

JAMESTOWN COMMUNITY COLLEGE
State University of New York

MASTER COURSE SYLLABUS

Course Title: Earth Science

Course Abbreviation and Number: GLG 1550

Credit Hours: 3

Course Type: Lecture

Course Description: Students will identify and explain basic concepts in geology, oceanography, and meteorology, including mineral and rock formation, plate tectonics, mountain building, weathering and soils, erosional and depositional processes, geologic hazards, oceans, and the atmosphere. Optional field experiences are offered. This is an introductory course for students with little or no science background.

Eligibility: ENG 1510 without supports or **Corequisite:** ENG 1510 with supports.

General Education Requirements Met

SUNY

Natural Sciences

JCC

Scientific Reasoning

Student Learning Outcomes:

Students who demonstrate understanding can:

1. Apply and/or discuss important definitions, concepts, compositions, and identities of common minerals and rocks.
 2. Apply and/or discuss concepts, and theories related to glaciation, including the timing of the last glaciation and its effect on the landscape in New York State.
 3. Apply and/or discuss important definitions, concepts, and theories related to geologic time and age-dating.
 4. Apply and/or discuss important definitions, concepts, and structures related to the ocean's water and the ocean floor.
 5. Apply and/or discuss how knowledge of seafloor sediment offers evidence of climatic conditions and change.
 6. Apply and/or discuss important definitions, concepts, and theories related to the structure of the atmosphere.
 7. Apply and/or discuss important definitions, concepts, and theories related to the measurement, origin (causes), classification, and mapping of winds (and cyclones).
 8. Apply and/or discuss important definitions, concepts, and theories related to air masses, fronts, their inter-relationships that cause weather patterns, and the mapping of these fronts and patterns.
 9. Apply and/or discuss important definitions, concepts and theories related to phases of water, humidity, cloud formation/classification, atmospheric stability/instability, condensation, forms of precipitation.
 10. Apply and/or discuss important definitions and concepts related to planetary motion, heliocentric (vs. geocentric) models of the universe, timing of planetary orbits, lunar phases, eclipses, structures and features of the Sun.
 11. Apply and/or discuss important definitions, concepts, and theories related to classification of stars, the structure and characteristics of the Milky Way Galaxy, and star's utility in deciphering the universe's history, evolution, and structure.
 12. Apply and/or discuss important definitions and concepts related to the Big Bang.
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Topics Covered:

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| • Introduction | • Plate Tectonics | • Heating the Atmosphere |
| • Minerals | • Earthquakes, Mountains | • Clouds and Precipitation |
| • Rocks | • Volcanoes | • Wind |
| • Streams and Groundwater | • Geologic Time | • Weather |
| • Glaciers and Deserts | • Oceanography | |
| • Interior of the Earth | • Oceans | |
| • Astronomy | | |
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Information for Students

- Expectations of Students
 - Civility Statement (<http://www.sunyjcc.edu/current-students/classroom-civility>)
 - Student Responsibility Statement (<http://www.sunyjcc.edu/academics/student-responsibility>)
 - Academic Integrity (<http://www.sunyjcc.edu/faculty-staff/academic-integrity>)

- Disability/Special Services
 - Any student who requires accommodations to complete the requirements and expectations of this course because of a disability should make their needs known to the Coordinator of Accessibility Services, 716.338.1251.
- Emergency Closing Procedures (<http://www.sunyjcc.edu/student-life/campus-safety/jcc-alert>)
- 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 2019