# Geology 301: Geology of National Parks & Monuments

**Spring 2013**

Taught Online, via Blackboard: see Class Preparation & Regulations document in the Blackboard Syllabus Section

Instructor: Dr. Kathy Thorbjarnarson  
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Office Hrs: T 9:30-10:30, Th 12:30-1:30 in GMCS 228F or by appointment

## Class Topic Schedule:

<table>
<thead>
<tr>
<th>Week of</th>
<th>Module</th>
<th>Topics Covered</th>
<th>Quizzes</th>
</tr>
</thead>
</table>
| 1/14    | 1      | Intro & Earth’s Structure & Plate Tectonics | GB1: Plate Tectonics  
| 1/21    | 1      | Hot Spot Volcanic Parks: Hawaii Volcanoes NP, Haleakala NP, Geothermal Features, Yellowstone NP | GB3: Igneous Rocks  
| 1/28    | 2      | Subduction Volcanic Parks: Mt. St. Helens, Crater Lake, Lassen, Alaska Volcanoes, Other Volcanic Parks | GB4: Volcanic & Plutonic Activity  
| 2/4     | 3      | Geologic Time, Sedimentary Rocks, Weathering | GB5: Geologic Time  
| 2/18    | 5      | Colorado Plateau & Grand Canyon | GB7: Weathering  
| 2/25    | 6      | Geologic Structures | GB8: Mtn Building & US Geologic Prov  
| 3/4     | 7      | Zion & Bryce | GB9: Geologic Structures  
| 3/11    | 8      | Arches, Canyonlands, Capital Reef | GB10: Glaciers  
| 3/18    | 8      | Glacial Features, Rocky Mountain Parks | GB11: San Andreas  
| 4/1     | 9      | Yosemite [Park Writing Assignment due – submitted to Turnitin link before Friday, April 12th, midnight] | GB9: Geologic Structures  
| 4/8     | 10     | Spring Break – go visit a park! | GB10: Glaciers  
| 4/15    | 11     | San Andreas Fault Zone, San Andreas Fault Parks | GB11: San Andreas  
| 4/22    | 12     | Deserts, Death Valley | GB9: Geologic Structures  
| 4/29    | 13     | Limestone and Cave Parks | GB11: San Andreas  
| 5/6     | 14     | Fossil Parks | GB12: Deserts  
| 5/13    | 14     | Finals Week [Exam 3 covering M8-14 open Sat, 5/11 noon until Tues, 5/14 noon] | GB12: Deserts  

[Open M 9AM, close following M 9AM unless otherwise noted]  
GB = Geology Basics Quiz  
P = Parks Quiz
General Course Description
You will be learning about the geology of many of America’s national parks, monuments and seashores. The goal is to become familiar with the key features of the parks and to understand why and how they developed. In addition to viewing the spectacular scenery of each park through slides and websites, you will learn the core fundamentals of geology and geological principles. No prior geology class is required - all the needed basics of geology will be covered in the class.

Class Readings: No textbook. Class readings and notes will be posted on the Blackboard (blackboard.sdsu.edu) site for the class.

General Education Explorations in Natural Sciences
Geol301 is an Explorations course in Natural Sciences. This 3-unit course will count toward the 9-unit requirement for Explorations in General Education (only if taken after achievement of junior standing; more than 60 units of classwork). Explorations classes take the goals and skills of GE Foundations courses to a more advanced level. Completing this course will help you learn to do the following with greater depth: 1) explain basic concepts and theories of the natural sciences; 2) use logic and scientific methods to analyze the natural world and solve problems; 3) argue from multiple perspectives about issues in natural science that have personal and global relevance; 4) use technology to connect concepts and theories with real-world phenomena.

Each Week’s Activities/Viewings Designated in Blackboard Module Section:
Each week’s activities/viewings will be listed in the appropriate Blackboard Module Section. You will need to keep on schedule in order to be successful in completing the weekly quizzes. Each week you should:
1. View Weekly Update Video
2. View On-Line Lectures in Blackboard
3. Complete Reading and other Activities described in the Blackboard Module link
4. Complete Quizzes
5. Monitor & Contribute to the Blackboard Discussion Board & Surveys

Class Grade:
3 Exams 300 pts
22 out of 24 quizzes 220 pts
Writing Assignment 80 pts
Participation:
Discussion Board & Surveys 50 pts
Class Total = 650 pts

Exams
Exams will be posted online in the appropriate Exam folder at the course Blackboard site. You can take an exam anytime within the 3 days of the week (but only 48 time period) it is available (exams will be available from Wednesday at noon until Friday at noon). When you begin taking an exam, you should note the time available on the timer. The exam questions will be shown one at a time (no backtracking allowed). After you submit all your answers, your exam will automatically be graded and your score shown to you. Note that you may use any study materials during the exam (notes, reading material, etc.); however, you will not have enough time to read through this material while you are taking the exam (this
is an attempt to ensure that you have studied and prepared well before you begin the exam). You may not use anyone else’s help; which constitutes cheating.

**Quizzes**
One or more quizzes must be completed each week. You may take each quiz 2 times - the highest grade will be recorded. Quizzes are not timed but must be submitted before the deadline. To help you practice for the format of the exams, each quiz question will show up one at a time and backtracking is not allowed. The questions are randomized - so be aware that the second time that you take the quiz, the questions will be in a different order (question 1 will no longer be question 1).

**Writing Assignment:** Short (at least 1500 word) paper about the general geology of a park and the possible activities (hikes, sites to see). Assignment information & rubric will be posted on Blackboard.

**Online Course Participation**

**Discussion Board:**
For the Discussion Board posts, I will read all comments but will make remarks only to add clarity, correct an error, or perhaps steer the discussion. As part of all Discussion Board assignments, you must also post 2 responses to other students’ posts.

**On-Line Class Participation:**
This course requires your participation in several class activities each week through viewing lecture videos, taking on-line quizzes, Discussion Board forums and exams. You should access the course at least once daily to read announcements and check the Discussion Board. Studies show that there is a higher success rate for online students who access the course Blackboard site daily.

Most of your participation in this class will take place via the class Discussion Board where you will make various posts about topics and also reply to posts from other students. You will earn participation points for both the quantity and quality of your contributions. I think you will find the Discussion Board to be a very interesting and stimulating part of this online course.