Jacksonville State University
College of Arts and Sciences
Updated June 27, 2006

GY 251 PHYSICAL GEOGRAPHY II: LAND SURFACES

COURSE DESCRIPTION

The study of Earth's soils, biomes and physiographic regions with emphasis on the processes that formed them and their global patterns.

TEXT

Physical Geography: A Landscape Approach, 7th edition. Knight, Tom L. and Darrel Hess. 2002 Prentice Hall.

COURSE OBJECTIVES

Physical Geography is the study of the Earth as a whole, involving the rocky portion of our planet (the geology), but also the atmosphere (climatology), the hydrosphere (oceanography) and living organisms (biology), with a strong emphasis on how humans affect, and are effected by the natural environment. In this, the second semester of the two-course Physical Geography sequence, we will first discuss processes affecting the Earth's surface, such as plate tectonics, weathering and erosion. Next, we will see how these processes modify the appearance of the surface by the creation of new landforms. Following, we will discuss the development of soils on these landforms, and study the importance of soils in terms of biological systems and human activities. Finally, we will study the living ecosystems, and their relation to climate-related stresses, that develop on these soils.

COURSE OUTLINE

Introduction and Composition of the Earth. 374-375.
Minerals and introduction to igneous rocks.
Igneous rocks. 375-378.
Sedimentary. 378-381.
Metamorphic rocks. 381-383.
The Earth's interior. 373-374.
Plate tectonics. 397-410.
More on Plate Tectonics.
Volcanoes. 410-422.
More volcanoes.
Test #1.

Groundwater. 267-273.
More on groundwater.

Fluvial processes and landforms. 459-483.
More fluvial landforms.
Desert processes. 505-516.
Desert landforms. 521-530.
Aeolian landforms. 516-521.
Coastal processes and landforms. 563-579.
More coastal landforms.
Test #2.

Glaciers: the Ice Age. 533-545.
Glacial landforms. 545-560.
Soil genesis. 337-341.
More on soil genesis.
Soil physical properties. 341-348.
Soil classification. 349-370.
More soil classification.
Soils and waste disposal.
Test #3.

Biosphere: energy flow and matter cycling. Units of life.
Biomes. The Tropical Rainforest. 317.
More on the Tropical Rainforest.
Tropical forest and tropical savanna biomes. 317-324.
Deciduous, Boreal/Evergreen forest, and Southern Pine forest biomes. 326-330.
Mediterranean and West Coast forest biomes. 325-326.
Grassland, desert and tundra biomes. 324-331.

Final

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GY 253 PHYSICAL GEOGRAPHY LAB II

COURSE DESCRIPTION

Exercises focus on study of the physical properties of soils, the analysis of biomes, the use of topographic maps to identify land surface features and the identification of physiographic regions.

TEXT

Physical Geology Laboratory Manual 2004

COURSE OJECTIVES

A student will investigate concepts in physical geography by doing various "self-explanatory" exercises. Each exercise will address one or two concepts about maps, mineral identification, rock identification, or stream hydrology. A series of questions will lead the student to investigate each issue. These issues will reinforce terms and principles covered by the lectures given in GY 251 Physical Geography.

COURSE OUTLINE

Lab #1	Rock identification: igneous
Lab #2	Sedimentary and metamorphic
Lab #3	Plate tectonics
Lab #4	Location on the Earth: latitude and longtitude
Lab #5	Introductions to maps
Lab #6	Location on the Earth: topographic maps
Lab #7	Contour Lines Homework Lab #6 due
Lab #8	Reading evaluations from the topographic map
Midterm	
Lab #9	Stream discharge and storm hydrographs
Lab #10	Soil texture
Lab #11	Dendrochronology
Lab #12	Groundwater contamination
Final	