

Geology 120: Geological Disasters - Tentative Schedule – Fall 2012

8/27:	Course Introduction - Philosophy, Expectations, Requirements	pp.1-11
8/29:	Solar System & Earth Formation	lecture
	Learning Modules: Quantitative Assessment Exercise: http://wamap.org/index.php - must be done before class time on 8/31/12	
8/31:	Earth Structure, Plate Tectonics	pp14-33
	Lab: local geology field trip	
9/3:	Plate Tectonics	pp14-33
	Learning Module: Unit Conversions & Rates http://serc.carleton.edu/mathyouneed/units/index.html Assessment must be completed by class time on 9/5/12: wamap.org	
9/5:	Plate Tectonics	pp14-33
9/7:	Plate Tectonics	pp14-33
	Lab: Plate Tectonic Exploration	
9/10:	Earth materials – minerals to rocks	pp.
9/12:	Sediments to Sedimentary Rocks	pp.
9/14:	Metamorphism - Metamorphic Rocks	pp.
	Lab: Plate Tectonics II	
9/17:	Igneous Rocks: solids from melts	pp. 135-139
	Learning Module: Unit Conversions & Rates http://serc.carleton.edu/mathyouneed/units/index.html Assessment must be completed by class time on 9/19/12: wamap.org	
9/19:	Magmas: melts from solids	pp. 135-139
9/21:	review session (questions)	
	Lab: Earth Materials and Plate Tectonics; Scavenger Hunt (extra credit)	
9/24:	<u>Exam #1: Earth structure, tectonics and the rock cycle ☹</u>	
9/26:	Volcanism	pp.134-160
9/28:	Volcanism	pp. 134-160
	Lab: volcanoes and volcanic hazards	
10/1:	Volcanism: volcanic deposits and eruptive styles	pp. 134-160
10/3:	Hawaiian and andestic-style volcanism	pp. 134-160
10/5:	tbd	
	Lab Assignment: “Disasters in the News”	
10/8:	Fall Break	
10/10:	Domes and caldera-forming eruptions	pp. 134-160
10/12:	Volcanic Hazards	pp. 162-197
	Lab: Ringing Rocks field trip	
10/15:	predicting eruptions & mitigation	pp. 162-197
	Learning Module: Rearranging equations: http://serc.carleton.edu/mathyouneed/equations/index.html Assessment must be completed by class time on 10/17/12: wamap.org	
10/17:	Volcanic hazard video Prediction & mitigation <u>Additional Reading:</u>	“Etna Eruption...”(in lab book)

Mt. Vesuvius:

<http://www.livescience.com/1945-feverish-effort-understand-mt-vesuvius.html>

Super volcanoes:

<http://www.livescience.com/5913-ancient-volcano-devastating-effects-confirmed.html>

pdf article: Airlines and Ash (Moodle Site)

10/19: volcanic hazards in depth - start volcanic statistical #s

Lab: Public perception of volcanic hazards - Movie: “Dantes Peak” & Time Magazine article

10/22: review session (questions)

10/24: **Exam #2: Volcanism** ☹

10/26: Earthquakes - introduction (folding and faulting), Elastic rebound pp. 34-67

Lab: Earthquake resistant design; research structural analysis - begin building10/29: Video - Nova: The Day the Earth Shook “*Highlights - Earthquakes...*” (in lab book)**Learning Module: Graphing – focus on plotting points and best-fit line:**<http://serc.carleton.edu/mathyouneed/graphing/index.html>**Assessment must be completed by class time on 11/7/12: wamap.org**

10/31: tbd

11/2: Seismic waves – P-, S- and Surface waves pp. 34-67

Lab: Earthquake Hazards; continue building

11/5: Seismograph, location, magnitude and intensity pp. 34-67

11/7: Mercalli Scale, Intensity and effects pp. 34-67

11/9: Earthquake Hazards - video: Great Quakes - San Francisco pp. 68-103

Lab: Earthquake calculations, preliminary structural test (part 1 eval.)

11/12: Frequency, distribution, prediction pp. 68-103

11/14: Earth Structure and earthquakes pp. 68-103

11/16: Tsunamis pp. 105-133

Lab: structural analysis - competition

11/19: review

11/21 – Thanksgiving break
11/2511/26: **Exam #3: Earthquakes** ☹11/28: Mass wasting - *Earth Revealed* & Slope stability and materials pp. 198-234

11/30: Mass wasting triggering events pp. 198-234

Lab: tbd12/3: Impact events - video: *Nova: The Doomsday Asteroid* pp. 510-527**Learning Module: Graphing – focus on “Reading a point from a curve”**<http://serc.carleton.edu/mathyouneed/graphing/index.html>**Assessment must be completed by class time on 12/5/12: wamap.org**

12/5: Meteorites pp. 510-527

12/7: Impacts and extinctions pp. 510-527

Lab: Making Impact Structures

Learning Modules: Final Quantitative Assessment:

<http://wamap.org/index.php>

- must be done before the beginning of the final exam (see below)

Exam #4 - during final exam period see...for the actual date

<http://registrar.lafayette.edu/schedule-of-courses-exams/>