

Outline of Topics for Physical Geography, GEOG 1003

Physical Geography by Gable, Petersen and Trapasso, 8th Edition

- I. Basic Concepts
 - A. Geography: A Spatial Science
 - B. Human-Cultural Components of Geography
 - C. Physical Geography
 - D. Models
 - E. Great/Small Circles

- II. Representations of Earth
 - A. Globe/Geographic Grid
 - B. Latitude/Longitude
 - C. Time/Days
 - D. Map Types
 - E. Projections
 - F. Map Essentials and Scale
 - G. Public Land Survey System
 - H. Geographic Information Systems
 - I. Global Positioning Systems
 - J. Remote Sensing

- III. Earth As a Planet
 - A. Size and Shape
 - B. Earth Movements
 - C. Seasons
 - D. Insolation

- IV. The Atmosphere, Atmospheric Heating
 - A. Characteristics of the Atmosphere
 - B. Controls of Weather and Climate
 - C. Heating of the Atmosphere
 - D. Temperature

- V. Atmospheric Pressure and Wind
 - A. Pressure Cells and World Pressure Belts
 - B. Pressure Gradients and Winds
 - C. Coriolis Effect

- VI. Circulation Patterns
 - A. Idealized Model of Global Wind Systems
 - B. Seasonal Migration
 - C. Ocean Currents and El Nino
 - D. Monsoon and Local Winds

VII. Moisture, Condensation, and Precipitation

- A. Humidity
- B. Condensation
- C. Adiabatic Rates
- D. Clouds/Fog
- E. Precipitation Forms and Causes

VIII. Air Masses and Atmospheric Disturbances

- A. Types of Air Masses
- B. Fronts
- C. Cyclones
- D. Storms

IX. Climatic Models and Climates

- A. The Koppen System
- B. A, B, C, D, E, and H Climatic Types

X. Biogeography

- A. Ecosystems and Autotrophs
- B. Classification of Terrestrial Ecosystems
- C. Climatic Factors
- D. Soil and Topography
- E. Human Impact on Ecosystems

XI. Earth's Interior and the Crust

- A. Structure of the Earth
- B. Rocks and Minerals
- C. Plate Tectonics

XII. Tectonic Processes and Resulting Landforms

- A. Magmatic Processes (Volcanism) and Resulting Landforms
- B. Solid Processes (Folding, Faulting, Warping) and Landforms

XIII. Gradation, Weathering, and Mass Wasting

- A. The Gradational Process
- B. Weathering (Physical, Chemical, Differential)
- C. Mass Movement

XIV. Fluvial Processes and Landforms

- A. The Stream System
- B. Landforms Sculpted by Streams

XV. Eolian (Wind) Landforms

- A. Wind Erosion and Deposition
- B. Water in the Desert
- C. Landforms of Arid Fluvial Erosion and Deposition

XVI. Glacial Systems

A. Glacier Formation

B. Continental Ice Sheets

C. Alpine Glacier