

## OUTLINE (GEOS 418)

Basic Geophysics (GEOS – 418, MWF 10:30-11:30) 9/06/07 through 12/19/07

Professor: Douglas Christensen

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Office Hours: By appointment

Grading: Mid Term, ~October 22, 2007 (30%)

Final, December 19, 2007 10:15 am - 12:15 pm (30%)

Problem Sets (~Weekly Sets, 35%)

10% off for each class day late

Professor's Discretion (5%)

Participation and Attendance

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9/7/07	Introduction
Week 1	The Earth as a planet The Solar System The Dynamic Earth
Week 2-6	Gravity and the figure of the Earth The Earth's size and shape Gravitation Earth's rotation The Earth's figure and gravity Gravity anomalies Isostasy Interpretation of gravity anomalies
10/22/07	Mid Term
Week 7-9	Seismology and the internal structure of the Earth Elasticity theory Seismic waves The seismograph Earthquake seismology Seismic wave propagation Internal structure of the Earth
Week 10-12	Geomagnetism and paleomagnetism Historical introduction The physics of magnetism Rock magnetism Geomagnetism Magnetic surveying Paleomagnetism Geomagnetic polarity
Week 13	Thermal properties and heat flow The Earth's heat
12/19/07	Final