Course Change Request

New Course Proposal

Date Submitted: 12/03/24 3:41 pm

Viewing: GEOL 301 : Geological Field Experience

Last edit: 01/07/25 8:38 am

Changes proposed by: ggilleau

Programs referencing this course

SC-BA-GEOL: Geology, BA

SC-BS-GEOL: Geology, BS

In Workflow

1. **AOES Curriculum Committee**
2. **AOES Chair**
3. **SC Curriculum Committee**
4. SC Assistant Dean
5. Assoc Provost-Undergraduate
6. Registrar-Courses
7. Banner

Approval Path

1. 12/04/24 2:32 pm Barry Klinger (bklinger): Approved for AOES Curriculum Committee
2. 12/04/24 3:20 pm Mark Uhen (muhen): Approved for AOES Chair

Are you completing this form on someone else's behalf?

No

Effective Term: Fall 2025

Subject Code: GEOL - Geology

Course Number: 301

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Geological Field Experience

Banner Title: Geological Field Experience

Will section titles vary by semester? No

Credits: 1-3

Schedule Type: Fieldwork

Hours of Other Contact Hours per week: 1.25

Repeatable: May be repeated within degree (RD)

Max Allowable Credits: 6

Default Grade Mode: Undergraduate Regular

Recommended Prerequisite(s):

Recommended Corequisite(s):

Required Prerequisite(s) / Corequisite(s) (Updates only):
GEOL 101, GEOL 102, GEOL 103, GEOL 104, and GEOL 302

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

Geological field data acquisition and analysis. This course will be centered on a single field experience during which students will learn basic geologic field skills used to investigate, analyze, and interpret igneous, metamorphic, and sedimentary rocks, as well as paleontological, geomorphological, and structural features. Research, presentation, and writing exercises will occur before and after the main field experience. Notes: Includes fieldwork.

Justification:

What: creating a new field experience course that is more accessible for our undergraduate students.

Why: AOES has traditionally required the 6-credit GEOL 404 for the BA in geology and the BS in geology with a concentration in general geology. This course involves a continuous 6-week summer commitment and a trip to Italy, which is not feasible both financially and logistically for some students. We therefore are proposing to increase accessibility to our degree programs by offering several shorter field experiences that each could count towards a total of 6 credits of field experience required for these degrees. This particular course involved a 1-week spring break field trip to Death Valley, California, which we ran with a generic course code in Spring 2024. It was a highly successful course, and we plan to run a similar 1-week spring break field trip to Utah in Spring 2025. This new course proposal will formalize the course, and allow us to run a series of field experiences that each will be between 1 and 3 credits, thus allowing students to gain field skills and satisfy the degree requirements in a more accessible way.

Does this course cover material which crosses into another department? No

Learning Outcomes:

- Learn basic geological field skills such as note taking and stratigraphic and structural measurements
- Investigate, analyze, and interpret igneous, metamorphic, and sedimentary rocks
- Examine and interpret paleontological, geomorphological, and structural features in the field
- Research, present, and write about the geologic history of the field area

Will this course be scheduled as a cross-level cross listed section? No

Attach Syllabus

GEOL 301_Syllabus.pdf

Additional Attachments

Staffing:

Drs. Geoff Gilleaudeau, Brittany Hupp, Daniel Segessenman

Relationship to Existing Programs:

Will partially satisfy the fieldwork requirements for the Geology BA and BS programs

Relationship to Existing Courses:

A potential alternative for students to the 6-week summer GEOL 404 course

Additional Comments:

Reviewer Comments

Key: 18842

GEOL 301: Geological Field Experience
Spring 2025 Syllabus

Professors: Drs. Geoff Gilleaudeau (ggilleau@gmu.edu), Brittany Hupp (bhupp@gmu.edu), Daniel Segessenman (dsegesse@gmu.edu)

*In all email communications regarding this course, please include all professors.

Pre- and Post-Trip Meeting Time: Wednesdays 10:30 to 11:45am
Pre- and Post-Trip Meeting Place: Exploratory Hall Room 1005
Pre- and Post-Trip Meeting Dates: 1/29, 2/5, 2/12, 2/19, 2/26, 3/5, 3/26, 4/2
Death Valley Field Trip Dates: 3/8 to 3/15 (times TBD based on flights)

Books/Recommended Readings: "Geology underfoot in Death Valley and eastern California" by Allen F. Glazner, Arthur Gibbs Sylvester, and Robert P. Sharp; "The broken land: Adventures in Great Basin geology" by Frank L. DeCourten

Course Goals:

An old adage states that you are only as good of a geologist as the quantity of rocks you have seen in the field. Through your geology major at GMU, you are exposed to tons of valuable information through lectures and labs, but nothing substitutes for the experience of seeing geological features in their natural environment. In this class, we have the opportunity to explore one of the most exciting geological regions in the world first-hand—the Death Valley region of eastern California and southwestern Nevada. The course will be divided into three parts: 1) familiarizing ourselves with the geology of this region before we go in the field; 2) the field trip itself (!); and 3) summarizing the information we learned once we return from the field. The diversity of geological features we will see and discuss in this course will be truly astounding—from the Precambrian to the Modern, and covering volcanology, sedimentology, geomorphology, paleontology, and structural geology, among others. We will also have a chance to visit important cultural sites, putting our geological adventures into perspective.

"The mountains are calling, and I must go."
-John Muir

Grading Scheme:

10%: Pre- and post-meeting attendance and participation
30%: Pre-meeting group presentation
30%: Field trip participation
30%: Post-meeting field guide write-up

*Prior to the field trip, each person will be assigned a group (see below), and that group will be responsible for an ~30 to 40-minute presentation on some aspect of Death Valley geology. These presentations will help us familiarize ourselves with the geological features we will see in the field.

A guide and grading rubric for these presentations is presented in a separate document on Blackboard.

*Each person will be given a geological field notebook to use when we are in the field. Your responsibilities in the field are two-fold: 1) you must be punctual and follow the code of conduct and all logistical guidelines provided by the professors to keep the trip running smoothly; and 2) you should be making detailed geological notes on each locality we visit. In the field, the professors will provide guidance on your notetaking. Failure to be punctual, follow the code of conduct, or causing problems with the logistical aspects of the trip will be considered grounds for losing points for "Field Trip Participation" at the discretion of the professors.

*After the trip, we will be preparing a Death Valley Field Trip Guidebook. Each group will be responsible for writing one chapter of that guidebook based on what we saw in the field. It should include photographs taken in the field, as well as text with citations. A guide and grading rubric for these field guide chapters is presented in a separate document on Blackboard.

*You must attend 5 out of 6 of the pre-trip class meetings in order to attend the trip unless expressly given permission by the professors.

Final Grading Scale:

97 to 100% = A+
93 to 97% = A
90 to 93% = A–
87 to 90% = B+
83 to 87% = B
80 to 83% = B–
77 to 80% = C+
73 to 77% = C
70 to 73% = C–
60 to 70% = D
Less than 60% = F

Class Schedule

Date	Presentation Topic	Student Presenters	Goal for Remainder of Class
1/29	Syllabus and introductions	Professors	Draft code of conduct together
2/5	Precambrian geology of Death Valley	Group A	Go over medical forms
2/12	Paleozoic geology of Death Valley	Group B	Go over and discuss packing list
2/19	Mesozoic geology of Death Valley	Group C	Go over field notebook and sketching/notetaking strategies
2/26	Cenozoic geology of Death Valley	Group D	Go over how to approach an outcrop in the field
3/5	Modern geology of Death Valley	Group E	Prepare a grocery list
3/8 to 3/15	FIELD TRIP!	FIELD TRIP!	FIELD TRIP!
3/19	NO CLASS	NO CLASS	NO CLASS
3/26	Work on guidebook chapters	Everyone	Work on guidebook chapters
4/2	Work on guidebook chapters	Everyone	Work on guidebook chapters
4/9	Guidebook chapters due via Blackboard (11:59pm)	Guidebook chapters due via Blackboard (11:59pm)	Guidebook chapters due via Blackboard (11:59pm)

Academic Integrity

The integrity of the University community is affected by the individual choices made by each of us. Mason has an Honor Code with clear guidelines regarding academic integrity. Three fundamental and rather simple principles to follow at all times are that: (1) all work submitted be your own; (2) when using the work or ideas of others, including fellow students, give full credit through accurate citations; and (3) if you are uncertain about the ground rules on a particular assignment, ask for clarification. No grade is important enough to justify academic misconduct. Plagiarism means using the exact words, opinions, or factual information from another person without giving the person credit. If you have any doubts about what constitutes plagiarism, please see us.

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http://ds.gmu.edu/ for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with us. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: ods@gmu.edu | Phone: (703) 993-2474

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Students must use their Mason email account to receive important University information, including communications related to this class. We will not respond to messages sent from or send messages to a non-Mason email address.

Policy on Chat GPT or other AI tools:

Chat GPT or other AI tools can be used to get started on researching a topic for the assignments for this class. However, you CANNOT turn in text for any assignment in this class that was written directly by Chat GPT or another AI tool. Any text handed in written by an AI tool will be given an automatic zero and be reported to the university academic integrity office. Handing in AI-written work is cheating.