

JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Physical Geology

Course Abbreviation and Number: GLG 1510

Credit Hours: 4

Course Type: Lecture/Lab

Course Description: In this classical introduction to geology, students will identify and explain the geologic processes operating on and beneath Earth's surface, including mineral and rock formation, plate tectonics, deformation, orogeny, weathering, erosion, transport, and deposition. Landforms resulting from geologic processes will be interpreted. Laboratory projects and field trips correlate with lecture topics.

Prerequisite/Corequisite: ENG 1510; [Corequisite: MAT 0550 OR Eligibility: college level math].

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Describe the physical and chemical basis of mineral characteristics and classification and identify common minerals by sight as well as via testing of physical and chemical properties.
 2. List and describe the main definitions, concepts, and processes related to the rock cycle with emphasis on the petrogenesis of sedimentary, igneous, and metamorphic rocks, and identify common rocks.
 3. Explain the formation and characteristics of weathering, erosional, depositional, and other landscape features and geologic structures on Earth's surface.
 4. Describe basic concepts of geologic time and relate stratigraphic, structural, and other geologic features to that framework, with an emphasis on New York State and North American geology.
 5. Explain the main definitions, concepts, and processes related to our understanding of Earth's interior, plate tectonics, orogenies, volcanism, and seismicity.
 6. Identify and interpret geologic features from photos, cross-sections, topographic maps, and geologic maps, describing their causal processes and phenomena.
 7. SUNY Gen Ed Natural Sciences: Students will demonstrate an understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, employment of mathematical analysis.
 8. SUNY Gen Ed Natural Sciences: Students will demonstrate an understanding of the application of scientific data, concepts, and models in one of the natural sciences.
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Topics Covered:

- Earth Structure
 - Introduction
 - Earth's Interior
 - The Sea Floor
 - Plate tectonics
 - Geologic Structures
 - Earthquakes – Mtn. Building
 - EQS
 - Lab EQS
 - Rocks and Minerals and Rock Formation
 - Minerals
 - Igneous Rocks and Volcanoes
 - Weathering
 - Mass Wasting
 - Sedimentary Rocks
 - Metamorphic Rocks
 - Geologic Time
 - Hydrosphere
 - Streams
 - Groundwater
 - Glaciers
 - Deserts
 - Shorelines
 - Resources
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Information for Students

- Expectations of Students
 - [Civility Statement](#)
 - [Student Responsibility Statement](#)
 - [Academic Integrity Statement](#)

- [Accessibility Services](#)
Students who require accommodations to complete the requirements and expectations of this course because of a disability must make their accommodation requests to the Accessibility Services Coordinator.
- [Get Help: JCC & Community Resources](#)
- [Emergency Closing Procedures](#)
- Course grade is determined by the instructor based on a combination of factors, including but not limited to, homework, quizzes, exams, projects, and participation. Final course grade can be translated into a grade point value according to the following:

A=4.0	B+=3.5	B=3	C+=2.5	C=2	D+=1.5	D=1	F=0
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- Veterans and active duty military personnel with special circumstances (e.g., upcoming deployments, drill requirements, VA appointments) are welcome and encouraged to communicate these to the instructor.

Effective Date: Fall 2024