

**GEO660: Field Geology Summer 2017 Sign Up Forms
DUE FEBRUARY 20, 2017**

Attached are the following forms for Geo. 660, Summer, 2017:

1. Sign-up Form (2 pages)
2. UT Medical Information and Emergency Medical Authorization Form (2 pages)
3. UT Liability Release Form (1 page)
4. JSG Field Trip/Field Course Policy Statement (1 page)

Also contained in this packet for your information is:

- An equipment list
- A short discussion of gear for Geo660

Please note the following:

- The class this year departs on **Sunday, May 28** and returns **Saturday, July 8**. The dates for the two halves are: Geo660A-May 28 to June 17; Geo660B-June 18 to July 8.
- As planning for this summer progresses, information is posted on the Geo660 website at <http://www.geo.utexas.edu/courses/660>. The site, which is currently being updated for 2017, also contains information about the class and an extensive collection of photos. Please check it weekly for announcements.

Before February 20, please fill out and return to **Mona Finucane in JGB 2.112D** the following:

- 1) Sign-up Information Form**
- 2) Medical Information and Emergency Medical Authorization;**
- 3) Liability Release**
- 4) JSG Field Course Policy Form**

Thank You!

SIGN-UP INFORMATION FOR GEO660: FIELD GEOLOGY

Please provide the following contact information (legibly, please):

Your Name: _____

UT EID: _____

Local Address: _____

Address (cont.) _____

City: _____

Work Phone: _____

Home Phone: _____

Cell Phone: _____

Email Address: _____

Person to Contact in an Emergency:

Name: _____

Street Address: _____

Address (cont.) _____

City: _____

State/Province: _____

Zip/Postal Code: _____

Country: _____

Work Phone: _____

Home Phone: _____

Cell Phone: _____

Email Address: _____

Place a check next to your present status/major:

- | | |
|--|---|
| <input type="checkbox"/> B.S. General Geology | <input type="checkbox"/> B.S. Hydrogeology |
| <input type="checkbox"/> B.S. Geophysics | <input type="checkbox"/> B.A. Geology |
| <input type="checkbox"/> Special Student/NDC | <input type="checkbox"/> Graduate Student |
| <input type="checkbox"/> B.S. Geosystems/Engineering | <input type="checkbox"/> Other (please explain) |

I will attend:

- | | |
|---|----------------------------------|
| <input type="checkbox"/> Geo660A | <input type="checkbox"/> Geo660B |
| <input type="checkbox"/> Both Geo660A and B | |

N.B. Both Geo660A and 660B are required for B.S. hydrogeology and geophysics students who do not otherwise have field/work credit in the form of an internship or credit for the Hydro. Field Methods class

and/or the Karst Methods class. Please check with an undergraduate advisor if you are uncertain about your field course requirements.

I have passed the following prerequisite courses with a grade of C or better:

_____ Geo420K Introduction to Field and Stratigraphic Methods

_____ Geo428: Structural Geology

Please indicate whether you are:

_____ Willing to drive on a regular basis

_____ Willing to be a relief driver

_____ Not interested in driving

Please provide your driver's license number (also state, if not TX). We need everyone's.

_____TX Other:_____

_____ I understand that I must have health insurance to participate in this course.

Enter the name of your health insurance provider and policy number in the space below. If you do not have health insurance now, write "no health insurance" and give your date of birth. Health insurance can be purchased for the class through an arrangement with the University.

Provider_____Policy #_____

UT AUTHORIZATION FOR EMERGENCY MEDICAL TREATMENT- ADULT

I. Medical Information (Please type or print legibly)

a. Name _____
(last, first, middle)

Address _____
(street or p.o. box, city, state, zip code)

Telephone Number: Day () _____ Night () _____

b. Name of Nearest Relative: _____
(last, first, middle)

Address _____
(street or p. o. box, city, state, zip code)

Telephone Number: Day () _____ Night () _____

c. Physician's Name: _____

Address _____
(street or p. o. box, city, state, zip code)

Telephone Number: Office() _____ Emergency () _____

d. Dentist's Name: _____

Address _____
(street or p. o. box, city, state, zip code)

Telephone Number: Office () _____ Emergency () _____

e. Health Insurance Company Name: _____

Policy Number: _____ Telephone () _____

II. Emergency Medical Authorization

I, the undersigned, do hereby authorize The University of Texas at Austin and its designated representatives to consent, on my behalf, to any medical/hospital care or treatment to be rendered upon the advice of any licensed physician. I agree to be responsible for all necessary charged incurred by any hospitalization or treatment rendered pursuant to this authorization.

The effective dates of this authorization are May 18 to June 28, 2014. I am eighteen years of age or older, have read the above authorization, and confirm that the information contained therein is true and accurate.

(Signature of Individual Providing Authorization)

Date _____, 20____

Please list below any health concerns your instructors should know about, including any medications, allergies, allergies to medicine or any other medical problems. Be specific and thorough.

Current Medications: _____

Allergies, including those to medicines: _____

Health Concerns:

RELEASE AND INDEMNIFICATION AGREEMENT

The University of Texas at Austin

PARTICIPANT: _____

Name (last name first- please print or type)

Address

City, State, Zip Code

DESCRIPTION OF ACTIVITY OR TRIP: *Field geology class, Geology 660A and/or Geology 660B*

MODE OF TRANSPORTATION: *University vehicles*

LOCATION(s) of activity or trip: *Various field sites in TX, NM, CO, UT, MT, and WY*

DATE(s) of activity or trip: FROM May 28 2017 TO July 8 2017

I, the above named student, am eighteen years of age or older and have voluntarily applied to participate in the above Activity or Trip. I acknowledge that the nature of the Activity or Trip may expose me to hazards or risks that may result in my illness, personal injury or death and I understand and appreciate the nature of such hazards and risks.

In consideration of my participation in the Activity or Trip, I hereby accept all risk to my health and of my injury or death that may result from such participation and I hereby release The University of Texas at Austin, its governing board, officers, employees and representatives from any and all liability to me, my personal representatives, estate, heirs, next of kin, and assigns for any and all claims and causes of action for loss of or damage to my property and for any and all illness or injury to my person, including my death, that may result from or occur during my participation in the Activity or Trip, whether caused by negligence of The University of Texas at Austin, its governing board, officers, employees, or representatives, or otherwise. I further agree to indemnify and hold harmless The University of Texas at Austin and its governing board, officers, employees, and representatives from liability for the injury or death of any person(s) and damage to property that may result from my negligence or intentional act or omission while participating in the described Activity or Trip.

I HAVE CAREFULLY READ THIS AGREEMENT AND UNDERSTAND IT TO BE A RELEASE OF ALL CLAIMS AND CAUSES OF ACTION FOR MY INJURY OR DEATH OR DAMAGE TO MY PROPERTY THAT OCCURS WHILE PARTICIPATING IN THE DESCRIBED ACTIVITY OR TRIP AND IT OBLIGATES ME TO INDEMNIFY THE PARTIES NAMED FOR ANY LIABILITY FOR INJURY OR DEATH OF ANY PERSON AND DAMAGE TO PROPERTY CAUSED BY MY NEGLIGENCE OR INTENTIONAL ACT OR OMISSION.

Signature of Student

Date signed: _____ 2 _____

Printed Name of Student

Signature of Witness

Date signed: _____ 2 _____

Printed Name of Witness

Jackson School of Geosciences Department of Geological Sciences
Field Trip and Field Course Policies

The Department of Geological Sciences conducts numerous field activities (field trips, field geology courses, and field research). Because students are exposed to a variety of situations and experiences that are different from those found in the classroom, special rules of conduct are necessary. Traveling and field work involves hazards and risks, so each person must exercise care to avoid personal injury to others. Examples of dangers specific to field work are the use of geologic picks, poisonous snakes, tick bites, toxic plants, falling, and slippery rocks encountered when hiking on steep slopes or crossing streams. Other dangers, as well as damage to property, may be created by carelessness. The Department has access to certain private properties and use of private facilities whose future availability will depend upon proper consideration for these resources by everyone. Students who abuse University or personal property during a field trip, or who jeopardize the health and safety of other people, will be required to leave the field trip immediately. These persons will be subject to appropriate academic evaluation and possible disciplinary action by the Office of the Dean of Students.

The Department has the following rules and recommendations which apply to field activities.

1. **Liability and Waiver.** The University requires all students to sign a liability release form (accompanying form). This form must be signed and returned before a student is allowed to participate in field activities.
2. **Medical Care.** A medical form must be filled out by all students. Any student who has medical problems (e.g. asthma, diabetes, metabolic disorders, allergies, trick knees) should inform the field trip leader or supervising professor. If you require special medications, it is your responsibility to insure that they are available when needed. Field activities are sometimes in very remote areas, and immediate medical assistance is not possible.
3. **Health Insurance.** Every student taking a *field course* must have medical insurance. Student health insurance is available at minimal cost through the Student Health Center (471-4955). Students taking field trips as part of normal classes who do not have health insurance will be provided with insurance for the field trips only.
4. **Clothing and protective cover.** Wear suitable clothes. We recommend wearing a hat, long pants, and good hiking boots in some areas. These help prevent sunstroke, insect bites, and bad encounters with cacti or thorny shrubs. You may want to bring insect repellent, and we also suggest the use of sunscreen. Consider significant possibilities of rain or cold weather.
5. **General field hazards.** Insects, poisonous snakes, and toxic plants may be found on any field trip or course. Wearing suitable clothing and boots helps reduce these hazards. Remember to check yourself for ticks which can transmit diseases such as Rocky Mountain spotted fever, Lyme disease, etc. Ticks should be removed immediately; be sure to remove the body with head intact. Do not use a match to kill the tick first. Watch for, don't play with, and avoid snakes. Five students on Department trips have been bitten by rattlers since World War II; try not to be the sixth. If you are allergic to such things as bee stings, you must bring appropriate medication. A few other common sense rules: stay out of the water if you can't swim; stay out of thunderstorms, particularly at high elevations, and out of flashflood-prone areas in any rain. Some field areas have steep cliffs that you are not required to and should not climb; use common sense and follow your instructor's advice in such areas.
6. **Head and eye protection.** We recommend eye protection when using, or around someone using, a geologic pick, hammer, or other tools. Hard hats should be used in mines, quarries, steep road cuts, or other areas where rock falls or blows to the head could occur; some sites may require these protective devices. Safety glasses and hard hats can be checked out from the Department storeroom.
7. **Firearms.** Possession of firearms or facsimiles at any time during any field course or field trip is forbidden.
8. **Drugs and alcohol.** Use or possession of illegal drugs at any time is forbidden. Alcoholic beverages may NOT be consumed at any time while traveling in a University vehicle.
9. **Department equipment.** Take care of Department property. Our equipment normally gets hard use and current budgets are tight, so treat it as you would your own.

I have read and agree to follow the Field Trip/Field Course Policies for departmental field activities.

Your signature

djv7/06/2007

EQUIPMENT LIST - GEO 660

Required Materials:

- Field notebook (e.g., engineer's field book)
- Clipboard (8 1/2 x 11 size) **with cover**
- Geologic hammer
- Hand lens (10x)
- Small squirt bottle of dilute (approx. 10%) HCl
- Grain size card
- Six-inch ruler (best is the Post ruler with protractor on it)
- Protractor (bring spare rulers & protractors; many students lose several)
- Pencils and erasers (again, the number depends on how many you lose)
- 2 or 3 drafting (mechanical) pencils (recommend Pentel or equivalent 0.5 mm or 0.3 mm lead, hardness F or 3H) and spare leads
- Colored pencil set that will keep a point (at least 10 colors); pencils with hard, water-fast lead are preferred
- Pencil sharpener or pointer, and/or sandpaper – for colored pencils
- Technical pens with fine-line points and black ink (Sizes 00, 0, 1, are desirable)
- Tablet of 8 1/2 x 11" tracing paper
- Tablet of 10 square to the inch of 8 1/2 x 11" graph paper
- Liquid paper (optional)
- The textbooks and lab manual from GEO 420K and GEO 428
- Calculator
- Watch
- Carrying bag (shoulder bag or daypack)
- Proper field clothes, long pants, long-sleeve shirts, jacket (see note on gear)
- Sun screen/block lotion
- Hat, wide brim
- Hiking boots, broken in (avoid non-lace boots; see note on gear)
- Rainwear (it will rain; see note on gear)
- Canteen (2 or 3, one-quart water bottles, a Camel-Back or some other water storage container)
- Warm sleeping bag and pad** (see note on gear)
- Towels, washcloth
- Flashlight and/or headlamp
- Plate, cup, silverware

Desirable Materials:

- Digital Camera
- Masking tape
- Scotch tape
- Tweezers (important for run-ins with cactus)
- Insect repellent (usually essential)

- Minor first aid kit for bug bites, thorns, blisters (moleskin), etc.
- Small pair of binoculars (not necessary but useful for “long-range” mapping)
- Whistle (if you are prone to getting lost and have a weak voice)
- Safety goggles or other eye protection (see field course policy handout regarding this and hard hats)
- Sharpie markers to label rocks

Prohibited Items:

- Firearms
- Illegal drugs
- Consumption of alcoholic beverages in University vehicles

Gear for Geo. 660

The equipment list for Geo. 660 contains several relatively expensive items that many of you may not already own. Below are some ideas on adequate equipment at reasonable prices. A little searching on the web can yield tremendous dividends.

Boots

Footwear is the single most important item for a field course. Good boots provides traction, protection and support for your feet. Tennis or basketball shoes are not adequate for the latter two reasons, nor are cowboy boots for the former. A wide variety of boot styles are available, from those with low-or high-top nylon/leather uppers, to all-leather boots. Leather boots provides maximum protection, support and, with the proper soles, excellent traction. Most today are designed with backpacking in mind, which requires relatively rigid uppers and maximum padding to provide comfort and support for carrying heavy loads. Once broken-in, a well-made boot of this type is unsurpassed for field use. They are the best at keeping feet dry, provide an important measure of protection from cactus spines and will usually (but not always) outlast a softer boot.

The major disadvantage of leather boots is price; a decent pair now costs over \$150, with many in the \$180-\$250 range. Do you need leather boots at this price for 6 weeks of fieldwork? No. A well-made, cheaper pair of "soft" boots can be adequate if: 1) you're relatively agile and light on your feet; 2) you're field pack doesn't weigh more than about 40 lbs.; 4) you're not prone to kicking cactus. I worked in soft boots for many years and, although they lasted little more than one season, I've was very happy with the lowest-priced models of Merrill, Vasque and Asolo boots, which can often be found on sale (or on the web) for less than \$80/pair. Well-made pairs by major manufacturers sell at list prices of \$70 - \$200. Less well made boots tend to lack side support (foot tends to roll sideways when walking across slopes) and can quickly come apart (soles detach, front rand comes off) after limited use. High-top boots provide ankle support and will keep scree and dirt out when moving down-slope on loose ground.

Regardless of the boots you select, you will be much more comfortable if you use well-padded socks with a clean pair of thin sock liners. Sock liners wick moisture from your feet and are easy to wash/rinse at the end of a day.

Rain gear

A good, well-fitting, waterproof coat is a necessity, not a luxury. We have never experienced a summer where it didn't rain. Two summers were exceedingly wet, raining nearly every day and for several days on end. We camp and cook outdoors and are in the field every day, rain or shine. Strong winds and colder temperatures often accompany rain in the mountains.

Adequate rain gear need not cost 100's of dollars, but a \$5 plastic poncho, which is only marginally better than a plastic trash bag, won't work in such conditions, nor will a thin nylon shell sprayed with Scotchguard. Lower-priced (\$20-50) raincoats and rain pants, which are usually made of plastic- or coated nylon, are adequate and widely available in a variety of styles. The best of the least expensive brands is probably Frogg Toggs. Medium-priced coats (typically \$50-100) are somewhat lighter-weight, usually better ventilated, may have an attached hood and are thus more comfortable to work in. They are, however, no more water repellent than lower-priced varieties, sometimes less so. High-priced rainwear is generally constructed of one or more "miracle" fabrics; lightweight materials that are touted to "breathe" while also being waterproof. In my opinion (based on several coats, boots, mittens, and a few other items) these fabrics are vastly overrated for the price. Nonetheless, such coats are generally ruggedly constructed, fit well, and typically have many desirable features (multiple pockets, armpit zippers, internal drawstrings, ancillary ventilation, etc.). Again, they are no more waterproof than much lower priced models. Ponchos and umbrellas don't work well in windy weather.

Regardless of what you type of coat you choose be sure it's large enough to allow for insulating layers underneath. Have a pair of rain pants.

Sleeping Bags and Pads

This summer, you will spend about 20 nights sleeping on the ground in a tent. Nighttime temperatures can be as low as 30° in June and are commonly 40°-50°. Blankets are only marginally adequate in such conditions; a sleeping bag provides better heat retention and insulation. The enormous price range for sleeping bags reflects differences in insulating materials, weight and construction. At the high end are extremely light, down-filled bags made of waterproof, breathable fabrics that have a comfort range that extends to -30° F. These bags are uncomfortably warm for all but the coldest conditions. At the low end are cotton bags with natural or synthetic fiber insulation, some of questionable construction, that may or may not keep you warm at temperatures below 50°. In between is a very large spectrum of nylon shell, down- or synthetic fiber-filled bags that are more than adequate for summer camping in the US Rockies. Fiber-filled bags are light, dry quickly, are easy to clean, are nearly as warm as down, and pack to a small volume. Like wool, they provide warmth even when wet. Down bags are typically more expensive, slow to dry and nonfunctional when wet. If you are concerned about your sleeping bag keeping you warm, bring a pair of long underwear to sleep in and make sure you have a good sleeping pad. I also use a sleeping bag liner to extend the temperature range of my bag.

A sleeping pad or foam mattress provides insulation from cold ground and a measure of comfort. A closed-cell foam or inflatable pad provides the best insulation. A blanket beneath your sleeping bag is better than nothing.

Tents

The Department no longer supplies tents. Tent prices have come down in recent years and very well made, 2- or 3- person tents are available for \$200 or less. In evaluating a tent for this summer, ask yourself the following: Will the tent withstand windy (30-40 mph) conditions? If it has fiberglass poles the answer is likely no. Is it waterproof (or can it be made waterproof) in a sustained, heavy downpour? If the tent fly does not extend most of the way to the ground the answer is no. Do I have all the parts? A waterproof ground cloth (a sheet of heavy mil plastic will do) keeps the floor of your tent from absorbing water and protects against punctures.

Clothing

You should have clothing that will allow you to live and work comfortably in both cold (40°) and hot (100°+) weather. Cold is best dealt with by wearing layers that can be donned and shed as needed. For maximum comfort your outermost layer should be windproof; rain coats/pants are adequate. Beneath this, a layer that will trap air (sweater, sweat shirt, fleece jacket, down vest, etc.) comes next, underlain by one or more thin layers (T-shirt, long sleeved shirt) that provide additional warmth and wick perspiration from your skin. Glove liners are a very good, warm alternative to standard gloves, which cause difficulties when using a pen or pencil. As much as 70% of your body's heat loss occurs through your head; if you're cold put a hat on.

A wide brim hat, bandanna, and sunblock are essential for working in the deserts of west Texas and New Mexico.

Finally, you will be traveling or working outdoors nearly every day of the 6 weeks. You will load and unload your gear, along with coolers, cook boxes, tarps, etc., many, many times along the way. It is to your and everyone else's benefit to travel light. Examine every piece of clothing you pack critically; do you really need it? Keep in mind that there will be opportunities to do laundry at nearly every place we visit and we will not be anywhere that requires anything more than field clothing.

Field Gear

As indicated by the attached gear list, the equipment packet you purchased for Geo420K contains the items you will need for completing most of the field projects. Be sure to purchase a grain size card from the undergraduate office if you don't have one – having an extra is also a good idea.