

INTRODUCTORY FIELD GEOLOGY SUMMER 2026

UNM Department of Earth and Planetary Sciences
EPS 319L -- 4 credit hours, for Advanced Undergraduates
May 18 through June 5, 2026



Summer Field Course Dates: May 18th - June 5th, 2026

Course Registration Window: April 6th – May 15th, 2026

This course focuses on field investigation of the stratigraphy and structure of New Mexico rocks and landscape evolution. Using localities with spectacular exposure of interesting structures and landforms in western and northern New Mexico, projects begin at a basic level and expand in scope and geologic complexity as the course progresses. Students learn to collect and interpret field samples and data, prepare detailed maps, cross sections, and stratigraphic sections, synthesize data to answer a research question, and present their results and interpretations. Projects will involve camping, with students providing their own personal gear (tent, sleeping bag, etc.). Meals while camping will be provided via group cooking.

Please keep in mind that field camp is an immersive experience and you must be present all days of this course, including weekends. You will not be able to work or plan for any other activities during this period.

Prerequisites: Mineralogy with lab (EPS 301/EPS 302L or equivalent) and Petrology (EPS 303L or equivalent)

Expenses: Course fee \$550, tuition based on UNM regents' determination (for reference, summer 2025 in-state tuition was ~\$1,470 for a 4-credit course). The EPS department provides a stipend for UNM EPS students taking the course, which will offset the cost of the course fees.

For additional information, email the course instructors:

- Dr. Tyler Mackey (tjmackey@unm.edu)
- Dr. Marisa Repasch (mrepasch@unm.edu)

Teaching Assistants for Summer 2026:

- Miranda Noonan
- Esteban Lopez Murillo
- David Giovannetti-Nazario

Tentative Itinerary (subject to change):

Date	Day	Project	Location	Detailed activities	Accommodations
5/18/26	Monday	Intro	Northrop Hall	8:30 am – ~2:00pm; Introductions, Background presentations, build map board, reading assignment, Field/camping gear check	Students and instructors return home for the night
5/19/26	Tuesday	Intro + half-day field trip	Northrop Hall	8:30 am – 4:00pm; Laser rangefinder, GPS activity, field trip to Placitas	Students and instructors return home for the night
5/20/26	Wednesday	Intro + half-day field trip	Northrop Hall	8:30 am – 4:00pm; field trip to Sandia foothills @ La Cueva Canyon	Students and instructors return home for the night
5/21/26	Thursday	Tentative Socorro Lake Ancestral Rio Grande Field Trip	Meet at Northrop Hall	6:00 am - 7:00 pm	Students and instructors return home for the night
5/22/26	Friday	Drive to Questa	Meet at Northrop Hall	Meet 10:00; Depart 10:30; Drive to Wild Rivers (~3.5 hr); Stops at Embudo Gaging Station, RG Gorge Visitor Center (Pilar), RG Gorge Bridge	Camping - Abiquiu reservoir?
5/23/26	Saturday	Taos Plateau/RG Gorge	Questa, NM	Project 1: Mapping at RG Gorge	Camping - Wild Rivers - El Aguaje (vault toilets)
5/24/26	Sunday	Taos Plateau/RG Gorge	Questa, NM	Project 1: Mapping at RG Gorge	Camping - Wild Rivers - El Aguaje (vault toilets)
5/25/26	Monday	Taos Plateau/RG Gorge	Questa, NM	Project 1: Mapping at RG Gorge	Camping - Wild Rivers - El Aguaje (vault toilets)
5/26/26	Tuesday	Taos Plateau/RG Gorge	Questa, NM	Project 1: Mapping at RG Gorge	Camping - Wild Rivers - El Aguaje (vault toilets)
5/27/26	Wednesday	Taos Plateau/RG Gorge	Questa, NM	Project 2: Lake Alamosa paleoshorelines	Camping - Wild Rivers - El Aguaje (vault toilets)
5/28/26	Thursday	Travel to Albuquerque	Questa --> ABQ	Travel Day; Drive Questa --> Albuquerque; Day off in ABQ	Sleep at Home
5/29/26	Friday	Drive to Grants; start Bonita Canyon Mapping	ABQ --> Grants	Drive ABQ --> Bonita Canyon; Mini mapping project: Bonita Canyon	Camping - Bonita Canyon BLM (no facilities)
5/30/26	Saturday	Bonita Canyon	Grants, NM	Project 3: Structural Mapping - Bonita Canyon	Camping - Bonita Canyon BLM (no facilities)
5/31/26	Sunday	Bonita Canyon	Grants, NM	Project 3: Structural Mapping - Bonita Canyon	Camping - Bonita Canyon BLM (no facilities)
6/1/26	Monday	Bonita Canyon	Grants, NM	Project 4: Volcanics near Grants	Camping - Bonita Canyon BLM (no facilities)
6/2/26	Tuesday	Travel	Grants --> ABQ	Travel Day; Depart Bonita Canyon - return to ABQ; stop at sandstone bluff overlook and Zuni-Acoma trail	Students and instructors return home for the night
6/3/26	Wednesday	Project Synthesis	Northrop Hall	Data analysis; ArcGIS work; Work on Oral presentations	Students and instructors return home for the night
6/4/26	Thursday	Project synthesis	Northrop Hall	Data analysis; ArcGIS work; Work on Oral presentations	Students and instructors return home for the night
6/5/26	Friday	Final Presentations	Northrop Hall	Data analysis; ArcGIS work; Oral presentations	Students and instructors return home for the night

Packing List for EPS 319L

We will be camping for a large portion of field camp, and you can expect to be hiking daily. Please make sure you have the essential gear to stay warm, dry, and comfortable during these days. Use this as a guide and checklist when packing for field camp.

Shelter

- Tent**** (two-person tent is most comfortable for you and your things)
- Sleeping pad**** (a cushion that goes under your sleeping bag for comfort (e.g., Therm-a-Rest Z-lite sleeping pad))
- Sleeping bag**** (it does get cool at night, so a 20° F might be necessary if you get cold easily; a 40°F sleeping bag may also work)
- Pillow** (a camping pillow or your bedroom pillow, whatever will help you sleep well!)
- Camp chair** (a collapsible chair; you can get one for \$10-\$20 at Walmart)
- Sheet or sleeping bag liner** (optional)

Clothing

- Underwear and socks** (bring plenty for all the days we will be in the field)
- Long pants** (at least 2 pairs)
- Shorts** (personal preference)
- Long-sleeve, lightweight shirts** (e.g., sun shirts or button up field shirts)
- T-shirts** (enough to change every 2-3 days)
- Insulated jacket** (e.g., puffy jacket)
- Fleece jacket/sweatshirt**
- Warm hat/gloves**
- Sturdy and comfortable hiking boots** (required!)
- Camp shoes** (sneakers, crocs, sandals)
- Sunglasses**
- Hat** (baseball cap or wide-brimmed sun hat)
- Rain jacket** (can also serve as a wind breaker or insulating layer)
- Rain pants** (we will be in New Mexico, so we may not see much rain during field camp, but these are good to have if we do)

Personal gear

- Duffel Bag(s)** – please use a large duffel bag to contain all your clothing and camping gear. You may want two duffel bags, one for your shelter and one for your clothing/personal gear.
- Field Daypack** (>20-liter backpack that's large enough to hold 3-4 liters of water, food, rain jacket/extra layers, office supplies, etc.)
- Water bottles and/or Camelbak water bladder** (*need to carry 3-4 liters of water!)
- Headlamp**** (e.g., Black Diamond Astro 300 or Petzl Tikkina)
- Sandwich box** (simple tupperware container for your lunch)
- Complete toiletry kit** (everything you need for your daily hygiene routine)
- Glasses/contact lenses** (bring extras!) (if applicable)
- Personal travel size hand sanitizer**

- Towel
- Cup or mug (useful for coffee/tea/hot chocolate in the mornings)
- Sunscreen
- Bug spray
- Pocketknife/multitool (optional)
- Battery block/power bank (optional, for charging phones in your tent)

Office supplies

- Geology Field Pouch Kit** (can purchase at UNM bookstore; includes protractor, ruler, field hip-belt pouch)
 - If you do not buy the kit from the bookstore, you will need to buy these items separately:
 - Protractor
 - Ruler
 - Pens/pencils/eraser
 - Geology field pouch to carry field notebook, pens, etc. (e.g., Plateau Design or similar)

Items provided by UNM

- Wag Bag
- Field Notebook
- Rock hammer
- Communal power bank
- Cooking supplies – camp kitchen and all food provided on field days
- Hand lens (we recommend having your own, but we have a few if needed)
- Map boards, mylar, basemaps, etc.
- Colored pencils
- GPS unit and Brunton

Camping Gear Rentals

You can rent sleeping bags, tents, sleeping pads, and headlamps from the **UNM Outdoor Adventure Center:
<https://recservices.unm.edu/outdoor-adventure-center/outdoor-rental-resource-center.html>

Other considerations:

Going to the bathroom in the backcountry

There will be vault toilets at the Rio Grande del Norte campsite, but not at the El Malpais campsite. We will set up a shared group toilet (Reliance Luggable Loo) and we will try to stop at vault toilets at nearby trailheads at least once per day. If you are worried about the bathroom situation, you could consider purchasing your own backcountry poop kits. Here are some helpful links:

<https://www.rei.com/learn/expert-advice/hygiene-sanitation.html>

<https://www.rei.com/product/249300/pact-outdoors-pack-out-kit-package-of-6>

<https://www.rei.com/product/182956/kula-cloth-reusable-antimicrobial-pee-cloth>

Tips for Buying Outdoor/Camping Gear

Note on Tents:

- If you purchase your own tent, chose a quality brand and look for a 2-person dome-style tent. Brands like Coleman, Stoic, Kelty, and ALPS Mountaineering offer tents ~\$100-150 that should hold up for the duration of field camp. Tents <\$100 are not likely to be durable and you may not be happy when we're in the field.
- Please **avoid** bringing large >3-person tents, as they take up space in both the vehicles and at our shared campsites.

Note on Water:

- Please bring enough water bottles and/or water bladders to carry 3-4 liters of water with you in the field.
- A great option would be to purchase a 3-liter water reservoir/hydration bladder, such as the CamelBak Crux 3-Liter, which you can purchase on amazon.

Where to buy affordable camping gear:

Outdoor Regear (warehouse of used outdoor gear at reduced prices)

4520 Alexander Blvd NE
Albuquerque, NM 87107

Amazon

For example, you can find a canvas [125 liter duffel bag \(30"x18"\)](#) for ~\$50.

Sierra (the TJ Maxx of outdoor gear and apparel)

<https://www.sierra.com/>

Walmart

Great place to find a good, affordable camp chair. For example, the Ozark Trail quad folding camp chairs, or backpacking chairs.

REI

High quality outdoor gear, but difficult to find gear at a low cost.