

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: GOL 105

Credits: 4

Course Title: Physical Geology

Course Description (including lecture hours, lab hours, total contacts)

Introduces the composition and structure of the earth and modifying agents and processes. Investigates the formation of minerals and rocks, weathering, erosion, earthquakes, and crystal deformation. Lecture 3 hours. Laboratory 3 hours. Total 6 hours per week.

General Course Purpose

This course is designed to satisfy 4 credits of a laboratory science for the Science AS, Social Sciences AS, and Liberal Arts AA degree programs.

Course Prerequisites/Corequisites (*Entry-level competencies **required** for enrollment*)

Prerequisites: satisfactory score on reading and writing placement tests or satisfactory completion of all developmental reading and writing courses before enrolling in GOL 105.

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Understand the origin, composition, and structure of Planet Earth.
- b. Understand the relationship between earth materials and active surface and subsurface processes.
- c. Understand the origin of nonrenewable earth resources and their geopolitical importance.
- d. Understand the Dynamic Earth and plate tectonics.
- c. Understand the importance of humankind's inheritance from Planet Earth and our responsibilities as stewards of the planet.

Major Topics to be Included

- a. Composition of Planet Earth and Mineralogy
- b. The Rock Cycle, Igneous Rocks, and Volcanism
- c. Weathering, Soils, and Sedimentary Rocks
- d. Metamorphic Rocks
- e. Mineral and Energy Resources
- f. Mass Wasting, Rivers, Ground Water, Wind, Glaciers, and Shorelines
- g. Earth's Interior, Earthquakes, Mountain Building, and Continents
- h. Ocean Floors and Plate Tectonics

Effective Date of Course Content Summary (Month, Date Year): 2/16/09