Instructor: Dr. Mike Read  
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Department: Geology  
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Office: Miller Science Building, Room 303  
Office Hours: As this is a web-based course, office hours will be offered electronically.

Course Calendar available via D2L

The lecture and laboratory portion of this class are both online classes. Please refer to the detailed course calendar. There is a mandatory quiz associated with this syllabus, so please read all the information in this unit carefully and then complete the Course Information and Syllabus Quiz in order to proceed into the course material.

Note: The quiz must be completed before any of the course material will be made available, the lecture and lab modules will remain locked until you complete this quiz.

Required Materials:

Fundamentals of Earth Science Laboratory Kit (required, available from the SFA Barnes & Noble bookstore)

*No textbook is required, but I recommend that you purchase Stephen Marshak’s Essentials of Geology if your personal learning style benefits from having a textbook for reference, but there are no required textbook assignments.

Course Description:

Fundamentals of Earth Science (GOL 101): Two hours lecture, two hours laboratory per week. An introduction to the fundamental principles of Earth Science: topics include the earth’s structure and surface landforms; mineral and energy resources; geologic hazards such as volcanoes, earthquakes and landslides; water resources; and the unifying theory of plate tectonics. Required lab fee. No prerequisites.

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.

General Education Core Curriculum Objectives/Outcomes:

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 GOL 101 Fundamentals of Earth Science, you are also enrolling in a Core Curriculum Course that seeks to develop the following core objectives established by the THECB:

- **Critical Thinking Skills** – creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.
- **Communication Skills** – effective development, interpretation and expression of ideas through written, oral and visual communication.
- **Empirical and Quantitative Skills** – manipulation and analysis of numerical data or observable facts resulting in informed conclusions.
- **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:**

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

- Demonstrate an understanding of fundamental geologic concepts as it relates to Earth processes and landscape evolution through geologic time.
- 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.
- Demonstrate knowledge on the interdependence of science and technology and the influences geologic reasoning associated with identifiable and testable hypotheses of geologic processes.
- Critically assess the interrelationships between geologic phenomena and communicate the resulting conclusions in oral, visual and written formats.
- Demonstrate an understanding of the skills and attitudes necessary for effective teamwork in collaborative learning activities.

**Course Requirements:**

GOL 101 (Fundamentals of Earth Science) is an introduction to the study of the earth’s structure and natural processes. In this course, students will be introduced to and apply the scientific method to evaluate hypotheses regarding the earth’s structure, the distribution of natural resources, the immediate and long term impact of geologic hazards, and anthropogenic influence on the natural world.

**The Federal Definition of the Credit Hour:** a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours out of class student work each week for approximately fifteen weeks for one semester of credit.

This class is a **3-credit hour course** and has a requisite lab where students will gain hands-on experience with earth materials, gathering and analyzing data, communicating their findings and working as a team to explain scientific processes. Expect to spend at least 6-9 hours a week on this course reading online content; completing quizzes, laboratory activities, and discussion prompts; and studying for exams.
Course Time:

Remember, you are expected to spend the same amount of time on online courses that you would spend for in the classroom for face-to-face courses. That is, expect to spend two hours per week on the lecture portion and two hours per week on the laboratory portion. In addition, success in this course would also require additional time spent in the material and studying; reports indicate that two to three additional hours (per credit hour) be spent -- independent of whether the class is online or face-to-face. Many of you are choosing to take an online course because of your work schedule, family responsibilities, and scheduling conflicts, so your time is precious. Be aware of the time commitment required by this course and work responsibly.

Course Topics:

- **Unit One** - Earth in Context
  - Geologic Time / Earth in context
  - Minerals
- **Unit Two** - Earth Structure and the Rock Cycle
  - Intrusive Igneous Rocks
  - Weathering and Erosion
  - Sedimentary Rocks
  - Metamorphic Rocks
- **Unit Three** - Earth Processes
  - Plate Tectonics and the Natural Environment
  - Earthquakes
  - Volcanoes
  - Geohazards
- **Unit Four** - Earth Resources
  - Fossil Fuels
  - Mineral Resources
  - Water Resources
  - Soils
- **Unit Five** - Earth in Society
  - Alternative Energy
  - Populations and Resources

Lecture Exams:

All lecture exams will include a multiple-choice section with additional sections that will vary between exams but 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 online and be delivered via D2L.** The exams will cover questions from lecture modules and assigned activities and outside sources (videos, webpages) referred to in the material.

There are between 30 and 50 questions each on each exam, and you will be given 60-75 minutes to complete the exams. The exams are not cumulative, but they are timed and you will not have adequate time to refer back to reference material. Questions on lecture exams and quizzes 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. You may not return to any question and change your answer after leaving that page so be sure of your response (study ahead of time!) before answering. 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. Once the time allotment for the exam has expired, the exam will be ended and scored.

No outside work or extra credit will be assigned to help improve your grade, so be prepared for the quizzes and exams. It is imperative that you log on and participate in all course material, pay attention to the course calendar, and keep up with the due dates for quizzes, discussions, and exams. In other words -- get your money’s worth!

Lecture Exam Schedule:

- **Exam 1:** July 13, 2020
- **Exam 2:** July 20, 2020
- **Exam 3:** July 27, 2020
- **Exam 4:** August 3, 2020
- **Exam 5:** August 7, 2020

Late Work:

This is not a self-paced course and you must keep up with the weekly assignments. Each week you will be required to interact with your classmates and me by participating in discussion forums, completing laboratory module activities, and completing quizzes in lecture and laboratory. It is imperative that you check the course calendar daily and be aware of the opening and closing dates of the modules and associated activities. If you miss one of the deadlines for an exam or quiz, please contact me to gain access. Please **DO NOT call and leave a voice message on my office phone or leave a phone message in the front office.** Please communicate with me via email, either mySFA or D2L.

Grading of Late Work:

- Discussion Posts - No time extensions will be offered for discussion posts as you will have already missed the opportunity to interact with your peers and they will have already moved on to the next topic.
- Lecture Quizzes and Exams - You will automatically lose 25% of your earned grade if you submit late work within 24 hours after the due date. You will continue to lose points as time elapses: 50% of your earned grade will be deducted if your work is submitted within 24-48 hours; 75% of your earned grade will be deducted if your work is submitted within 48-72 hours; after 72 hours, no credit will be given.
- Laboratory Quizzes and Assignments - You will automatically lose 25% of your earned grade if you submit late work within 24 hours after the due date. After 24 hours, you will lose 50% of your earned grade until the answers to the laboratory activities are posted. Once the answers to the laboratory activities are posted, no credit will be given.
Grading and Evaluation:

Lecture Grading Policy:

- Five exams (Exam 1 = 35 points, Exam 2 = 65 points, Exams 3-5 = 100 points each) = 400 points
- Ten online quizzes @ 10 points each = 100 points
- Fourteen discussion posts @ 10 points each = 140 points
- Total possible points = 640 points
- Lecture grade = your total points / 640, then multiply by 100
- Example: your lecture point total 480 / 640 = 0.75 x 100 = 75

Laboratory Grading Policy:

- Two exams @ 100 points each = 200 points
- Ten laboratory quizzes @ 10 points each = 100 points
- Plate Tectonics Map and Discussion Activity = 20 points
- Earthquake Press Release = 20 points
- Soil Resources Presentation = 20 points
- Alternative Energy Group Position Statement = 30 points
- Group Project Discussion Forum = 10 points
- Total possible points = 400 points
- Laboratory grade = your total points / 400, then multiply by 100
- Example: your laboratory point total 275 / 400 = 0.69 x 100 = 69

Course Final Grading Policy:

- Lecture counts 2/3 (66.7%) of the final course grade
- Lab counts 1/3 (33.3%) of the final course grade
- Total Points for Final Grade: 33.3% (Lab) + 66.7% (Lecture) = final course grade
- Example: Lecture grade = 75, Lab grade = 69
  - 75 x .667 = 50.03; 69 x .333 = 23.00; 50.03 + 23.0 = 73.03 final course grade

Grade Scale:

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

Grades from the lecture and lab will be combined, with the lab counting 1/3 of the grade. You will receive one grade for the entire course, assigned by your instructor.

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.

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 the Office of Disability Services website.