



# UNIVERSITY OF HOUSTON – YBRA GEOLOGY & GEOPHYSICS FIELD CAMPS SUMMER 2019



**GEOLOGY SESSION I: June 3 – July 7, 2019**  
**GEOLOGY SESSION II: July 7 – August 10, 2019**  
**GEOPHYSICS: May 15 – May 24, 2019**

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 2019.

## GENERAL INFORMATION

The UH-YBRA geology 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 and a lodge where the lounge, dining room and kitchen are located. Faculty and students will board in cabins and dorms within YBRA camp.

The Geology field camp program also includes field trips to Yellowstone or Grand Teton National Park. During this time, students will stay at Yellowstone or Grand Teton National Park camping sites and also at the University of Montana Western campus in Dillon, Montana.

The Geophysics field camp program is based at the Texas A&M Galveston campus on Galveston Island, Texas. Students stay in dorms on the campus and participate in daily field data acquisition campaigns using both marine and land-based systems.

**IMPORTANT:** Students are expected to participate in normal but often strenuous activities of a field course such as hiking, climbing in steep terrain and at high altitude, 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 713-74-.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, the course consists of two courses: GEOL 3355 and GEOL 3360. Note that the University of Houston Geology major students are required to enroll in **both** GEOL 3355 and GEOL 3360 for a degree in Geology. Students from other institutions may choose to take Geology Field Camp for 6 credit hours

or only 3 credits hours. Students who chose to enroll in only 3 credit hours will be enrolled in GEOL 3360. Registering for 3 credit hours will result in lower tuition, but the length of the camp, daily schedule, and amount of work will remain the same as those seeking 6 credit hours.

### Recommended Prerequisites for Geology Field Camp

**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.

Note that the University of Houston Geology major students must have successfully fulfilled **all** prerequisites to attend Geology Field Camp.

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. Instruction in basic field techniques, methods and observations are included in both sessions.

### GEOPHYSICS FIELD CAMP

GEOL 4355: 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, unmanned aerial vehicles (UAVs), and Global Positioning Systems will be covered.

Targeted areas will include marine seismic surveys in Galveston Harbour and Clear Lake; multicomponent seismic surveys, VSP, and well logging at the La Marque Geophysical Observatory (inside the UH Coastal Center); GPR and resistivity in coastal sand dunes; GPS, total station, and LIDAR at geotechnical locations; and gravity and magnetics over salt domes.

No experience with geophysical equipment 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 2019 Application Deadline: February 15, 2019**

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

- **Step One – Preliminary Admission:** Complete the online application found at the UH Department of Earth and Atmospheric Sciences website:

<http://www.uh.edu/nsm/earth-atmospheric/undergraduate/ybra-field-camp/>

Through the online application, submit a copy (does not have to be an official copy) of your transcript and proof of health insurance by **February 15th**, 2019. Notification of admission for qualified students will be emailed as reviewed and accepted, but typically no later than March 15th. Late applications will be considered at the discretion of the department.

- **Step Two – University of Houston (UH) Admission and Registration:** after being admitted to field camp program:

- **Current UH Students:** You will be registered for GEOL 3355 and GEOL 3360 (6 credit hours).

- **Non-UH Students:** must first apply for admission to the University of Houston as a **transient student** for the summer of 2019 by April 15th 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, as well as **proof of recent meningitis vaccination** <http://www.uh.edu/academics/courses-enrollment/policies/immunization/index.php>. Once the non-UH student is admitted to the University of Houston, our office will place you in the field camp course(s) to which you have been admitted.

- **INTERNATIONAL STUDENTS** – International students must apply for admission to the University of Houston as a **transient student** for the summer of 2019 **by April 1st**. Department faculty and staff cannot assist in obtaining visas.

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

**NOTICE:** Tuition and university fees calculation as presented below are **approximations** only. Please consult the University of Houston website for more updated information ([www.uh.edu/financial/](http://www.uh.edu/financial/))

**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 courses. Note: these fee amounts are approximations only and may be subject to change by the university.

### GEOLGY FIELD CAMP

**Room, Board and Vehicle Fees** – the Department of Earth and Atmospheric Sciences is collecting an additional fee of **\$2,500 per student** 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.

### GEOPHYSICS FIELD CAMP

**Room, Board, Equipment Rental, and Vehicle Fees** – the Department of Earth and Atmospheric Sciences is collecting an additional fee of **\$1,500 per student** for lodging, food, vehicle and other equipment expenses during field camp.

## TEXAS RESIDENTS

### Three credit hours option (Geology)

Tuition for 3 credit hours	\$ 820.23 (appx.)
University fees for 3 credit hours	\$ 550.00 (appx.)
Room, board and vehicle fee	<u>\$2,500.00</u>
<b>Total</b>	<b>\$3,870.23 (appx.)</b>

### Six credit hours option (Geology)

Tuition for 6 credit hours	\$1,640.46 (appx.)
University fees for 6 credit hours	\$ 850.00 (appx.)
Room, board and vehicle fee	<u>\$2,500.00</u>
<b>Total</b>	<b>\$4,990.46 (appx.)</b>

### Three credit hours option (Geophysics)

Tuition for 3 credit hours	\$ 820.23 (appx.)
University fees for 3 credit hours	\$ 550.00 (appx.)
Room, board, equipment and vehicle fee	<u>\$1,500.00</u>
<b>Total</b>	<b>\$2,870.23 (appx.)</b>

## TEXAS NON-RESIDENTS

### Three credit hours option (Geology)

Tuition for 3 credit hours	\$1,750.23 (appx.)
University fees for 3 credit hours	\$ 550.00 (appx.)
Room, board and vehicle fee	<u>\$2,500.00</u>
<b>Total</b>	<b>\$4,800.23 (appx.)</b>

### Six credit hours option (Geology)

Tuition for 6 credit hours	\$3,500.46 (appx.)
University fees for 6 credit hours	\$ 850.00 (appx.)
Room, board and vehicle fee	<u>\$2,500.00</u>
<b>Total</b>	<b>\$6,850.46 (appx.)</b>

### Three credit hours option (Geophysics)

Tuition for 3 credit hours	\$1,750.23 (appx.)
University fees for 3 credit hours	\$ 550.00 (appx.)
Room, board, equipment and vehicle fee	<u>\$1,500.00</u>
<b>Total</b>	<b>\$3,800.23(appx.)</b>

**Transportation** – Students are responsible for arranging their own transportation to Montana/Houston at the beginning of field camp and departure from Montana/Houston at the end of field camp.

### **GEOLOGY**

Geology students must report at YBRA camp no later than 5:00PM on the first day of camp. Geology students may make arrangement to leave camp after 10:00AM on the last day of camp.

**By car:** Students may drive their personal vehicles to camp. These vehicles are not allowed to be used for official camp activities and must be left at the YBRA facility when the camp moves to Dillon for the second half.

**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. If you do not carry health insurance and want to purchase health insurance through the University of Houston for the summer semester, it offers the following two options:

**Option 1:** through myUH (PeopleSoft) – health insurance will be placed on your tuition and fee statement

**Option 2:** through Macori, Inc. ([www.macori.com](http://www.macori.com)) & UH Health Center

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

**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

### **GEOLOGY FIELD CAMP**

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### **GEOPHYSICS FIELD CAMP**

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