
Death Valley Field Studies, 2019

What is it about? Death Valley is possibly the most spectacular geologic exposure in the entire western United States. The oldest rocks and fossils are found here, as well as rocks from every geologic era. The presence of recently active volcanoes and faults make it an ideal laboratory for the study of structural geology, and the unique animal and plant species allow us to understand adaptation and evolution in a harsh climate.

It should be understood that this trip will be a rigorous test of your patience and health. There will be several **long driving days**, and conditions may become harsh, with **rain, snow and wind** as serious possibilities (on the other hand, there is fair chance of working on your tan as well!). The success of the trip will depend on your amiability and willingness to put up with inclement conditions.



Dates: February 14-18, 2019: **Please note:** you will be missing class on Thursday night. Make arrangements **now** to make up any missed assignments.

Academics: 2 units. Add codes available from Garry Hayes, SCC 336. Fee is \$90.00. Payments are made in the MJC Business Office in the Student Center (**the fee is not charged when you enroll; you have to go to the business office**). The fee must be paid before the trip.

Text (Recommended):

Geology of Death Valley National Park by Miller and Wright

Geology Underfoot in Death Valley and Owens Valley, by Sharp and Glazner

Academic Requirements:

BEFORE THE TRIP:

- You must attend the **organizational meeting:** Thursday, Jan. 31 at 5:30 PM in Science Community Center Room 326 on West Campus
- You must research and write a **short synopsis** (2 pages) on some aspect of the geology of Death Valley National Park or the Mojave Desert. Topics might include the paleontology, mining and resources, or faulting. **This synopsis MUST be submitted BEFORE the trip departure.**

DURING THE TRIP:

- You will be expected to take complete lecture notes
- You will be expected to complete the worksheet provided at the beginning of the trip.

AFTER THE TRIP:

- Notes and worksheets are to be submitted by March 1
- Final exam on Thursday, Feb. 28 at 5:30 PM in SCC 326

Tentative Itinerary:(Stops and Campsites subject to change)

Thursday Evening: (leave at 4:00 PM)

Drive to Bakersfield (200 miles)

Campsite: Kern River County Park - (805) 861-2345

Friday, Feb. 15:

Stops: Sharktooth Hill
Redrock Canyon State Park
Fossil Falls
Cinder Cone
Darwin Plateau

Campsite: Stovepipe Wells. Note that flexibility on your part is needed: no reservations can be made, and in the worst-case scenario, we might be camping in the middle of nowhere in the desert, without facilities. At best, camp facilities are somewhat limited: no tables or chairs. Fairly expensive restaurants and showers MAY be available nearby. See equipment list for recommendations.

Saturday, Feb. 16:

Stops: Jubilee Pass Chaos and Aulacogen
Cinder Hill
Black Mountains
Badwater, Fault Scarps
Devil's Golf Course
Death Valley Sand Dunes
Mosaic Canyon

Campsite: Same as previous night

Sunday, Feb. 17:

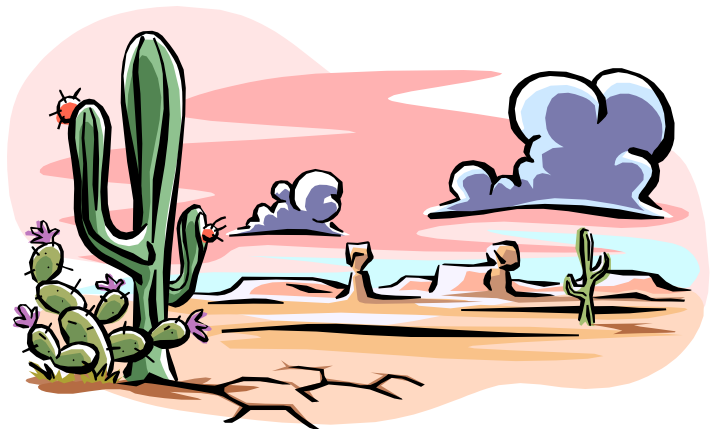
Stops: Keane Wonder Mine
Gower Gulch
Dantes View
Titus Canyon or
Ubehebe Craters

Campsite: Same as previous night

Monday, Feb. 18:

Stops: Mosaic Canyon
Agueberry Point

Route home will be by way of Bakersfield.
Return to MJC, approximately 8:00pm



Logistics:

You will be responsible for your own meals for this trip. I strongly recommend getting together with others to save money and space. Keep meals as simple as possible. For breakfast, it is best to use meals requiring only milk or hot water for their preparation. Lunches should consist of snacks that can be eaten all day. Dinners are easiest when they're out of a can! Expect to bring or buy dinner on Thursday evening. You will need 4 dinners, lunches and breakfasts.

We will be camping out and **there are no assurances that we will be in a campground every night.** **Cold** temperatures are **very likely.** **Wind, snow and cold rain** are possibilities. Please be prepared to be comfortable in these conditions. We will be doing some moderate hiking, so please bring adequate walking shoes as well.

No alcohol or drugs allowed at school functions. Use of these substances is grounds for immediate removal from the trip and a long bus ride home at your expense.

You may wish to bring some extra cash for junk food, visitor center trinkets, or other items essential to survival. Cell phone coverage is spotty throughout the region.

Suggested Equipment

SPACE IS AT A PREMIUM: PLEASE PACK AS COMPACTLY AS POSSIBLE!

Personal:

Warm Sleeping Bag	Foam Pad
Personal Toilet Kit	Day Pack
Eating utensils, cup, plate	Poncho or rainsuit
Warm jacket or coat (layers)	Warm hat
Walking shoes	Gloves or mittens
Changes of clothes	Flashlight (two)
Sunglasses	Extra batteries
Sunscreen	Toilet Paper
Clipboard, Pen, Pencils	Paper
Towel	Canteen
Lip balm	Ground cloth

Group

Tent	Cleaning supplies
Cooking utensils	Ice Chest
Stove	Lantern

Optional:

Camera	Rock hammer
Extra blanket	Small folding chair
Small pillow	

Upon satisfactory completion of this course, the student should be prepared to:

1. Identify the characteristic rock, fossil, and mineral specimens, landforms, and geologic structures found in Death Valley National Park and adjacent parts of the Basin and Range and Mojave Desert provinces.
2. Model the geologic history of Death Valley National Park based on field observations of rock and structure relationships