

ERTH 16 - Geology of National Parks
Spring 2007 Syllabus

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Office Hours: Wednesdays and Fridays 3:00-4:00 pm York 3030
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Textbook: Geology of National Parks, Harris, Tuttle, and Tuttle
Lecture notes will be posted at: <http://sorcerer.ucsd.edu/ERTH16>

Overview:

This course is designed to give you an overview of geologic processes through the lens of our national park system. We will explore the concepts of geologic time, plate tectonics, and the rock cycle, by studying individual national parks that highlight some of the best geologic examples of the material covered.

Grading:

Grades will be based primarily on two hour exams (20% each) and the final exam (40%). The remaining 20% of the grade will come from homework assignments and occasional surprise quizzes. The final exam will be cumulative. You are free to work with others on the homework assignments, though everyone must turn in his or her own work. Identical answers (i.e. word for word copies) will result in a grade of 0 for both papers.

<u>Date</u>	<u>Topic</u>	<u>Reading</u>
April 2	Grand Canyon - a geologic view of time	1
April 4	Interpreting the Grand Canyon sedimentary record	
April 6	Grand Canyon - geologic history and canyon formation	
April 9	Mesozoic history of Colorado Plateau (Zion, Bryce)	2,3
April 11	Weathering and erosion (Canyonlands, Arches)	5,6,8
April 13	Introduction to plate tectonics	
April 16	Volcanic activity and igneous rocks	37
April 18	Basaltic volcanism and hotspots (Hawaii)	40
April 20	Cascade volcanoes (Rainier, Crater Lake)	35,36
April 23	Cascade volcanoes	29
April 25	Exam 1	
April 27	Seafloor spreading and convergent margins (Olympic)	30
April 30	Convergent margin processes (Olympic)	
May 2	Yosemite and the Sierra Nevada	28,49

May 4	Yosemite and the Sierra Nevada	
May 7	Yellowstone - continental hot spot	43
May 9	Yellowstone - geysers and hydrothermal activity	
May 11	Mountain building processes	
May 14	The Rocky Mountains (Rocky Mountain, Grand Teton)	25,44
May 16	The Rocky Mountains	
May 18	Exam 2	
May 21	The Appalachian Mountains (Acadia, Great Smoky, Shenandoah)	24,54
May 23	The Appalachian Mountains	55
May 25	Glaciers and ice ages (Waterton-Glacier, Voyageurs)	26,22
May 28	Memorial Day	
May 30	Glaciers and ice ages	
June 1	Basin and Range (Death Valley, Joshua Tree, Great Basin)	45,47,48
June 4	Basin and Range	
June 6	Groundwater and caves (Mammoth, Carlsbad)	14,16
June 8	Everglades	19