

TENTATIVE SYLLABUS: Field Geology, GEO 4960

Summer 2018

FACULTY INFORMATION:

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COURSE DESCRIPTION:

A five-week intensive course in geologic mapping and field investigation. Prerequisite: A grade of C or better in Sedimentology & Stratigraphy (GEO 3410/3415) and Structural Geology (3510/3515), and advanced standing in program.

REQUIRED TEXT(S):

A field methods handbook will be provided.

STUDENT LEARNING OUTCOMES:

- 1) Knowledge of the physical world
Students will:
 - I. recall terminology
 - II. categorize elements of geology
 - III. recognize geologic trends
 - IV. summarize and illustrate fundamental principles, generalizations, and theories appropriate to physical geology
- 1) Inquiry and analysis
Students will:
 - i. show advanced proficiency in using field and lab methods systematically
 - ii. explore geology through data collection and analysis
 - iii. make logical interpretations from their collected data
- 3) Critical thinking
 - I. Students will integrate and evaluate data to derive conclusions regarding natural phenomena

COURSE ASSESSMENT TABLE:

	Week 1 Exercises	Week 2 Exercises	Week 3 Exercises	Week 4 Exercises	Week 5 Exercises
Knowledge	x	x	x	x	x
Inquiry and Analysis	x	x	x	x	x
Critical Thinking	x	x	x	x	x

COURSE OBJECTIVES:

- Learn and apply geologic field skills and geologic principles
- Produce maps based on collected field data
- Interpretation of geologic features

COURSE REQUIREMENTS:

Grading Policy:

	Week 1 Exercises	Week 2 Exercises	Week 3 Exercises	Week 4 Exercises	Week 5 Exercises
Percent	20%	20%	20%	20%	20%

Assignments will be due each week by Friday at 5pm. Due dates are subject to change.

Grading Scale:

100-94% = A	83-80% = B-	69-67% = D+
93-90% = A-	79-77% = C+	66-64% = D
89-87% = B+	76-74% = C	63-60% = D-
86-84% = B	73-70% = C-	<59% = F

GENERAL SUU POLICIES

Attendance Policy: Students are required to attend all class times.

Assignment policy: It is departmental policy that students do not receive completed assignments to keep. Assignments will be returned in class for review only, and must be returned to me by the end of the class period. Grades will be held for unreturned assignments. Students may review their work at any time in my office.

Academic Integrity: Scholastic dishonesty will not be tolerated and will be prosecuted to the fullest extent. You are expected to have read and understood Policy 6.33 Academic Integrity and the current issue of the student handbook (published by Student Services) regarding student responsibilities and rights.

ADA Statement: Students with medical, psychological, learning or other disabilities desiring academic adjustments, accommodations or auxiliary aids will need to contact the Southern Utah University Coordinator of Services for Students with Disabilities (SSD), in Room 206F of the Sharwan Smith Center or phone (435) 865-8022. SSD determines eligibility for and authorizes the provision of services.

Emergency Management Statement: In case of emergency, the University's Emergency Notification System (ENS) will be activated. Students are encouraged to maintain updated contact information using the link on the homepage of the *mySUU* portal. In addition, students are encouraged to familiarize themselves with the Emergency Response Protocols posted in each classroom. Detailed information about the University's emergency management plan can be found at <http://www.suu.edu/ad/facilities/emergency-procedures.html>

HEOA Compliance Statement: The sharing of copyrighted material through peer-to-peer (P2P) file sharing, except as provided under U.S. copyright law, is prohibited by law. Detailed information can be found at <http://www.suu.edu/it/p2p-student-notice.html>.

Disclaimer: Information contained in this syllabus, other than the grading, late assignments, makeup work, and attendance policies, may be subject to change with advance notice, as deemed appropriate by the instructor.

PROGRAM OF STUDY

Field Geology (GEO 4960), is a six credit course (semester system) structured to teach students the hands-on mechanics of field work and the preparation of geologic maps, cross sections and reports. This is an advanced-level course designed for students who have completed undergraduate geology studies and are able to proceed into advanced mapping, analysis and interpretation of geologically complex terrains.

Experience is gained by preparing maps using aerial photos, topographic maps, the transit compasses, and GPS methodologies. Honing observational and interpretive skills are stressed. Exercises include work in sedimentary, igneous, metamorphic and mineralized terrains, many of which are structurally complex. Stratigraphic and structural studies are combined in the form of 2 to 5 day map problems using topographic base maps, GPS, and air photos. In addition to making geologic maps, you will construct cross sections, plot structural data and write geological reports on selected areas.

A workday usually starts when the vans pull out at 7:30 a.m. and ends back at the university or campground about 5 p.m. Monday through Friday. The start and end times may vary with the weather. You will be informed of any changes. Weekends are free to explore the spectacular geology, culture, and scenery of the southwestern Utah area.

GENERAL COMMENTS and OFFICIAL FIELD POLICIES

- **First Day:** We will meet in room SC 010 at 8 am on the first day of class. We will have a short course introduction and then begin a project. You will need to be prepared for field work on the first day.
- **Private cars:** Private cars may not be used in the field. We will provide transportation. If you are interested in driving, please contact your instructor to get set-up as a driver. Compensation will be given.
- **Camping:** We will be camping some nights of field camp. You will need to bring your own camping equipment. A list of suggested gear can be found below.
- **Health and Accident Insurance:** All field trip participants are required to have some sort of health and accident insurance, which will cover them for the duration of the trip. You are not covered by the University during non-classroom hours. Bring the policy information.
- **Smoking:** The SUU vans and dorms are non-smoking areas.
- **Liquor:** Possession of or consumption of alcoholic beverages, including beer, is prohibited in the field, in SUU vans, and in SUU dorms.
<http://www.suu.edu/pub/policies/pdf/PP537University.pdf>
- **Drugs:** No drugs (except by prescription). <http://suu.edu/pub/policies/pdf/PP59DrugFree.pdf>
- **Pets:** No pets of any kind in the dorm or in the field.
- **Guests:** Visits by family and friends are welcome on the weekends. No one may have a "visitor" during class time.

- **Field partners:** The majority of projects involve working in pairs, both for physical security in the event of an injury and because much of the work involves cooperation of at least two people. The faculty will choose your partner for most of the projects.
- **Recreation:** Southern Utah University is located in the heart of one of the world's most varied geological areas. The campus is situated at the western edge of the Colorado Plateau and the eastern edge of the Basin and Range province. The base location is a beautiful, modern university campus only 64 miles from Zion National Park, 76 miles from Bryce Canyon National Park, and 22 miles from Cedar Breaks National Monument. It is within easy driving distance of Grand Canyon, Canyonlands, Arches, Capitol Reef and Great Basin National Parks, Glen Canyon National Recreation Area, and Las Vegas.

EQUIPMENT GUIDE

Field Dress Code - all students must wear boots that support the ankle and appropriate clothing (long pants are recommended while in the field). Also essential is an easily carried rain suit or poncho, and some type of hat. Beyond these, bring clothes suitable for fieldwork.

Minimal Day Gear (personal gear supplied by each student)

General Gear	Clothing and Sun Protection	Geology Gear
Day pack	Hiking boots	Field notebook(s)
2 liters of water	Hat	Hand lens
Lunch/snacks	Rain gear	Rock hammer
Pencils	Sunscreen, chapstick, etc.	Pencils

Minimal Camping Gear (personal gear supplied by student)

Camping	Cooking	Toiletries
Tent (you can share)	FOOD	Towel
Sleeping pad	Small cooking pots or pans	Personal hygiene supplies
Sleeping bag	Eating utensils	Insect repellent (recommended)
Warm clothes	Cook stove (if you have one)	
Flashlight or head lamp	Dish soap, sponge, etc.	

Shared Gear, Provided by SUU (students can also bring personal gear)

Geology Gear	Camp Supplies
Maps and aerial photos	Toilet paper
Brunton Pocket Transit	Assorted cooking utensils and camp stoves
Clipboards/Map boards	Portable toilets
Acid bottle	First aid kit
Field methods handbook	Water jugs
Ink pens, straight edges (for mapping)	Limited cooler space
Portable radios	
Jacob's Staff	