

# Wasatch-Uinta Field Camp

[www.fieldcamp.org](http://www.fieldcamp.org)

Summer 2017



## Instructors:

Dr. Phil Brown, University of Wisconsin (Director)  
Dr. Kurtis Burmeister, Univ. of the Pacific (Director)  
Dr. Michael Stewart, University of Illinois  
Dr. Scott Giorgis, SUNY Geneseo  
Dr. Russell Shapiro, CSU Chico  
Dr. Tyrone Rooney, Michigan State University  
Alex Bryk, UC Berkely  
Allie Macho, University of Arizona  
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## Teaching Assistants:

Ali Severson, CO School of Mines  
Erik Haroldson, University of Wisconsin  
Susan Krans, Michigan State University  
Alexis Lopez, University of the Pacific

## Course description

The Wasatch-Uinta Field Camp is a six-week capstone course designed to prepare students for successful careers in the geosciences. We emphasize scientific methodology and traditional techniques that provide a strong foundation for the broad range of modern technologies used by today's industry, academic, government and private workforces. Students learn to develop research strategies, collect field observations and measurements, compile detailed rock descriptions, measure stratigraphic sections, and construct geologic maps and cross sections. Our field exercises are located in geologically ideal locations in the Wasatch and Uinta mountains of Utah, the San Rafael Swell of southeastern Utah, Grand Teton National Park in Wyoming, and the Carlin-type gold deposits of Nevada. The Wasatch-Uinta Field Camp was established in 1967 by the University of Minnesota. The camp is operated by a consortium that currently includes the University of Minnesota-Duluth, University of Wisconsin-Madison, University of Illinois, and Michigan State University.

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## Prerequisites

As a general rule, students enrolling in field camp are expected to have completed courses in mineralogy, petrology (igneous, metamorphic, and sedimentary), structural geology, and stratigraphy. Students that have attended field camp without completing one or more of these courses typically have had difficulty with the curriculum.

## Topics

The curriculum is designed to provide field experiences in a wide variety of geological environments. It's your responsibility to make the most of this opportunity through hard work and interacting with the faculty. In general terms the curriculum is as follows. The schedule and particular projects may change from year to year.

- Week 1: Introduction to regional Mesozoic & Cenozoic stratigraphy, sedimentary rock and unit descriptions, geologic mapping of faults and folds, measuring stratigraphic sections
- Week 2: geologic mapping of faults and folds, ExxonMobil sequence stratigraphy short course
- Week 3: measuring stratigraphic sections, introduction to Proterozoic & Paleozoic stratigraphy
- Week 4: geologic mapping of volcanic and shallow intrusive igneous rocks
- Week 5: geologic mapping of igneous and metamorphic rocks, economic geology Newmont Gold economic short course
- Week 6: geologic mapping of igneous rocks and contact metamorphism

## Evaluation

Grades for all course-related deliverables (e.g., rock descriptions, geologic maps and cross sections, stratigraphic columns, short written reports, and exams) are determined jointly by the faculty. To help highlight areas for improvement while avoiding a counterproductive preoccupation with grades, scores for individual project elements are loosely divided according to rubrics into three bins: good, average, poor. These scores reflect the intelligence of your interpretations; the effort, neatness, clarity, accuracy, pertinence, and conciseness of your work; your industry and attitude in the field; and the intangible subjective impressions of your instructors.

Grades are not helped by sloppiness in work, spelling, grammar, attitude, and poor "field etiquette". Deadlines are strictly enforced. Early projects are designed as "learning" exercises, generally involve group work, and are graded accordingly. Later projects – including opportunities for individual work – carry additional weight.

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## Health & Safety

The Wasatch-Uinta Field Camp Safety Forms outline common environmental, health, and safety hazards, the expected standards of conduct, and the ramifications of policy violations at field camp. This document also discusses the safety precautions and strategies needed to minimize risk to yourself and others. It is important for you to evaluate the stated risks with regard to your own personal health and safety, request reasonable modifications ("accommodations") to course delivery, and modify your participation or attendance accordingly.

Download here: [Wasatch-Uinta Field Camp Safety Forms](#)

### Required Actions

1. Once you have downloaded the 2014 Wasatch-Uinta Field Camp Safety Forms, you must complete the following five steps. Your enrollment in the program is contingent upon the completion of these steps -- you will not be allowed to participate if you fail to do so:
2. Read and understand all of the sections in the Statement of Hazards & Standards of Conduct (pages 1-6 of the document).
3. Sign the Acknowledgement (page 7 of this document) indicating that you received, read, and understand the Statement of Hazards & Standards of Conduct.
4. Complete a Personal Medical Assessment form (pages 8-9 of the document).
5. Read and sign the official General Liability Waiver form (page 10 of the document). This waiver is specific to field camp only and must be completed in addition to any waivers required by your own university.
6. Submit your (1) signed Acknowledgement, (2) completed Personal Medical Assessment, and (3) signed General Liability Waiver (pages 7-10 of the document) to Dr. Burmeister via email OR regular mail on or before **1 APRIL**.

### Send electronic attachments via email

Please send only scanned forms saved *in PDF-format only*.  
Make sure "FORMS" or something similar appears in the subject line.

### Send paper copies via regular mail to:

Dr. Kurtis C. Burmeister  
COP Dept of Earth Science  
3601 Pacific Avenue  
Stockton, CA 95211

### Questions

If you have any questions about this Safety Statement, the Personal Medical Assessment form, the Field Camp General Liability Waiver, or any topic associated with field camp, please contact Dr. Burmeister. Please feel free to direct gender-sensitive questions to Dr. Gran.

**Dr. Kurt Burmeister**  
Univ. of Illinois, Univ. of the Pacific  
209-946-2398, [Email](#)

**Dr. Karen Gran**  
University of Minnesota Duluth  
218-726-7406, [Email](#)

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## Arriving at Camp

Camp always begins on a Sunday. Students must arrive at the Chateau Apres Lodge in Park City between noon (not before noon) and 6:00 PM for dinner and mandatory meeting on the first Sunday.

Park City is situated high in the Wasatch Mountains about 40 minutes east of the nearest major transportation hubs in Salt Lake City. For students arriving at the International Airport (SLC), the railroad depot, or the bus station in Salt Lake City, ground transportation can be arranged via local taxi service. In the past, All Resort Express has offered the best prices for service from Salt Lake City to Park City and offer a discount for making reservations in advance.

## **Luggage and Personal Gear**

Please limit yourself to a reasonable amount of luggage (1 or 2 large duffle bags, sleeping bag, tent). Bring a daypack large enough to carry your gear in the field (3-4 liters of water, rain gear, lunch, etc.) and to hold items you want with you on driving trips. Please check with your university representative if you plan to bring a bicycle. Soft-sided luggage is preferred – please avoid hard-sided suitcases and external frame packs. Excessively large baggage is not allowed.

## **Daily Schedule**

*Monday - Saturday*

- 6:30 - 7:15 AM: Breakfast
- 7:30 AM: We leave for the field regardless of disability created by the previous night's activities.
- 5:30 PM: Return to Chateau
- 6:00 PM: Dinner
- 7:00 PM: Faculty on duty, study hours
- 10:00 PM: Projects due (if applicable)

*Free time:* You will be expected to work on your maps or other projects on most evenings. Generally, you will have some free time on Sundays and some Saturdays to relax and recuperate.

*Meetings:* Mandatory evening or morning meetings will be scheduled as necessary -- generally in advance of each new project. Announcements for these meetings and other important information will be posted on a board in the dining room - be sure to check it regularly.

## **End of Camp**

Camp always ends on a Friday. Students should plan on leaving the Chateau after noon (not before noon) on the final Friday. If you must stay in Park City that Friday night, you will need to make arrangements to stay at a hotel or campsite.

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## **Course Materials and Resources:**

*Suggested textbooks*

- Compton, R. R., 1985. *Geology in the Field*. John Wiley Sons, New York, 398 p.
- Bevier, M.L., 2005. *Introduction to Field Geology* (1<sup>st</sup> ed): McGraw-Hill Ryerson, 191 p.

*Suggested Gear*

Please see the field camp website ([www.fieldcamp.org](http://www.fieldcamp.org)) for a complete list of suggested field, camping, and personal gear.

**Tentative schedule** (*subject to change – so stay informed and when in doubt, please ask*):

Date	Day	Activity
6/11	Sunday	Camp starts at dinner
6/12	Monday	First regional overview trip: Mesozoic and Cenozoic
6/13	Tuesday	Peoa
6/14	Wednesday	Peoa
6/15	Thursday	Deer Creek
6/16	Friday	Deer Creek
6/17	Saturday	Deer Creek
6/18	Sunday	Day off
6/19	Monday	Chalk Creek
6/20	Tuesday	Chalk Creek
6/21	Wednesday	Chalk Creek
6/22	Thursday	San Rafael Swell
6/23	Friday	San Rafael Swell
6/24	Saturday	San Rafael Swell
6/25	Sunday	Day off
6/26	Monday	Ankareh Ridge
6/27	Tuesday	Second regional overview trip: Precambrian and Paleozoic
6/28	Wednesday	Antelope Island
6/29	Thursday	Grand Tetons
6/30	Friday	Grand Tetons
7/1	Saturday	Grand Tetons
7/2	Sunday	Grand Tetons
7/3	Monday	Bonanza Flats
7/4	Tuesday	Bonanza Flats
7/5	Wednesday	Keetley Volcanics
7/6	Thursday	Bonanza Flats
7/7	Friday	Bonanza Flats
7/8	Saturday	Day off
7/9	Sunday	Day off
7/10	Monday	Wasatch Igneous Belt - Cottonwood Canyon
7/11	Tuesday	Wasatch Igneous Belt - Cottonwood Canyon
7/12	Wednesday	Economic geology, Carlin, NV
7/13	Thursday	Economic geology, Carlin, NV
7/14	Friday	Economic geology, Carlin, NV
7/15	Saturday	Economic geology, Carlin, NV
7/16	Sunday	Day off
7/17	Monday	Albion Basin - Individual Project
7/18	Tuesday	Albion Basin - Individual Project
7/19	Wednesday	Jupiter Peak - Individual Project
7/20	Thursday	Jupiter Peak - Individual Project
7/21	Friday	Camp ends at noon