

GEOLOGY OF NATIONAL PARKS



Explores the geology found in our national park system. Examines basic geologic processes (i.e., minerals, rocks, plate tectonics, volcanoes, earthquakes, glaciers, streams, coasts), which created park landscapes, and the role of society in creation, maintenance and enjoyment of the national park system. Emphasis will include parks in the Pacific Northwest and the western U.S.A. Includes lab.

G-147, CRN #25338, 4 credits. Lecture and Laboratory sessions each day, plus one local geologic field trip (during class time).

Dates: Monday and Wednesday evenings, 6:30 pm – 9:20 pm, **Spring Quarter 2020**, 10 weeks (starting March 30th).

Where: PCC-Sylvania Campus, 12000 SW 49th Avenue, ST Bldg. Room 317

Textbook: **Parks and Plates: Geology of our National Parks**, 5th Edition (2005), by Lillie (ISBN 978-0393924077)

Instructor: Prof. Kyle Dittmer, office (503) 731-1314 (day time), email: kyle.dittmer@pcc.edu

COURSE TOPICS:

Introduction

- Scientific Method...Branches of Geology
- Geological Time...Early Earth
- History of National Park (NP) system
- Society role in NP – volunteers, recreation

Plate Tectonics and Mountain Building

- Plate Tectonics (and film)
- Volcanoes (and film)
- Earthquakes (and film)
- Types of mountains...building processes

Minerals and Rocks

- Rocks and Minerals...the Rock Cycle
- Igneous, Sedimentary, Metamorphic Rocks

Geomorphology - Landforms

- Hydrologic Cycle...Rivers...drainage basins
- Glaciers...processes and landforms
- Deserts...processes and landforms
- Karst, Caves...processes and landforms

Volcanoes of the western USA

- Mt. Rainier NP (WA)...Mt. St. Helens NVM (WA)
- Yellowstone NP (WY)... Hawaiian Volcanoes NP (HI)
- Crater Lake NP (OR)...Mt. Shasta NP (CA)...Mt. Lassen NP (CA)

Columbia Basin province

- North Cascades NP (WA)... Olympic NP (WA)
- John Day Fossil Beds NM (OR)...Craters of the Moon NM (ID)

Basin and Range province

- Grand Canyon NP (AZ)...Great Basin (UT)
- Death Valley NP (CA)...Capitol Reef NP (UT)
- Canyonlands NP (UT)...Arches NP (UT)

Rocky Mountain province

- Glacier NP (MT) ...Grand Teton NP (ID)...Badlands NP (SD)
- Rocky Mountain NP (CO)...Mesa Verde NP (CO)

Other parks

- Carlsbad Caverns NP (NM)...Mammoth Caves NP (KY)
- Great Smokey Mountains NP (TN)...Acadia NP (ME)
- Yosemite NP (CA)...Denali NP (AK)...Glacier Bay NP (AK)

It's easy to register! To register online, go to: [<http://www.pcc.edu/enroll/registration/>]. You can also register by calling: 971-722-8888. You will need to know the 5-digit CRN for the class you want to take.

PCC is committed to supporting all students. If you need accommodations for a disability, please contact PCC Disability Services. Web: pcc.edu/disability; Email: disability.services@pcc.edu; Phone: 971-722-4341; Video Phone: 503-928-5875.



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