Earthquakes (GEOS-120 PART A, Lecture TR 11:30am-1:00pm) 1/24/08 through 2/26/08

Professor:

Douglas Christensen

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Office Hours:

10:00-11:00 am on Tues, and Thurs, in 334 Natural Science Building

or by appointment

Suggested Text:

Earthquakes, by Bruce A. Bolt

Grading:

Quizzes, Thurs., Jan. 31, Feb. 7, 14, Total 15% (5 min. each)

Final, February 26, 50% (1.5 hr.)

Labs, 35% (Total of 4 Labs)

OUTLINE

1/24/08 Lecture Notes 1 Historical Perspective of Seismology

Chap. 2 Where Earthquakes Occur

Earthquake Geography and Plate Tectonics

1/29/08

Earthquake Geography and Plate Tectonics (continued)

Lecture Notes 2 Faults in the Earth Chap. 3,4

The Causes of Earthquakes

1/31/08

The Causes of Earthquakes (continued) Chap. 1,9 Lecture Notes 3

Seismic Waves and Tsunamis What we Feel in an Earthquake

Quiz 1

2/05/08 Chap. 5,8 Lecture Notes 4 Measuring Earthquakes:

Locations and Magnitudes

2/07/08

Measuring Earthquakes: Magnitudes

Chap. 4,7 Lecture Notes 5 Plate Tectonics and the Seismic Gap Hypothesis

Quiz 2

2/12/08

Lecture Notes 6

Earthquake Hazards and Prediction

Chap. 10-12

2/14/08 Lecture Notes 7

Earthquakes in Alaska

Chap. 1

Lecture Notes 8 The Great March 28, 1964 Alaska Earthquake

Quiz 3

2/19/08 Chap. 6 Lecture Notes 9

Interior Structure of the Earth

Exploring the Inside of the Earth

2/21/08

Earth Structure Problems

Chap. 6

Seismic Exploration

2/26/08

Test for Part A (course and lab)

Note: Attendance will be taken in Lab sections and is mandatory. In general Lab exercises should be completed and turned in at the end of each lab. TA's will not accept labs from students not attending lab.

http://www.aeic.alaska.edu/

Alaska Earthquake Information Center

http://www.odsn.de/odsn/services/paleomap/animation.html Plate Reconstructions

http://earthquake.usgs.gov/eqcenter/recenteqsww/ Earthquake Locations (7 days)

http://www.iris.edu/seismon/

Earthquake Locations (15 days)

http://www.iris.edu/about/GSN/map\_family.html Map of Seismic Stations

http://www.crustal.ucsb.edu/ics/understanding/elastic/rebound.html Elastic Rebound Animation

http://www.geophys.washington.edu/seismosurfing.html Many seismology links

http://quake.geo.berkeley.edu/cnss/maps/cnss-map.html Seismicity maps

http://www.whfreeman.com/

Earthquakes by Bolt additional material