



# UNIVERSITY OF HOUSTON – YBRA GEOLOGY & GEOPHYSICS FIELD CAMPS SUMMER 2010



SESSION I (Geology): June 1 – July 5  
SESSION II (Geology): July 5 – August 8  
SESSION III (Geophysics): August 2 – August 12

The University of Houston Department of Earth and Atmospheric Sciences will offer two sessions of Geology Field Camp and one session of Geophysics Field Camp during the Summer of 2010.

## GENERAL INFORMATION

The UH-YBRA field camp program is based at the Yellowstone Bighorn Research Association (YBRA) camp near Red Lodge, a small town southwest of Billings, Montana. The camp has classrooms, a library, and a lodge where the lounge, dining room and kitchen are located. Faculty and students will board in cabins and dorms within YBRA camp.

Geology field camp programs also include field trips to the Yellowstone National Park. During this time, students will stay at the Yellowstone National Park camping site and also at the University of Montana Western campus in Dillon, Montana.

**IMPORTANT:** Students are expected to participate in normal but often strenuous activities of a geology field course such as hiking, climbing, camping... If you have any physical or medical condition that might limit your ability to participate in these activities, you must obtain permission from your doctor, in the form of a letter, which should also contain an explanation why your condition will not interfere with your participation in this field program.

The American with Disabilities Act (ADA) of 1990 requires that the university make reasonable accommodation to persons with disabilities as defined under the act. Students who feel they need assistance under the ADA guidelines should contact the field camp director to discuss such consideration before enrolling. When

possible, and in accordance with 504/ADA guidelines, we will attempt to provide reasonable academic accommodations to students who request and require them. Furthermore, to be eligible for accommodation as afforded by the ADA, students who feel they need assistance under the ADA guidelines should request assistance by registering with the UH Center for Students with DisABILITIES. Please call 713.743.5400 for further assistance and information.

## COURSES INFORMATION

### GEOLOGY FIELD CAMP

GEOL 3355: Field Geology 1

GEOL 3360: Field Geology 2

The geology field camp program is designed to enable undergraduate geology majors to learn how geologic problems are defined and addressed in the field, to enhance their field measurement and mapping skills, and to bring their growing technical skills to focus on a series of field problems in sedimentary, igneous, and metamorphic rocks.

In each session of Geology Field Camp, both GEOL 3355 and GEOL 3360 will be offered. Note that the University of Houston Geology major students are required to take **both** courses for a degree in Geology. Students from other institutions may choose to take one or both courses, depending on the degree requirements from their institutions. Registering for 3 credit hours will result in lower tuition, but the length of the camp and daily schedule will remain the same for those seeking 6 or 3 credit hours.

## Prerequisites for GEOL 3360

**GEOL 3345: *Structural Geology*** (or equivalent). Properties of earth minerals and their behavior in stress fields; description, classification, and interpretation of geologic structure.

**GEOL 3145: *Structural Geology Laboratory*** (or equivalent). Techniques for solving problems in structural geology.

**GEOL 3350: *Principles of Stratigraphy*** (or equivalent). Principles of stratigraphy applied to problems of geometry, composition, and time relations of stratified rocks.

**GEOL 3150: *Principles of Stratigraphy Laboratory*** (or equivalent). Stratigraphic problem solving.

Students with the appropriate pre-requisites in Stratigraphy, Structural Geology or their equivalent may register for both GEOL 3355 and GEOL 3360. Beginning students seeking only 3 credit hours should sign up for GEOL 3355. Advanced students who have taken Stratigraphy and Structural Geology (or their equivalents) and are seeking only 3 credits may register for GEOL 3360. Students seeking 6 credit hours of field camp should register for **both** GEOL 3355 and GEOL 3360.

Because field training is a desirable experience early in a geologist's career, we also encourage students early in their undergraduate program to take a field course as soon as possible after they have identified their interest in Geology. These students may register for GEOL 3355 only; prerequisites are fewer for students desiring a single 3-credit-hour course. Instruction in basic field techniques, methods and observations are included in both sessions. This 3-credit option may also be used for advanced students seeking to transfer only 3 credit hours to their home institutions.

## GEOPHYSICS FIELD CAMP

GEOL 4397: Geophysics Field Camp

The course is designed to provide practical experience for geophysicists or geologists in geophysical field acquisition techniques. Topics and techniques including multi-component reflection seismology, earthquake-related broadband seismic data acquisition, well logging, vertical seismic profiling, gravity and magnetic field measurements, ground penetrating radar, and Global Positioning Systems will be covered. Targeted areas of investigation include the oil-producing Elk Basin field, climate-change related glacial deposits, an active dinosaur excavation site, complex structural tear faults, igneous intrusive subsurface mapping, and geotechnical features.

No experience with geophysical equipments is assumed, but students must have a pre-requisite of GEOL 4330 (Introduction to Geophysics) or equivalent.

### Prerequisites:

**GEOL 4330: *Introduction to Geophysics*** (or equivalent)

## ADMISSION

### Summer 2010 Application Deadline: March 1, 2009

There are two steps in the admission of UH-YBRA field camp program:

- Step One – Preliminary program admission: students interested in field camp must complete the UH-YBRA field camp application (can be found at the end of this brochure). Submit the completed application along with a copy of your transcript and proof of health insurance to the UH Department of Earth & Atmospheric Sciences by March 1, 2010. Offers of admission for qualified students will be emailed as reviewed and accepted, but typically no later than April 15. Late application will be considered only if the student is highly qualified, and if the sessions are not fully filled. Once notified of acceptance, you must proceed to apply/register with the University of Houston as guided below.
- Step Two – UH Admission and Registration: after being admitted

to the program:

- Current UH Students: must register for GEOL 3355 and GEOL 3360 for the Summer Session they have been accepted for field camp. Registration must be done within the time allotted (as guided by your PeopleSoft account).
- Non-UH Students: must apply for admission to the University of Houston as a transient student by visiting: [https://www.applytexas.org/adappc/gen/c\\_start.WBX](https://www.applytexas.org/adappc/gen/c_start.WBX). At this time you will be required to submit your official transcript to the UH Admission Office. Once the non-UH student is admitted to the University of Houston, he or she will be provided with a student identification number (PeopleSoft ID) and password. Online registration may be done using this information.

Students with disabilities as defined under the American Disability Act (ADA) must register with the UH Center for Students with DisABILITIES to be eligible for accommodation as afforded by the ADA. Please call 713.743.5400 for more assistance and information.

## TUITION AND FEES

**Tuition** – Tuition and university fees for the field program will depend upon residency status of the student, as well as whether the student is seeking 6 credit hours or 3 credit hours for the summer field program (*see chart below*). Texas non-resident students who receive scholarship of at least \$1000 through the University of Houston may qualify for in-state tuition.

**University Fees** – include administrative and support fees for the course ranging from \$825 for 3 credit hours to \$1106 for 6 credit hours. \*\*Note: these fee amounts are approximations only and may be subject to change by the university.\*\*

**Room, Board and Vehicle Fees** – the Department is collecting an additional fee of \$1,500 per student (for Geology Field Camp) or \$1,000 per student (for Geophysics Field Camp) which will go toward payment of the student's cost for lodging, food, vehicle and other equipment expenses during field camp. These payments will **not** include: (1) travel to and from Montana, and (2) cost of meals during 3 days of camping outside YBRA facility. Prior experience indicates that students should bring approximately \$200 to buy meals for three field days in Yellowstone National Park.

## TEXAS RESIDENTS

### Three credit hours option (Geology)

Tuition for 3 credit hours	\$574.50
University fees for 3 credit hours	\$551.30 (appx.)
Room, board and vehicle fee	<u>\$1,500.00</u>
Total	\$2,625.80 (appx.)

### Six credit hours option (Geology)

Tuition for 6 credit hours	\$1,149.00
University fees for 6 credit hours	\$791.60 (appx.)
Room, board and vehicle fee	<u>\$1,500.00</u>
Total	\$3,440.60

### Three credit hours option (Geophysics)

Tuition for 3 credit hours	\$574.50
University fees for 3 credit hours	\$551.30 (appx.)
Room, board and vehicle fee	<u>\$1,000.00</u>
Total	\$2,125.80 (appx.)

## TEXAS NON-RESIDENTS

### Three credit hours option (Geology)

Tuition for 3 credit hours	\$1,405.50
University fees for 3 credit hours	\$551.30 (appx.)
Room, board and vehicle fee	<u>\$1,500.00</u>
Total	\$3,456.80 (appx.)

**Six credit hours option (Geology)**

Tuition for 6 credit hours	\$2,811.00
University fees for 6 credit hours	\$791.60 (appx.)
Room, board and vehicle fee	<u>\$1,500.00</u>
Total	\$5,102.60 (appx.)

**Three credit hours option (Geophysics)**

Tuition for 3 credit hours	\$1,405.50
University fees for 3 credit hours	\$551.30 (appx.)
Room, board and vehicle fee	<u>\$1,000.00</u>
Total	\$2,956.80(appx.)

**Transportation** – Students are responsible for arranging their own transportation to Montana at the beginning of field camp and departure from Montana at the end of field camp. Students must report at YBRA camp no later than 5:00PM on the first day of camp.

By UH vans: Students who live in the Houston area will have the option to travel with UH vans from and back to Houston. Cost for the one-way trip with UH van is \$110 and \$220 for round trip.

By air: Students may also fly to Billings' Logan Airport which is approximately one hour's drive from Red Lodge, Montana. Pick up and drop off at the airport will be available at designated times. For organizational purposes, please provide us with your travel itinerary.

By bus: Greyhound bus ([www.greyhound.com](http://www.greyhound.com)) arriving in Billings is also available. Pick up and drop off at Billings' Logan Airport will be available at designated times. For organizational purposes, please provide us with your travel itinerary.

**Health Insurance** – The University of Houston requires all students to carry health insurance while at the field camp. Students must provide proof of health insurance (copy of insurance card) before leaving for field camp. For those without personal health insurance, the University of Houston offers two options of coverage:

- Option 1: through myUH (PeopleSoft) – health insurance will be placed on your tuition and fee statement
- Option 2: through Macori, Inc. & UH Health Center

To learn more about these options and how to purchase, visit this website: <http://www.uh.edu/how-to/index.php>

**Scholarship and Financial Aid** – is not available directly from the UH Department of Earth and Atmospheric Sciences, except for students who attend University of Houston and who qualify for financial aid from the University of Houston or who are awarded an UH Alumni Scholarship. Some students from other institutions who would ordinarily qualify for financial aid on the basis of need have been able to transfer part of their financial aid packages from their home institutions; other have been able to acquire scholarship or loans from their home institution. Each applicant is encouraged to contact his or her financial aid officer for more information.

**CONTACT INFORMATION**

Dr. Virginia Sisson, UH-YBRA Field Camp Director  
 Telephone: (713) 743.3508  
 Email: [vbsisson@uh.edu](mailto:vbsisson@uh.edu)

Dr. Michael Murphy, Field Director  
 Telephone: (713) 743.3413  
 Email: [mmurphy@mail.uh.edu](mailto:mmurphy@mail.uh.edu)

Tram Nguyen, Program Manager  
 Telephone: (713) 743.3402  
 Email: [tnguye36@mail.uh.edu](mailto:tnguye36@mail.uh.edu)

University of Houston  
 Department of Earth and Atmospheric Sciences  
 312 Science and Research Building 1  
 Houston, Texas 77204-5007  
 Telephone: (713) 743.3399  
 Fax: (713) 748.7906  
[www.geosc.uh.edu](http://www.geosc.uh.edu)

Yellowstone Bighorn Research Association  
 P.O. Box 630  
 Howell Gulch Road, South of Red Lodge  
 Red Lodge, MT 59068  
[www.ybra.org](http://www.ybra.org)

**UNIVERSITY OF HOUSTON – YBRA  
2010 GEOSCIENCES FIELD CAMP PROGRAM**

**APPLICATION**

Submit completed application along with: proof of insurance and a copy of your transcript to:

By mail: University of Houston  
Department of Earth & Atmospheric Sciences  
312 Science and Research Building 1  
Houston, Texas 77204-5007  
Attention: Tram Nguyen  
By email: tnguye36@mail.uh.edu  
By fax: (713) 748-7906

SESSION 1: Geology Field Camp (June 1 – July 5, 2010)  
SESSION 2: Geology Field Camp (July 5 – August 8, 2010)  
SESSION 3: Geophysics Field Camp (August 2 – 12, 2010)

**APPLICATION DEADLINE: MARCH 1, 2010**  
**Extended Deadline: MARCH 17, 2010**

1. Name: (last, first, middle)	2. Date of Birth: (mm/dd/yyyy)	3. Gender <input type="checkbox"/> Female <input type="checkbox"/> Male
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4. University/College of Current Enrollment:	5. Expected Graduation Date:
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6. Status (as of June 2010): <input type="checkbox"/> Freshman <input type="checkbox"/> Sophomore <input type="checkbox"/> Junior <input type="checkbox"/> Senior <input type="checkbox"/> Graduate	7. How will you travel to camp site? <input type="checkbox"/> I will make my own travel arrangements <input type="checkbox"/> I will use UH-arranged transportation (additional fees required)
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8. Mailing Address:	9. Telephone:
	10. Alternative Telephone:

11. Permanent Address: (if not same as above)	12. Emergency Contact: Name: ..... Relationship:..... Telephone:.....
13. Email Address:	

14. Major:	15. If not "Geosciences" Major, reason for applying:	16. Cumulative GPA:
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17. List courses you have taken or are taking in Earth Sciences (use a separate sheet if necessary)	18. Please indicate your plan to enroll for the 2010 Summer Program																					
<table border="1"> <thead> <tr> <th>Course Name</th> <th>Grade</th> <th>If no grade, completed by June 2009?</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Course Name	Grade	If no grade, completed by June 2009?																			<input type="checkbox"/> Session I (Geology) <input type="checkbox"/> GEOL 3355 <input type="checkbox"/> GEOL 3360 <input type="checkbox"/> Session II (Geology) <input type="checkbox"/> GEOL 3355 <input type="checkbox"/> GEOL 3360 <input type="checkbox"/> Session III (Geophysics)
Course Name	Grade	If no grade, completed by June 2009?																				

19. Do you have a physical or medical condition that might limit your ability to participate in the normal but often strenuous activities of a geology field course, such as hiking, climbing, camping, etc.? If your answer is "yes", you may be asked to obtain permission from your doctor allowing your participation in field camp program. Please see brochure or call (713) 743-3402 for more information  <input type="checkbox"/> Yes <input type="checkbox"/> No	20. Provide the name of your insurance provider:
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Signature of faculty member from your institution recommending admission or an academic advisor, and who can verify the accuracy of all grades reported on this application  ..... Date	Signature of Applicant  ..... Date
Name: _____ Title: _____	By signing, applicant certifies that all the above information is true and correct to the best of his or her knowledge.
Email Address: _____	