GEOL 1403 - Physical Geology Course Syllabus

Description
Introduction to the study of the materials and processes that have modified and shaped the surface and interior of Earth over time. These processes are described by theories based on experimental data and geologic data gathered from field observations. Laboratory activities will cover methods used to collect and analyze earth science data.
Prerequisites TSI Reading complete
Credits 4
Lecture Hours 3
Lab Hours 3
Extended Hours 0
Contact Hours 96
State Approval Code 40.0601.54 03
Instructor Name Hunter Hines
Semester/Year Fall 2024

Meeting Time and Location
Online

Alternate Operations During Campus Closure
In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Panola College to move to altered operations. During this time, Panola College may opt to continue delivery of instruction through methods that include, but are not limited to: online learning management system (CANVAS), online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor Panola College's website (www.panola.edu) for instructions about continuing courses remotely, CANVAS for each class for course-specific communication, and Panola College email for important general information.

Student Basic Needs
Unexpected circumstances may arise, but Panola College offers various resources to support students. If you need mental health services or are facing challenges with transportation, affording class materials and supplies, or accessing food regularly—issues that may impact your class performance—please visit panola.edu/resources.

Class Attendance
Regular and punctual attendance of classes and laboratories is required of all students. When a student has been ill or absent from class for approved extracurricular activities, he or she should be allowed, as far as possible, to make up for the missed work. If a student has not actively participated by the census date, they will be dropped by the instructor for non-attendance. This policy applies to courses that are in-person, online, hybrid, and hyflex.

Attendance in online courses is determined by submission of an assignment or participation in an activity. According to federal guidelines, simply logging into a distance learning course without participating in an academic assignment does not constitute attendance. Distance learning is defined as when a majority (more than 50%) of instruction occurs when the instructor and students are in separate physical locations. Students must engage in an academic activity prior to the course census date.

When an instructor feels that a student has been absent to such a degree as to invalidate the learning experience, the instructor may recommend to the Vice President of Instruction that the student be withdrawn from the course. Instructors may seek to withdraw students for non-attendance after they have accumulated the following number of absences:

Fall or spring semesters:

3 or more class meeting times per week - 5 absences

2 class meeting times per week - 3 absences

1 class meeting per week - 2 absences

The student is responsible for seeing that he or she has been officially withdrawn from a class. A student who stops attendance in a class without officially withdrawing from that class will be given a failing grade; consequently, the student must follow official withdrawal procedures in the Admissions/Records Office.

Please note: Health Science and Cosmetology courses may require more stringent attendance policies based on their accreditation agencies. Please see the addendum and/or program handbook for further information concerning attendance.

Pregnant/Parenting Policy

Panola College welcomes pregnant and parenting students as a part of the student body. This institution is committed to providing support and adaptations for a successful educational experience for pregnant and parenting students. Students experiencing a need for accommodations related to pregnancy or parenting will find a Pregnancy and Parenting Accommodations Request form in the Student Handbook or may request the form from the course instructor.

Student Learning Outcomes

Critical Thinking Skills – to include creative thinking, innovation, inquiry and analysis, evaluation and syntheses of information

- CT2: Gather and assess information relevant to a question
- CT3: Analyze, evaluate, and synthesize information

Communication Skills – to include effective development, interpretation, and expression of ideas through written, oral, and visual communication

- CS1: Develop, interpret, and express ideas through written communication
- CS2: Develop, interpret, and express ideas through oral communication
- CS3: Develop, interpret, and express ideas through visual communication

Empirical and Quantitative Skills – to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

- EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion

Teamwork – to include the ability to consider different points of view and to work effectively with others to support a shared purpose or goa

- TW1: Integrate different viewpoints as a member of a team
- TW2: Work with others to support and accomplish a shared goal

Instructional Goals and Purposes

The purpose of this course is to introduce students to the natural processes operating on and in planet Earth. Students will learn how these processes interact with one another and with life on the planet.

Learning Outcomes

After studying all materials and resources presented in the course, the student will be able to:

1. Describe how the scientific method has led to our current understanding of Earth's structure and processes.
2. Interpret the origin and distribution of minerals, rocks and geologic resources.
3. Describe the theory of plate tectonics and its relationship to the formation and distribution of Earth's crustal features.
4. Quantify the rates of physical and chemical processes acting on Earth and how these processes fit into the context of geologic time.
5. Communicate how surface processes are driven by interactions among Earth's systems (e.g., the geosphere, hydrosphere, biosphere, and atmosphere).
6. Identify and describe the internal structure and dynamics of Earth.
7. Describe the interaction of humans with Earth (e.g., resource development or hazard assessment).

Course Content

A general description of lecture/discussion topics included in this course are listed in the Learning Objectives section of this syllabus.

Students in all sections of this course will learn the following content:

1. Nature of scientific inquiry
2. Theory of Plate Tectonics
3. Formation and classification of minerals, igneous rocks, sedimentary rocks, and metamorphic rocks
4. Mechanical and chemical weathering processes, soil erosion
5. Geologic time and fossils
6. Crustal deformation (faulting, folding)
7. Earthquakes and earthquake hazards
8. Structure of the interior of Earth
9. River processes
10. Groundwater
11. Mass wasting processes
12. Glaciers and glaciation
13. Coastal processes
14. Introduction to historical geology
15. Energy resources
16. Global climate change

Methods of Instruction/Course Format/Delivery

This course is offered fully online. Lecture material will be delivered via eText assignments and prerecorded Powerpoint presentations. Homework assignments for lecture will be submitted through Canvas.

Lab material will be delivered by reading assignments in students' lab manual and assignments submitted through Canvas. Students will complete a group lab project, due at the end of the semester. This will consist of students addressing a current issue in geology and creating a Powerpoint presentation with audio about this topic. Students do not need to be in the same location to complete this assignment, and virtual meetings are encouraged.

All lecture exams must be taken at a proctored testing center. Lab assignments may be completed on a home computer.

Major Assignments/Assessments

The following items are assigned and assessed during the semester and used to calculate the student's final grade.

Assignments

1. Weekly laboratory assignments
2. Homework assignments and quizzes
3. Final Project

Assessments

1. Lecture Exam 1 and 2
2. Final Lecture Exam

Course Grade

The grading scale for this course is as follows:

- Lecture Exams- 20%
- Lecture Final Exam – 10%
- Weekly Lecture Homework – 35%
- Weekly Lab Assignments/Project - 35%

Texts Materials, and Supplies

- Hands on Labs Geology lab kit and materials from the Panola College bookstore
- Access to internet
- Access to Powerpoint or similar software
- Access to a scanner (see your local library)

Other

- Courses conducted via video conferencing may be recorded and shared for instructional purposes by the instructor.
- For current texts and materials, use the following link to access bookstore listings: https://www.panolacollegestore.com.
- For testing services, use the following link: https://www.panola.edu/student-services/studentsupport/academic-testing-center.
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Charles C. Matthews Student Center or go to https://www.panola.edu/studentservices/student-support/disability-support-services for more information.
- Withdrawing from a course is the student's responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.
- Student Handbook: https://www.panola.edu/ (located on at the bottom under student)