The Earth Through Time: Historical Geology
GOL132.002
Fall 2019
E.L. Miller Science Building, Rm 234
TR 11:00 am – 12:15 pm

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Office Hours: M 12:00 pm – 2:00 pm; TR 9:00 am – 10:30 am; and by appointment
Department: Geology

Course Description: The Earth Through Time (GOL132) – Three semester hours. The history and development of the continents and ocean basins and the evolution of life on Earth; includes earthquakes and the Earth’s interior, mountain building, drifting of continents and sea-floor spreading, the Ice Ages, space science and oceanography. Co-requisite: GOL 132L. Prerequisite: GOL 131 or GOL 101.

Text:
The Changing Earth: Exploring Geology and Evolution (6th or 7th Ed.; variations primarily exist in the “GeoFocus” and “GeoImpact” excerpts throughout the text), Monroe et al. ISBN: 9781285733418. 736 p. (recommended)

Or


Course Requirements
The Earth Through Time is an introduction to how the Earth has evolved over the last 4.2 billion years. We will learn about the ever-changing and dynamic planet we live on. Students will be introduced to the development of continents, ocean basins, mountain chains, volcanoes, earthquakes, and many other geologic events, and also develop an understanding on how scientists can determine changes in the Earth through time. The rock record is the story of the Earth through time, and has preserved information on the depositional environment, but also of ancient lifeforms, from microscopic invertebrates to large carnivorous reptiles and mammals. This class introduces some of the various life forms that have inhabited our planet through time, their relative succession, and some of the factors that brought about their demise.

This class is a 3-credit hour course, with a weekly co-requisite lab where students will gain hands-on experience with fossils, geologic materials and data, and learn to interpret geologic maps. Grades from the lecture and lab are separate. Labs being the 2nd week of classes, and are staffed by Graduate Teaching Assistants. Mr. Wesley Turner is the lab coordinator, and will also answer any questions you may have. The lab manual (The Earth Through Time Laboratory Manual) is available only at the bookstores (Barnes and Noble, and Jack Backers). It is needed for your first week of lab. There is a lab syllabus quiz and a prequiz due before the first day of lab (please check your email and D2L/Brightspace regularly for information regarding your lab).

I will post “empty” slides online before lectures, but I am not posting the full slides online. The empty slides will give you a chance to see what we are covering in class, but also to help keep up with notes if by chance I go too fast. It is best to write down notes during class, as this is the best way to remember the material. Those who attend class tend to do best as they are listening to the material, and then overview the book shortly after lecture.
There will be three exams. Each exam will be primarily multiple choice, with potentially a few short answer questions and fill in the diagram or blank, and will cover the material from the previous exam (or start of classes for exam 1) through the date of the exam. Calculators may be useful during some of the exams. Your cellphone cannot be used as a calculator.

There will be weekly online quizzes. Quizzes will only include material covered from the current week and/or from the assigned chapters covered. Each quiz will have two chances to take.

There will be several assignments given throughout the class that will equal 20% of the grade (100 pts). They may include written assignments on a certain time period, determining fossils, or other exercises such as determining the age of a rock.

There are several resources for help on campus, your TA’s in the lab can answer questions, your classmates are an excellent resource, and I am almost always available (and most definitely willing) to help. I have set office hours, but can also be available by appointment, and email (note I most likely won’t answer an email after 10 pm or so). Much of the time during the week, I am in my office or on the third floor of the Miller Science Building somewhere. We are here to help you succeed, while also helping you learn a bit about the world you inhabit.

Please limit food in the classroom, phone calls (silence phones), texting, and other distracting behaviors. If you need to leave, please do so quietly. If you know you need to leave class early, please sit near the edge of the row and excuse yourself quietly.

**Grading**

There will be three exams and weekly online quizzes, totaling 400 possible points.

<table>
<thead>
<tr>
<th>Weekly Quizzes</th>
<th>100 pts</th>
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<tbody>
<tr>
<td>Assignments</td>
<td>100 pts</td>
</tr>
<tr>
<td>Exam 1</td>
<td>100 pts</td>
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<tr>
<td>Exam 2</td>
<td>100 pts</td>
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<tr>
<td>Exam 3</td>
<td>100 pts</td>
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<tr>
<td>Total points</td>
<td>500 pts</td>
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- 450 – 500 pts A
- 400 – 449.9 pts B
- 350 – 399.9 pts C
- 300 – 349.9 pts D
- < 299.9 pts F

Grades are rounded to the nearest tenth, and I do not round up.

Weekly Quizzes will be posted on Thursday of the week, and will remain open until the start of lecture on Tuesday.

There will be several extra credit assignments throughout the semester (notably after or during tests).

There will be several assignments given throughout the semester that will equal 100 pts. They will be handed out in class and posted on D2L with instructions.

The lab grade is separate and given by your instructor.
**Course Calendar**

Topics try to coincide with the laboratory topics covered, up until the last third of the semester. We will try to stay on scheduled topic, although exam dates will be firm. Topics are subject to change.

<table>
<thead>
<tr>
<th>Week (date)</th>
<th>Chapter Covered</th>
<th>Topic</th>
<th>Important Dates</th>
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<tbody>
<tr>
<td>Aug 26-wk 1</td>
<td>Chapter 1, 2, 3, 4</td>
<td>A review of The Earth, Minerals, Rocks, and Plate Tectonics.</td>
<td>Aug 30-last day to register</td>
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<tr>
<td>Sept 2-wk 2</td>
<td>Chapter 6, 7, 8</td>
<td>Continued review of the Rock Cycle and Plate Tectonics</td>
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<tr>
<td>Sept 9-wk 3</td>
<td>Chapter 17 and supplemental information provided on D2L</td>
<td>Geologic Time Rocks, Fossils and Time Sedimentary Rocks: The Archives of Earth History</td>
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<tr>
<td>Sept 16-wk 4</td>
<td>Chapters 7 and supplemental information provided on D2L</td>
<td>Rocks, Fossils and Time Sedimentary Rocks: The Archives of Earth History</td>
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<tr>
<td>Sept 23-wk 5</td>
<td>Chapter 16</td>
<td>Oceans, Shorelines, and shoreline processes</td>
<td>Exam 1 Thur. Sept 26</td>
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<td>Sept 30-wk 6</td>
<td>Chapter 18</td>
<td>Organic Evolution – The theory and its supporting evidence Precambrian Earth and Life History – Hadean and Archean Eons</td>
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<tr>
<td>Oct 7-wk 7</td>
<td>Chapter 19</td>
<td>Precambrian Earth History – The Proterozoic Eon</td>
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<td>Oct 14-wk 8</td>
<td>NO CLASS – OUT OF TOWN</td>
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<tr>
<td>Oct 21-wk 9</td>
<td>Chapter 20</td>
<td>Paleozoic Earth History</td>
<td>Oct 23-last day to drop</td>
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<td>Oct 28-wk 10</td>
<td>Chapter 21</td>
<td>Life of the Paleozoic</td>
<td>Exam 2 Tue. Oct 29</td>
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<td>Nov 4-wk 11</td>
<td>Chapter 22</td>
<td>Mesozoic Earth History</td>
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<td>Nov 11-wk 12</td>
<td>Chapter 22</td>
<td>Life of the Mesozoic Era</td>
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<td>Nov 18-wk 13</td>
<td>Chapter 23</td>
<td>Cenozoic Earth History – The Paleogene and Neogene Periods</td>
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<td>Nov 25</td>
<td>NO CLASS – THANKSGIVING BREAK</td>
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<td>Dec 2-wk 14</td>
<td>Chapter 23</td>
<td>Cenozoic Earth History – The Quaternary Period</td>
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<td>Dec 9-wk 15</td>
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<td>Exam 3 Thu. Dec 12 @ 10:45 am – 1:15 pm</td>
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**Attendance Policy**

Attendance is mandatory, and necessary in order to succeed in class.

To make-up an exam or in-class exercise, only excused absences will be accepted (doctor’s note, sporting event, etc., with proper documentation). We will arrange a time and place for the make-up exam, which will be a different exam than the one given in class.

**Program Learning Outcomes**

There are no specific program learning outcomes for this major addressed in this course, as it is a general education core curriculum course and/or a service course.
**Student Learning Outcomes**

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 oral, 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 Fundamentals of Earth Science you are also enrolling in a Core Curriculum Course that fulfills the Natural Sciences requirement. You will see this course on your D2L list.

The student is expected to develop the following core objectives established by the THECB.

CO 1. Critical Thinking Skills – creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information. (SLO 1-4)

CO 2. Communication Skills – effective development, interpretation and expression of ideas through written, oral and visual communication. (SLO 4-5)

CO 3. Empirical and Quantitative Skills – manipulation and analysis of numerical data or observable facts resulting in informed conclusions. (SLO 1-2,4)

CO 4. Teamwork – the ability to consider different points of view and to work effectively with others to support a shared purpose or goal. (SLO 3-5)

**Academic Integrity (A-9.1)**

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/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 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.

**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/).