JAMESTOWN COMMUNITY COLLEGE
State University of New York

INSTITUTIONAL COURSE SYLLABUS

Course Title: Historical Geology

Course Abbreviation and Number: GLG 1520 **Credit Hours:** 4 **Course Type:** Lecture/Lab

Course Description: Students will identify and interpret the scientific theories explaining the physical and biological evolution of Earth, with an emphasis on the North American continent, using stratigraphic, fossil, and radiometric evidence. Laboratory projects and field trips include the use of geologic maps, cross-sections, and the study of faunal succession using fossil specimens.

Prerequisite: GLG 1510 or 1550.

General Education Requirements Met

SUNY	JCC
Natural Sciences	Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Describe the concept of geologic time as recorded in the geologic and paleontological record.
2. Apply stratigraphic and geologic principles as they relate to the interpretation of the rock record.
3. Describe the basic principles and historical development of plate tectonics.
4. List/describe the major types of life, the fossil evidence, and the environment that exited at each geologic era, period, and epoch. {First one-celled organisms, first multi-celled organisms, age of invertebrates, age of fishes, age of amphibians, age of reptiles, first flowering plants, age of mammals, human development.}
5. Demonstrate an understanding of the major physical and chemical changes of Earth's history.
6. Demonstrate an understanding of the methods scientists use to explore natural phenomena, including observation, hypotheses development, measurement and data collection, experimentation, evaluation of evidence, and employment of data analysis or mathematical modeling. [SUNY Gen Ed – Natural Sciences]
7. Application of scientific data, concepts, and models in one of the natural sciences. [SUNY Gen Ed – Natural Sciences]

Topics Covered:

- Stratigraphic principles, sedimentary environments and paleogeography
- The fossil record and geologic timescale
- The development of geology as a science: deep time, James Hutton, Alfred Wegener, etc…
- Structure of the Earth, orogenesis, and continental growth by accretion
- Precambrian geology and early life forms
- Early Paleozoic geology and life forms
- Late Paleozoic geology and life forms
- Permian Extinction
- Early Mesozoic geology and life forms
- Late Mesozoic geology and life forms
- Triassic-Cretaceous Extinction
- Cenozoic geology and life forms

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

- 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 2023