

## **Physical Geology**

### **GEOL 1303-01W Online Fall 2019**

**Instructor:** Kayla Gibbs

**Office Hours:** Online Wednesday 8-9pm

**Email:** Kayla.Gibbs@tamuc.edu

**Class:** GEOL-1403-1LW Physical Geology Lab

**Materials:** All labs are provided in D2L. No manual required.

#### **GEOL 1303 - Physical Geology**

**Hours: 3**

A systematic study of minerals, rocks, and the processes which shape and modify the surface features of the earth. Plate tectonics, volcanoes, earthquakes, and the practical aspects of geology are studied as they relate to man's adjustments to the geologic environment.

#### **GEOL 1403 - Physical Geology**

**Hours: 4**

A systematic study of minerals, rocks, and the processes which shape and modify the surface features of the earth. Plate tectonics, volcanoes, earthquakes, and the practical aspects of geology are studied as they relate to man's adjustments to the geologic environment.

Note: This is a University Studies course.

Texas Common Course Number (GEOL 1403)

**Prerequisites:** None

Ours is a cross-listed class. This means that we have students of many majors attending 1303, and environmental majors attending 1403. There will be no difference for any of you for the lecture portion of the course. The difference is that 1403 has a lab portion to their class. Another difference is where the grades come from for each class, this will be discussed later in this syllabus.

#### **Student Learning Objectives:**

**Upon successful completion of this course, students will:**

Describe how the scientific method has led to our current understanding of Earth's structure and processes.

Interpret the origin and distribution of minerals, rocks and geologic resources.

Describe the theory of plate tectonics and its relationship to the formation and distribution of Earth's crustal features.

Quantify the rates of physical and chemical processes acting on Earth and how these processes fit into the context of geologic time.

Communicate how surface processes are driven by interactions among Earth's systems (e.g., the

geosphere, hydrosphere, biosphere, and atmosphere).

Identify and describe the internal structure and dynamics of Earth.

Describe the interaction of humans with Earth (e.g., resource development or hazard assessment).

### **EDUCATIONAL OBJECTIVES:**

1. To understand and apply method and appropriate technology to the study of the natural sciences.
2. To recognize scientific and quantitative methods and the differences between these approaches and the other methods of inquiry and to communicate findings, analyses and interpretation both orally and in writing.
3. To identify and recognize the differences among competing scientific theories.
4. To demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics, values and public policies.
5. To demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to modern culture.

### **INTELLECTUAL COMPETENCIES:**

1. **READING**—the ability to analyze and interpret a variety of printed materials—books, documents and articles.
2. **WRITING**—the ability to produce clear, correct and coherent prose adapted to purpose occasion and audience.
3. **LISTENING**—analyze and interpret various forms of spoken communication, possess sufficient literacy skills of writing, reading.
4. **CRITICAL THINKING**—think and analyze at a critical level.
5. **COMPUTER LITERACY**—understand our technological society, use computer-based technology in communication

### **Student Behavior**

As adults I expect you to observe common courtesy. I will be respectful in my communications with you, I expect the same from you. Even though you are not looking at me when you send an email that does not mean that you do not use correct and respectful language.

**Course Outline:** Topics of instruction will be internal Earth, rocks and minerals, structures, earthquakes, volcanoes, effects of wind and water, etc.

Chapter Quizzes are due Sunday by 11:59pm. Late submissions will not be accepted.

Week Beginning	Lecture topic
Aug. 26	Ch. 1 Introduction to Geology
Sept. 2	Ch. 3 Matter & Minerals
Sept. 9	Ch. 4 Igneous Rocks & Intrusive Activity
Sept. 16	Ch. 7 Sedimentary Rocks

Sept. 23	Ch. 8 Metamorphism & Metamorphic Rocks <b>Mastering Homework 1-5 and Exam 1 (Chapters 1, 3, 4, 7, 8) due 9/22 by midnight</b>
Sept. 30	Ch. 2 Plate Tectonics
Oct. 7	Ch. 5 Volcanoes and Volcanism
Oct. 14	Ch. 9 Earthquakes and Earth's Interior
Oct. 21	Ch. 10 Origin and Evolution of Ocean Floor
Oct. 28	Ch. 11 Crustal Deformation and Mountain Building
Nov. 4	Ch. 13 Running Water <b>Mastering Homework 6-10 and Exam 2 (Ch. 2,5,9,10,11) due 11/10 by midnight</b>
Nov. 11	Ch. 14 Groundwater
Nov. 18	Ch. 15 Glaciers and Glaciation
Nov. 25	Ch. 16 Deserts and Wind
Dec. 2	Ch. 20 Global Climate Change
Dec. 9	Final Exam Week <b>Mastering Homework 11-15 and Exam 3 (Ch. 13,14,15,16,20) due 12/9 by midnight</b>

The instructor reserves the right to change this syllabus at any time. If changes are made, you will be alerted in a timely manner.

### **Grades and Grading:**

Your grades in this class are determined by what you earn. I will not change your grade. If you want to make an A in the class, you must do A level work. As with any other science, geology has a language of its own. Unless you have had a geology class, you are going to have to study to learn that language. There are also many geological concepts that you will not be familiar with. It is up to you to make sure you have done everything you need to do well, including reading ahead, notes, any homework, and asking questions as we cover material.

### **1303-Grading**

Homework 50%

Exams 50%

100-90 – A

80-89 – B

70-79 – C

60-69 – D

<60 – F

### **Extra credit:**

Will only be offered on a class wide basis and at my discretion. Please don't ask. I will **not** give you **individual** extra credit. Extra credit is an incentive, it is not a way to pass when you are failing. To do well in the class you must study from the first day.

**Make-ups:**

There are no make-ups in this class. Everything will be open for you so you should do work early if you are going to be away. There are extenuating circumstances, we will discuss this as need arises.

**Cheating:**

Cheating will not be tolerated. In the case of cheating the offenders will be given a zero on the assignment. The incident will be reported and the department will conduct further investigations.

**Obligatory Statements**

**Drop Date:** November 10 is the last day to drop this class. I will not drop you. If you simply stop participating you will probably end the class with an F

**Disabilities** — Students with Disabilities: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:Office of Student Disability Resources and Services

Texas A&M University-Commerce

Gee Library, Room 132

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

StudentDisabilityServices@tamu-commerce.edu

**Behavior** — All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment.” (See Student’s Guide Handbook, Policies and Procedures, Conduct)

All students are expected to conduct themselves with a proper demeanor and to behave as socially conscience adults. Actions, which disrupt class and the process of instruction, are not acceptable. The instructor has the responsibility to maintain the learning environment free of disruption and actions not to conformance with good citizenship and recognition of the rights of others.

**Plagiarism** — Plagiarism is a criminal activity. You must cite all sources of information. Unreferenced copying of material, whether parts of sentences, whole sentences, paragraphs, or entire articles can result in a score of zero for your assignment and may result in further disciplinary action.

**Early Intervention for First Year Students** — Early intervention for freshmen is designed to communicate the University’s interest in their success and a willingness to participate fully to help students accomplish their academic objectives. The university through faculty advisors and mentors will assist students who may be experiencing difficulty to focus on improvement and course completion. This process will allow students to be knowledgeable about their academic progress early in the semester and will provide faculty and staff with useful data for assisting students and enhancing retention. Grade reports will be mailed by the end of the sixth week of the semester

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