 PM |
|            | Unit 2 Module 4: Rocks in Your Head Review | Quiz 7 Due 5/16 @ 11:59 PM |
| 5/17       | Unit 2 Review & Unit 2 Rock Exam | Review Unit Material  
Lab Unit 2 Exam Due 5/17 @ 11:59 PM |

### Unit 3: Topographic Maps
<table>
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<th>Start Date</th>
<th>Module</th>
<th>Assignments</th>
</tr>
</thead>
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<tr>
<td>5/18</td>
<td>Unit 3 Module 1: Location</td>
<td>Quiz 8 Due 5/18 @ 11:59 PM</td>
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<tr>
<td>5/19</td>
<td>Unit 3 Module 2: Contouring</td>
<td>Quiz 9 Due 5/19 @ 11:59 PM</td>
</tr>
<tr>
<td>5/22</td>
<td>Unit 3 Module 3: River and Arid Maps</td>
<td>Quiz 10 Due 5/22 @ 11:59 PM</td>
</tr>
</tbody>
</table>
|            | Unit 3 Module 4: Groundwater and Glaciation Maps | Quiz 11 Due 5/22 @ 11:59 PM  
Field Project and Course Survey Due 5/22 @ 11:59 PM |
| 5/23       | Unit 3 Exam                                 | Lab Unit 3 Exam Due 5/23 @ 11:59 PM                        |