

Study Concepts for Final Exam

Geology 10113

General Comments

- Anything in the presentations or that I have talked about is fair game for the exam.
- I will not ask you about information in the book I have not talked about.
- I do not expect and will not ask simple fact regurgitation - I expect you to have a working knowledge of the concepts discussed.
- If you do well on the various multiple choice questions given by the textbook publisher (http://wps.prenhall.com/esm_tarbuck_earth_8) for the chapters we have covered you should do well.
- Those who wait to study until the weekend before the exam usually do fairly poorly.
- The portion since the last exam counts for 60% of the exam, while the comprehensive portion accounts for 40% of the exam.

Shorelines

- Shoreline features
- Waves of Oscillation and Translation
- Surf zone
- Longshore current and sediment transport
- Headland erosion and erosional features
- Depositional features
- Shoreline erosion and stabilization features
- Tides

Stress and Strain

- Concepts of deformation, force, stress and strain
- Different types of stress
- Relation of stress to faults and folds
- Tension and compression
- Strike and dip
- Anticlines, synclines, monoclines, domes and basins
- Types of faults and fault terminology

Earthquakes

- Earthquake terminology
- Elastic rebound
- Seismographs and what they record
- P, S and Surface waves
- Epicenter distance and how to find
- Deep, Intermediate and Shallow earthquakes
- How to find magnitude given distance and amplitude
- Response of materials to earthquakes
- Tsunamis
- Famous earthquakes
- Earthquake patterns

The Earth's Interior

- Earth's interior based on chemical properties or physical properties
- Wave refraction
- Earth models
- Crust - mantle boundary
- Core - mantle boundary
- Inner core - outer core boundary
- Structure of the mantle
- Mantle convection
- Earth's magnetic field

Continental Drift

- Age structure of a craton
- Geosynclinal theory
- Wegener and Continental Drift (including supporting evidence)
- Geophysics and why Continental Drift can't work
- Sonar and the sea-floor
- Edges of the continents
- Midoceanic Ridges
- Distribution of earthquakes, trenches and volcanoes
- Earth's magnetic field, inclination and declination
- Matuyama and polar reversals
- Magnetometers
- 'Polar wandering paths'
- Magnetic seafloor stripes and seafloor spreading

Plate Tectonics

- Age of the seafloor
- The nature of plates and continents
- Divergent plates (and detail)
- Convergent plates (and detail, including different boundaries)
- Appalachian collision history
- Hot Spots
- Terrane accretion
- History of western North America

Planetary Geology

- Nature of early solar system
- Stony and Jovian planets and their makeup
- Our Moon and its characteristics
- Mercury
- Venus
- Mars
- Jupiter
- Saturn
- Uranus
- Neptune
- Asteroids
- Meteoroids