

**WILLIAM RAINEY HARPER COLLEGE**  
**BUSINESS AND SOCIAL SCIENCE DIVISION**  
**GENERAL COURSE OUTLINE**

GEG	111	<b>Physical Geography</b>	(3-0)	3
Course Prefix	Course Number	Course Title	(Lec-Lab)	Semester Hours

**Course Description**

Examines the spatial distribution of elements of Earth's four physical spheres: the atmosphere, the hydrosphere, the lithosphere, and the biosphere including landforms, climates, weather, vegetation, and soils. Consideration is given to the causes of these distributions and to their effects on human populations. IAI P1 909

**Topical Outline**

- I. Introduction to Physical Geography
  - A. Geography as an Academic Discipline
  - B. Geographic Themes
  - C. Physical Geography and Science
  - D. Critical Concepts in Physical Geography (Systems, Globalization)
- II. Earth-Sun System
  - A. The Solar System
  - B. Earth Movements
  - C. The Seasons
  - D. Local and Standard Time
- III. Representing the Earth
  - A. Geographic Grid
  - B. Properties and Uses of Maps
  - C. Map Projections
  - D. Geospatial Technologies (GIS, GPS, Remote Sensing)
- IV. Atmosphere
  - A. Solar Energy and Atmospheric Heating
  - B. Atmospheric Pressure and Wind
  - C. Atmospheric Moisture
  - D. Storms and Severe Weather
  - E. Weather Forecasting
  - F. Climate Classification and Climate Change
- V. Hydrosphere
  - A. The Hydrologic Cycle
  - B. Surface Water Resources
  - C. Groundwater Resources
  - D. The Cryosphere

- VI. Geomorphic Processes and Landforms
  - A. Plate Tectonics and Tectonism
  - B. Weathering, Mass Movement, and Erosion
  - C. Karst, Hydrothermal Processes and Landforms
  - D. Fluvial Processes and Landforms
  - E. Geomorphic Processes and Landforms in Arid Lands
  - F. Coastal processes and Landforms
  - G. Glacial processes and Landforms
- VIII. Biosphere
  - A. Soils
  - B. Biogeochemical Cycles
  - C. Ecosystems
  - D. Terrestrial Biomes
  - E. Zoogeographic Regions
- VI. Human Impact on the Environment
  - A. Impact on Water
  - B. Impact on Air and Climate
  - C. Impact on Landforms
  - D. Impact on Plants and Animals
- V. Geography of Renewable Energy
  - A. Solar Power
  - B. Wind Energy
  - C. Biomass Energy
  - D. Hydroelectricity
  - E. Wave Energy

**Method of Presentation**

1. Lecture
2. Other:
  - a. Online presentations
  - b. Audio-visual presentations
  - c. Cooperative learning/small group discussions
  - d. Demonstrations or field investigations

**Student Outcomes (The student should)**

1. discuss geography as a field of study and distinguish between physical and human geography.
2. relate Earth-Sun relations to the seasons and time.
3. apply an understanding of the geographic grid, scale, and map projections to map interpretation.
4. explain the location and distribution of the world's major physical geographic features and phenomena, such as major wind belts, mountains, rivers, and lakes.

5. examine spatial information using GIS (Geographic Information Systems) and related software.
6. relate insolation, wind development, and atmospheric moisture processes to local and hazardous weather.
7. classify global climates based on temperature and precipitation differences.
8. discuss the differences between natural and anthropomorphic climate change.
9. relate plate tectonics concepts to volcanism, earthquakes, mountain building, and associated hazards to human life and settlements.
10. relate weathering/mass wasting to soil formation, geomorphic processes, and natural hazards.
11. describe soil characteristics, development processes, and conservation.
12. recognize and distinguish between landforms created by karst, hydrothermal, fluvial, glacial, and coastal processes.
13. recognize and distinguish between landforms formed in arid lands.
14. compare and contrast between the characteristics and distribution of terrestrial biomes and zoogeographic regions.
15. evaluate man's impact on water, air, landforms, and the biosphere.

### **Methods of Evaluation**

Grades are based on demonstrated proficiency in subject matter. Proficiency is determined from:

1. Final exam
2. Quizzes
3. Exams
4. Written reports
5. Problem sets and assignments
6. Map exercises

### **Textbook & Instructional Materials**

#### *Required*

Christopherson, Robert, *Elemental Geosystems*. 8th Edition. Pearson, 2016 ISBN: 9780321985019

Prepared by:

Mukila Maitha

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