CoSM Class Syllabus / Policy

2020 / Spring Semester
GOL 131.004
Introductory Geology

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Department: Geology
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Office: E.L. Miller Science, Room 305
Office Hours: Mon. 1-5 pm, Tue. 2-5, Fri. 9-11 or by appointment

Class meeting time and place: T-TR: 11:00 AM – 12:15 AM; E. L. Miller Science 335
Final Exam Date & Time: May 5th, 10:45 AM-1:15 PM

Please feel free to stop by any time to ask questions, discuss any problems you may be having with the material or to help facilitate further understanding. If these hours conflict with your schedule, please call or email to make an appointment.

Course Description:
Designed for the student with no geology background. Introduction to the study of plate tectonics, minerals, rocks, earthquakes, mountains, 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. No prerequisites. Three hours of lecture, plus two hours of laboratory per week (enrolled separately).

Text and Materials:
REQUIRED:
- 3 scantrons (Form 882)
- Introductory Laboratory Manual (available in all SFA bookstores)
- Top Hat classroom response system (semester or yearly subscription, see details below)

RECOMMENDED*:

*In order to keep the cost of this course at a minimum, I am not requiring the textbook by Stephen Marshak. However, most of my lectures and illustrations in Powerpoints will be constructed from this book. Attending lecture regularly and following along with the assigned
reading from the free open source textbook that is required will be sufficient to get a good grade in this class. However, the illustrations and organization of the Marshak book (Essentials of Geology) are just all around better, so if you would like to follow along in this book you will be a true “rock” star. The 6th edition can be purchased for full price in the SFA bookstore, but you can find the 4th and 5th editions of this text for MUCH CHEAPER online. As far as I can tell, there are only minor changes between editions.

EXTREMELY IMPORTANT

Top Hat Classroom Response System:

We will be using the Top Hat (www.tophat.com) classroom response system in class. You will be able to submit answers to in-class questions using Apple or Android smartphones and tablets, laptops, or through text message. This is also the system that I will be using to take role in class EVERYDAY, assign homework and/or in class quizzes. Accordingly, you absolutely must have a Top Hat account set up and bring a device every day that you will be able to access Top Hat. Please make sure you have an account set up no later than the second class meeting. Otherwise you will begin to lose points in class.

You can visit the Top Hat Overview (https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide) within the Top Hat Success Center which outlines how you will register for a Top Hat account, as well as providing a brief overview to get you up and running on the system.

An email invitation will be sent to you by email, but if don’t receive this email, you can register by simply visiting our course website: https://app.tophat.com/e/635167
Note: our Course Join Code is 635167
Important: YOU HAVE TO SIGN UP WITH YOUR OFFICIAL SFASU EMAIL ADDRESS NOT YOUR PERSONAL EMAIL ADDRESS

Top Hat requires a paid subscription, and a full breakdown of all subscription options available can be found here: www.tophat.com/pricing. Fortunately, if any of your other courses use Top Hat, you only have to pay for one subscription. You don’t have to pay for Top Hat usage by individual course. Last I checked, it was approximately ~$26 per semester. I know (and apologize) that it is not free, but it is much cheaper than requiring you to pay more than $90 for a text book.

Should you require assistance with Top Hat at any time, due to the fact that they require specific user information to troubleshoot these issues, please contact their Support Team directly by way of email (support@tophat.com), the in app support button, or by calling 1-888-663-5491.
Grading Policy:
Exams (3 exams = 200 points each) 600 points
Pre-Lecture Preparation Question(s) 50 points
Attendance 100 points
In class participation 100 points
Post-Lecture Homework Assignments 150 points

Total (lecture grade) your total points/1000 points *100=class%

100-90% A
89-80% B
79-70% C
60-69% D
< 60% F

You will receive a separate lab grade given by your lab instructor.

Course Requirements:
Introductory Geology is an introduction to the study of the Earth, including its natural resources, structure, and natural processes. Students will learn the impacts of geology on society such as earthquakes and volcanoes, as well as the effect that humans have on the Earth, and touch on major theories in earth science such as plate tectonics. This course will have three 50-minute exams, small pre-lecture readings or video assignments accompanied by a question set that prepares you for lecture once a week, and a weekly homework that covers the material that has been covered in class. Attendance is required and you will also earn participations points by answering questions using Tophat during class. Attendance and class participation together are worth 20% of you grade, so be in class every day. There is a co-requisite weekly lab which will provide hands-on experiences in Earth Science. You are expected to have read the material for the week outlined below, which will facilitate in content retention and aid in classroom discussions. I may also provide some supplemental material throughout the semester that is expected to be read before the designated class. These will consist of short pieces, typically news articles or scientific summaries that focus on a geologically related topic that affects society.

There are several resources for help on campus, such as tutoring in the AARC, along with your TA’s in the lab can answer questions. I am usually available in my office and almost always available to help unless I am teaching and/or helping another student. I have set office hours, but can also be available by appointment, and email (note I most likely won’t answer an email after 6 pm or so). We are here to help you succeed, while also helping you learn a bit about the world you inhabit. Our SI for class is Emmie Schubert.

Details of the course requirements are broken down below. We will briefly cover them on our first class meeting, but please read in the syllabus in detail and be familiar with all aspects of what is required of you in class.
Exams

All lecture exams may include any or all of the following sections: 1) multiple choice questions; 2) true/false questions; 3) fill in the blank questions; 4) short answer questions; 5) figure illustration; 6) short essay questions. All exams will take place in room 335 unless otherwise stated in class.

The exams will cover questions from lecture, assigned reading material, activities conducted in class, and outside homework assignments. You will need a Scantron (Form 882) and a number 2 pencil for the exams. The essay questions are part of the text and sometimes extra credit. When answering the essay questions, please use complete sentences, correct grammar, and spelling. The final exam will be given at the University’s scheduled time.

It is imperative that attend all lectures and labs, pay attention in class, take detailed notes, and use those to study. 20% of your grade is just from attending class and participating during class using Top Hat. You must be in class to get a good grade- I want to see you succeed so set yourself up for success!

Pre-Class Preparation Questions:

Once a week, a small task or activity will be assigned in Top Hat. These usually consist of a question or few questions from a one page or less reading assignment or a youtube video. These may include current events or other texts that are not included in the textbook. These tasks should take no more than 15-20 minutes and are designed simply to help students pre-think a concept we will discuss in lecture. The task and question set will be assigned the day before Thursday lecture and will be closed at start of class Thursday.

Attendance and In Class Participation Policy:

- Daily attendance is required! You earn points by simply being in class, so please come. Please note that it is considered academic dishonesty to have someone text or tell you the Top Hat attendance code for the day if you are not physically in class. It is also academic dishonesty to have someone sign in for you. If I catch you doing this, I will begin proceedings to report you to the Dean of Students as is required by University Policy.
- Daily attendance will be taken for university accounting purposes. Attendance will be taken using the Top Hat class room response system, so a subscription to Top Hat is required! Success in this course will reflect the level of effort you put into the course.
- Be prepared for lectures by reading the material to be covered prior to attending class. Questions are encouraged and welcome and we will make time periodically to submit in class questions to Top Hat. Do not hesitate to ask questions!
- You will need either a smart phone, laptop, or tablet in order to participate during class. However, please refrain from texting, browsing the internet, and using social media during this time. Please have your device set to silent or vibrate so as to not disrupt the lecture. Questions and mini quizzes will be interspersed throughout lecture every day, so it is imperative that you are paying attention so that you can answer the questions and earn full points.
- If you are late to class, please seat yourself quietly and see me after lecture so that you can earn attendance points. Try not to be late because it interrupts others in class. If you need to use the restroom or become ill, please excuse yourself from the lecture quietly.
Homework:

Homework will be assigned and completed within the Top Hat classroom response system. Homework questions will encompass the material we covered in class that week and will be assigned on Thursday after class and due before the start of class Tuesday of the following week. The material you will need to complete homework assignments will be found within TopHat assignment, notes from lecture, the book chapters we covered that week, and the power point slides. Power point slides from lecture will be made available after each class meeting. Think of the homework you are assigned as a review sheet for Exams. Questions on the exams will be developed primarily from the concepts we discuss in class and are reinforced on the homework assignments. Note that Exam 1 Review will be required and treated like a homework assignment, the rest of the exam reviews will be optional. This is so you get a good understanding of the types of question you will see on the exam and to illustrate to you how useful completing the exam review will be for you to get a good grade on test.

### Course Schedule
(Schedule is tentative and subject to changes)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Reading</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan. 16</td>
<td>Course Information, What is Geology?, The Scientific Method</td>
<td>Syllabus, Johnson Ch. 1, Marshak Prelude</td>
<td>Homework 1</td>
</tr>
<tr>
<td>Jan. 21st</td>
<td>Earth in Context: An image of the Universe</td>
<td>Johnson Ch. 8 (sections 8.1-8.2), Marshak Ch. 1</td>
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<tr>
<td>Jan. 23rd</td>
<td>Plate Tectonics</td>
<td>Johnson Ch. 2, Marshak Ch. 2</td>
<td>Homework 2</td>
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<tr>
<td>Jan. 28th</td>
<td><strong>No class – buoyancy activity</strong></td>
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<tr>
<td>Jan. 30th</td>
<td>Plate Tectonics</td>
<td>Johnson Ch. 2, Marshak Ch. 2</td>
<td>Homework 3</td>
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<tr>
<td>Feb. 4th</td>
<td>Patterns in Nature: Atoms and Minerals</td>
<td>Johnson Ch. 3, Marshak Ch. 3</td>
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<tr>
<td>Feb. 6th</td>
<td>Igneous Rocks and Volcanoes</td>
<td>Johnson Ch. 4, Marshak Ch. 4</td>
<td>Homework 4</td>
</tr>
<tr>
<td>Feb. 11th</td>
<td>Igneous Rocks and Volcanoes</td>
<td>Johnson Ch. 4, Marshak Ch. 4</td>
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<tr>
<td>Feb. 13th</td>
<td>Volcanoes!</td>
<td>Johnson Ch. 4, Marshak Ch. 4</td>
<td><strong>Homework 5:</strong> Exam 1 Review</td>
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<tr>
<td>Feb. 18th</td>
<td>Exam 1</td>
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<tr>
<td>Feb. 20th</td>
<td>Pages of the Past: Weathering, Soil, Sediments and Sedimentary Rocks</td>
<td>Johnson Ch. 5, Marshak Interlude B</td>
<td>Homework 6</td>
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<tr>
<td>Feb. 25th</td>
<td>Sedimentary Rocks</td>
<td>Johnson Ch. 5, Marshak Ch. 6</td>
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<tr>
<td>Feb. 27th</td>
<td>Metamorphism: A Process of Change Plate Tectonics and the Rock Cycle</td>
<td>Johnson Ch. 6, Marshak Ch. 7 Marshak Interlude C</td>
<td>Homework 7</td>
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<tr>
<td>Mar. 3rd</td>
<td>Geologic Time and the Age of the Earth</td>
<td>Johnson Ch. 7, Marshak Ch. 10</td>
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<td>Mar. 5th</td>
<td><strong>Campus Scavenger Hunt-No Class</strong></td>
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<td>Mar. 10th</td>
<td>University Holiday – No Class</td>
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<tr>
<td>Mar. 12th</td>
<td>University Holiday- No Class</td>
<td></td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Textbook References</td>
<td>Notes</td>
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<tr>
<td>Mar. 17th</td>
<td>Geologic Time and the Age of the Earth</td>
<td>Johnson Ch. 7, Marshak Ch. 10</td>
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<tr>
<td>Mar. 19th</td>
<td>Faults, Deformation, and Mountain Building</td>
<td>Johnson Ch. 9, Marshak Ch. 9</td>
<td>Homework 9</td>
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<tr>
<td>Mar. 24th</td>
<td>Earthquakes</td>
<td>Johnson Ch. 9, Marshak Ch. 8</td>
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<tr>
<td>Mar. 26th</td>
<td>Earthquakes</td>
<td>Johnson N/A, Marshak Interlude D</td>
<td>Exam 2 Review</td>
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<tr>
<td>Mar. 31st</td>
<td>Exams</td>
<td></td>
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<tr>
<td>Apr. 2nd</td>
<td>Landslides and Other Mass Movements</td>
<td>Johnson Ch.10, Marshak Ch. 13</td>
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<tr>
<td>Apr. 7th</td>
<td>The Geology of Running Water</td>
<td>Johnson Ch. 11, Marshak Ch. 14</td>
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<tr>
<td>Apr. 9th</td>
<td>University Holiday-No Class</td>
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<tr>
<td>Apr. 14th</td>
<td>The Geology of Running Water</td>
<td>Johnson Ch. 11, Marshak Ch. 14</td>
<td>Homework 10</td>
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<tr>
<td>Apr. 16th</td>
<td>Groundwater: A Hidden Resource</td>
<td>Johnson Ch. 11, Marshak Ch. 16</td>
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<tr>
<td>Apr. 21st</td>
<td>Oceans and Coastlines</td>
<td>Johnson Ch. 12, Marshak Ch. 15</td>
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<tr>
<td>Apr. 23rd</td>
<td>Dry Regions: The Geology of Deserts</td>
<td>Johnson Ch. 13, Marshak Ch. 18</td>
<td>Homework 11</td>
</tr>
<tr>
<td>Apr. 28th</td>
<td>Amazing Ice: Glaciers and the Ice Ages</td>
<td>Johnson Ch. 14, Marshak Ch. 18</td>
<td></td>
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<tr>
<td>Apr. 30th</td>
<td>Global Change in the Earth System</td>
<td>Johnson Ch. 15, Marshak Ch. 19</td>
<td>Exam 3 Review</td>
</tr>
<tr>
<td>May 5th</td>
<td>Final Exam</td>
<td>10:45 AM – 1:15 PM</td>
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**Classroom Etiquette:**

- Headphones, earbuds, or auditory devices will not be allowed during lecture (unless necessary and cleared by the Office of Disability Services).
- Be respectful of other students in the class
- Basically, put yourself in my shoes. If it seems disrespectful or disruptive, you probably shouldn’t do it during class.

**Academic Integrity (A-9.1)**

Academic integrity is the 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 a 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/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp)

**Withheld Grades Semester Grades Policy (A-54)**

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 will automatically become 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 of the purpose of computing the grade point average.

The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

**Students with Disabilities**
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/](http://www.sfasu.edu/disabilityservices/)

If you need an accommodation for Exams, please come and see me so we can arrangements that best suit us both.

**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 service course.

**General Education Core Curriculum Objectives/Outcomes:**

The Texas Higher Education Coordinating Board (THECB) 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 GOL 131 Introduction to Earth Science, you are also enrolling in a Core Curriculum Course that seeks to develop the following core objectives established by the THECB:

**CO 1. Critical Thinking Skills** - creative thinking, innovation, inquiry, evaluation and synthesis of information, and analysis.

**CO 2. Communication Skills** - Effective development, interpretation and expression of ideas through written, oral, and visual communication

**CO 3. Empirical and Quantitative Skills** - manipulation and analysis of numerical data or observable facts resulting in informed conclusions

**CO 4. Teamwork** - the ability to consider different points of view and to work effectively with
others to support a shared purpose or goal.

**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 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 oral, visual, and written formats.

**SLO 5.** Demonstrate an understanding of the skills and attitudes necessary for effective teamwork in collaborative learning activities.