

GEOGRAPHY 208
Physical Geography of the National Parks
Fall 2007

Instructor: Dr. Randall Schaetzl
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Lectures: 10:20-11:10 M,W in room 108 Kresge Art Center
Office hours: M, W (and most Fridays): 11:30-12:30

Texts:

Harris, A.G., Tuttle, E., and S.D. Tuttle. 2004. **Geology of National Parks**. Kendall-Hunt Publ., Dubuque, IA. 882 pp. REQUIRED

Some type of United States Atlas RECOMMENDED

National Park System Map and Guide. Available from Dr. Schaetzl for \$1.00.
RECOMMENDED

Course Goals: This course is designed to provide an introduction to physical geography and natural history through an examination of the landform/landscape/vegetation assemblages contained in the US national parks, monuments, lakeshores, etc. As examples, a discussion of Glacier National Park will be used to examine *glacial landforms* and their potential for land use and scenic appeal. The discussion of Big Bend National Park will highlight *desert vegetation* and its adaptations to dry conditions. And so on.

A goal of the course, therefore, is to strengthen the scenic appeal of the US national parks by providing students with a better understanding of exactly what they are viewing, and how that particular landscape has evolved and formed. Historical development, human impacts, and human resource utilization of the parks is woven into the course content.

EXAMS: There will be two hourly examinations and a final exam. Dates are provided below. These will usually consist of T/F and multiple choice questions, “visual” questions, and a few short essay questions. Map (location-type) questions should also be expected. All exams will be of similar format. The final exam is comprehensive, but stresses the material covered in the latter section of the course.

If you miss the first or second exam, you will normally be assigned, for the missed exam, the average grade from your other two exams - provided you have a valid excuse. Make-up exams are rarely given, and are generally only allowed in cases where a doctor's excuse is presented or if the student discusses their particular dilemma with the professor well before the exam date. If an exam is missed due to a family funeral, a newspaper obituary (with the date of the newspaper issue clearly shown) must be presented to the instructor within five class days of the missed exam or the student will receive a grade of zero for the exam.

GRADING: There are 350 possible points to be earned in Geography 208. Cumulative point totals will be *curved* to arrive at a final course grade. A total of 175 points (50% of possible) is required for a passing grade in Geography 208; there are no exceptions.

Exam 1:	100 points
Exam 2:	100 points
Final Exam:	<u>150 points</u>
Total:	350 points

LECTURE AND READING OUTLINE

DATE	TOPICS	PARKS FEATURED	READINGS
Aug 27	Introduction, course goals and approaches the types of US national "parks"	none	xiv
Aug 29	Geologic concepts and the geologic timetable	none	13-15; inside frt cover
Sep 5	Fluvial processes in arid regions	Badlands, Teddy Roosevelt	1-6; 115-124; 129-134
Sep 10	Fluvial processes in arid regions	Canyonlands, Grand Canyon, Monument Valley	7-19
Sep 12	Geology of the Grand Canyon	Grand Canyon	19-28
Sep 17	Rock types and weathering concepts	Bryce Canyon, Zion, Cedar Breaks	29-35; 43-52; Box 25.1
Sep 19	Rock structure and weathering	Arches, Natural Bridges	79-86
Sep 24	Faulting and folding of rocks	Grand Teton	644-657
Sep 26	Basin and Range landscapes	Death Valley, Great Basin	663-669; Box 45.1 713-733
Oct 1	Exam 1		
Oct 3	Continental glaciation: principles and processes	none	289-294
Oct 8	Exams back; Continental glaciation: erosion	Acadia	321-332
Oct 10	Alpine glaciation	Glacier, Yosemite, Glacier Bay,	357-367; 385-397
Oct 15	Plate tectonics principles, vulcanism via tephra	Craters of the Moon	37-39; 506-510
Oct 17	Explosive vulcanism	North Cascades, Crater Lake, Lassen, Craters of the Moon	511-516; 527-532; 536(last part)-539
Oct 22	Non-explosive vulcanism	Hawaii Volcanoes, Haleakala	575-585; 593-598
Oct 24	Old, old, vulcanism in the midwest	Isle Royale	307-319
Oct 29	No class		
Oct 31	Intro to Yellowstone National Park	Yellowstone	619-633
Nov 5	Geothermal processes and geysers	Yellowstone	619-633
Nov 7	Exam 2		
Nov 12	Karst and cave formation	Mammoth Cave	187-204
Nov 14	Exams back; Karst and cave formation, cont.	Wind Cave, Carlsbad Caverns	209-215; 221- 229
Nov 19	Coastal processes: erosion	Olympic, Acadia, Point Reyes,	429-434
Nov 21	(YES we <i>are</i> having class) Coastal processes: deposition	Cape Hatteras, Cape Lookout, Wright Brothers	---
Nov 26	Eolian processes and sand dunes	Great Sand Dunes, White Sands	149-159
Nov 28	Biogeography of deserts	Big Bend, Saguaro, Organ Pipe, Joshua Tree, Great Basin	675-676; 693-699 704-710; 791-796
Dec 3	Biogeography of deserts	Big Bend, Saguaro, Organ Pipe, Joshua Tree, --- Great Basin	---
Dec 5	Biogeography and ecology of the big trees	Redwood, Sequoia, King's Canyon	739-744; 769-772
FINAL EXAM: Thursday, Dec 13, 10:00 am			