***INTRODUCTORY FIELD GEOLOGY SUMMER 2024***



**University of New Mexico Department of Earth and Planetary Sciences**

**E&PS 319L -- 4 credit hours, for Advanced Undergraduates**

**May 13 through June 3, 2024**

**Prerequisites**: mineralogy, petrology, sedimentology-stratigraphy, structural geology.
**UNM students must complete and submit the field camp application form by March 29, 2024 at 4:00 pm.**

This course focuses on field investigation of the stratigraphy and structure of New Mexico rocks and landscape evolution, from the Paleozoic to the modern. Using localities with spectacular exposure of interesting structures and landforms in central 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. Part of the course is based on day-trips from Albuquerque. Other projects will be conducted in the Jemez Mountains and Questa, NM and thus will involve camping. Students provide their own personal gear (tent, sleeping bag, etc.) but meals will be done via campaign-style group cooking. Camping gear can be rented from the [UNM Outdoor Adventure Center](https://recservices.unm.edu/outdoor-adventure-center/index.html), and we will work to secure reduced cost gear rentals for students attending field camp.

**\*Field camp is an immersion experience (like taking an immersion language course); do not plan to work on other major activities during this period. \***

**For additional information email Dr. Tyler Mackey or Dr. Marisa Repasch**

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**Tentative schedule** (beginning and end dates are set, but project dates may shift):

**Monday May 13**: Introductory meeting for 319L, Northrop Hall, UNM, begins 9 AM. Field gear checks.

**First Project** - 3 days (May 14-16): Rio Grande sediment transport and anthropogenic impacts on sediment grain size; Based out of Albuquerque.

**Second Project** – 4 days (May 17-20): Quaternary and Neogene mapping in the northern Rio Grande Rift; River incision study of RG Gorge; Camping at Rio Grande del Norte, Wild Rivers Recreation Area

**Third Project** – 5 days (May 21-25): Geophysics project along the Gallina Fault, Jemez Mountains; Camping near Jemez Springs, NM.

**Fourth Project** – 5 days (May 26-May 30): Geologic mapping, stratigraphy, and structural analysis near San Ysidro, NM; camping near Jemez Springs, NM.

**Field Camp Project Synthesis** – 4 days (May 31-June 3): Laboratory analyses, data synthesis, interpretation, poster design, and finish the course with poster presentations on the last day.

**Tentative Itinerary**

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| **Date** | **Day** | **Project** | **Location** |
| 5/13/24 | Monday | Introduction to Field Camp; Gear checks | Northrop Hall |
| 5/14/24 | Tuesday | Rio Grande sedimentology | Rio Grande near ABQ |
| 5/15/24 | Wednesday | Rio Grande sedimentology | Rio Grande near ABQ |
| 5/16/24 | Thursday | Rio Grande sedimentology | Rio Grande near ABQ |
| 5/17/24 | Friday | Quaternary/Neogene mapping | Questa, NM |
| 5/18/24 | Saturday | Quaternary/Neogene mapping | Questa, NM |
| 5/19/24 | Sunday | Quaternary/Neogene mapping | Questa, NM |
| 5/20/24 | Monday | Questa Molybdenum Mine Visit | Questa, NM |
| 5/21/24 | Tuesday | Intro to Geophysics Project | Northrop Hall |
| 5/22/24 | Wednesday | Geophysics project | Jemez Mountains, NM |
| 5/23/24 | Thursday | Geophysics project | Jemez Mountains, NM |
| 5/24/24 | Friday | Geophysics project | Jemez Mountains, NM |
| 5/25/24 | Saturday | Geophysics project  | Jemez Mountains, NM |
| 5/26/24 | Sunday | San Ysidro mapping project | San Ysidro, NM |
| 5/27/24 | Monday | San Ysidro mapping project | San Ysidro, NM |
| 5/28/24 | Tuesday | San Ysidro mapping project | San Ysidro, NM |
| 5/29/24 | Wednesday | San Ysidro mapping project | San Ysidro, NM |
| 5/30/24 | Thursday | San Ysidro mapping project | San Ysidro, NM |
| 5/31/24 | Friday | Project synthesis; laboratory analyses | Northrop Hall |
| 6/1/24 | Saturday | Project synthesis and poster design | Northrop Hall |
| 6/2/24 | Sunday | Project synthesis and poster design | Northrop Hall |
| 6/3/24 | Monday | Student poster presentations | Northrop Hall |