

Regional Geology and Geological Field Methods in the Southwest United States

January 4 - 25, 2012

The field is geology's laboratory. This course is an introduction to the major concepts of geology, as well as the methods of field geology. Students will learn how to collect, synthesize, and analyze geological data in the field. Techniques will be taught in the context of the regional geology of an area so students will gain a critical appreciation of a geological terrain outside of their usual experience. Students will spend 2-3 weeks in the field examining geological structures, modern-day faults, modern processes that shape the earth's surface, and examining the ancient record of past climate and environments preserved in the rock record. Student teams will learn basic techniques and instruments of geological mapping and rock description, how to recognize geological structures like faults and folds, ways to interpret the evolution of the earth from sedimentary, igneous, and metamorphic rocks, and to link surface processes with the rock record.

Prerequisites

Geology 110, 111, 114, 115, or 162

Fulfills

Core lab science requirement; Geology, Environmental Science, or Environmental Studies major/minor credit

Cost

The program fees are \$3938, plus a \$200 Off-Campus Study Fee. The programs fees are based on a minimum of 16 students and are subject to change.

Housing and Meals

The group will be camping for most of the time that it is in the field. We will be in a campground and you will have access to bathrooms and running water. We will drive to take showers a few times a week. Most meals will be cooked by the group. Between 5 and 6 nights will be spent in motels in Las Vegas and just outside of Zion National Park, Utah.

Program Structure

You should expect to be in the field, hiking and closely looking at rocks, for most of the day. It gets dark relatively early, so to maximize our daylight we will try to be on the outcrop at 8:30 a.m. Evenings are spent cooking dinner, relaxing around the campfire, hanging out...or sleeping! We have built in a few free days that will be spent in Las Vegas and at Zion National Park at a motel.

Required Readings

None; field-based work.

Evaluation

Project 1: Bitter Springs Mapping	30%
Project 2: TBD	25%
Zion National Park mini-project	5%
Death Valley National Park mini-projects	15%
Field notes for other, short activities	15%
Participation	10%

Course Schedule

J-term Pre-Departure Orientation	11/18/2011
On campus class meeting	1/4/2012
Arrive Las Vegas, drive to Lake Mead NRA	1/5/2012
Project 1: Bitter Spring Mapping	1/6-1/10/2012
Day off in Las Vegas	1/11/2012
Project 2: Documenting Basin and Range Extension	1/12-1/17/2012
Drive to Zion National Park	1/15-1/17/2012
Day off in Zion National Park	1/18/2012
Drive to Death Valley National Park	1/19/2012
Death Valley Projects	1/19-1/24/2012
Departure and arrival in Minneapolis	1/25/2012

Program Directors

Tom Hickson received his Ph.D. from Stanford University and has been teaching at St. Thomas since 2000. Tom currently serves as the Director of the Environmental Science Program.

Kevin Theissen received his Ph.D. from Stanford University in 2003 and his research interests include: Paleocology of Lakes, recent climate change, geochemistry, and oceanography.

Application Procedures & Deadlines

Applicants for this course will be reviewed through a selection process that will include a formal interview. Not all applicants are guaranteed an interview. Students selected for an interview will be notified by email after the application deadline. Applications are available on the [Study Abroad web site](#). Complete applications are to be submitted to the International Education Center.

Priority application deadline is April 8, 2011
Final application deadline is October 3, 2011

All information is current as of March 28, 2011 and is subject to change - Check our website for updates