GLY 2010
INTRODUCTION TO PHYSICAL GEOLOGY

COURSE DESCRIPTION

Introduction to Physical Geology (3) (A.A./A.S./A.A.S.).
Three hours lecture per week. This course meets Area V requirement for the A.A., A.S., and A.A.S. General Education requirements. The course is designed to give the student an understanding of the Earth. The course is appropriate for non-science majors as well as those who will be majoring in geology, civil engineering, landscaping architecture or other disciplines requiring knowledge of the earth and earth materials. Course topics will include plate tectonics, history of the Earth, Earth materials, structures, surface features of the Earth. Topics will also include Earth processes including sinkholes, glaciers, volcanoes, and earthquakes. Natural resources from the Earth such as energy, and ores will be covered. Specific geology of Florida will be covered.

PERFORMANCE STANDARDS

The student, at the successful completion of GLY 2010 should be able to:

1. Identify different types of tectonic plate boundaries, including divergent, convergent, and transform boundaries and understand how these feature relate to seismic activities and volcanic activities on the earth.
2. Describe the Theory of Plate tectonics as it relates to earth history, paleontology, paleogeography, earth resources.
3. Identify the genesis of seismic activity as related to plate tectonics and isostasy.
4. Perform an analysis of seismic records, both the P wave and the S wave to determine location of a seismic event.
5. Identify common classes of minerals, including, calcite, anhydrites, gypsum, quartz, feldspars, olivine, and other common rock forming minerals.
6. Describe the rock cycle.
7. Describe the occurrence and formation of sedimentary, igneous and metamorphic rocks.
8. Identify various sedimentary rocks, i.e. sandstones, limestone, and evaporites,
9. Identify various igneous rocks, i.e. granites, andisites, basalts.
10. Identify various metamorphic rocks, i.e. slate, schist, marbles, and gneiss.
11. Describe relative dating techniques and radiometric dating techniques
12. List and describe the geological time scale including various time intervals in earth history, and major fossil assemblages.
13. Describe the development of major earth geomorphological features; deserts, glaciated terrains, volcanic, and mountain ranges.
14. Describe the causes of karst topography and related geohazards in Florida
15. Describe the geological hazards related to barrier islands in Florida

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