



# Department of Geology

## *Undergraduate Student Handbook*

<http://www.geology.buffalo.edu/>

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## GENERAL INFORMATION

The *Geological Sciences* curriculum provides a comprehensive background in each of the major areas of modern geology through a required sequence of courses in geology and basic undergraduate courses (such as chemistry, physics, and math). In addition to the core courses in geology, a wide range of geology electives offers exposure to more specialized topics.

Because fieldwork and observation are important aspects of geology, field trips are an essential part of many courses. Students have the option of participating in faculty-supervised, inter-semester field excursions (in the past we have traveled to Mexico, Great Britain, Alaska and New England). Additionally the annual summer Geological Field Training course (field camp) in Wyoming, Utah, and Colorado serves as a rigorous and exciting part of the curriculum. The field camp complements the student's previous training and provides an opportunity to develop greater competence and self-confidence.

Faculty and students are active in research projects that study how and why features of the earth are formed, or what kind of threat they pose to communities. Active research in the department includes earthquake and volcanic hazard assessment; the study of debris flow and erosional landforms; site assessment for waste disposal and removal of toxic chemicals from the environment; analysis of tectonics related volcanism on Mars; remote sensing studies of ice sheets and glaciers; reconstruction of glacier and climate change, studies of the degradation of coral reefs and the evolution and structure of oil and gas reservoirs.

## PROGRAMS IN GEOLOGY

The *BS in Geological Sciences* program is designed for students who will enter directly into geology-related employment upon graduation (energy resources, environmental consulting, State or National Geological Surveys, etc.), or will continue on to graduate school.

The *BA in Geological Sciences* program offers more flexibility in coursework and is designed for students interested in careers outside of geology that require a strong geological background, such as environmental law, high-school earth-science teaching, government policy, nature writing, etc.

The *Minor in Geological Sciences* will provide a good secondary area of concentration for all Civil, Structural or Environmental Engineering, Environmental Geosciences, and Environmental Chemistry majors. In addition, The Geology minor offers broader exposure to the details of geology not available through the introductory sequences alone.

The *BA/MA Program* is designed to take five years, compared to the six years for a conventional BA (four years) followed by an MA (two years). This program is designed for students interested in careers outside of geology but requiring graduate-level schooling. Any geology major who meets the requirements may apply to the combined program during the second semester of their junior year. The student will receive a single BA/MA combined degree upon successful completion of the program.

The *Geology Honors Program* is in addition to the usual academic honors offered to students upon graduation by the university (baccalaureate degree with distinction, high distinction, etc.). Receipt of an Honors degree requires maintenance of a 3.25 or higher GPA and completion of a senior project that the student conducts while enrolled in GLY499 (undergraduate research) for two consecutive semesters. Additional information regarding application to the Honors Program is available from the Director of Undergraduate Studies.

The *Hydrosciences Certificate Program* consists of a sequence of courses in the Geography and Geology departments that is designed to familiarize the student with the movement of water on the earth's solid surface. Issues relating to the interactions of water flow with sediments, landforms and the earth's interior will also be treated. The program thus has significant components of geomorphology, hydrology and hydraulics, geohydrology, and fluvial processes. Interested students should speak with the Director of Undergraduate Studies regarding the specific requirements.

## **GEOLOGY LIBRARY COLLECTIONS**

The Science and Engineering Library includes the Geology Collection of approximately 20,000 volumes, and a Map Collection of 100,000 sheet maps. The Map Collection includes large-scale topographic maps of the United States and Canada, and other areas of the world. Selected thematic maps of geology, gravity, seismology, nautical, and aeronautical charts are also available. Also located in this library are geological journals, books, and monographs. Indices and bibliographies are also housed there, as well as reserve materials requested by the department faculty. Bibliographic instruction is available from the Geology and Map Librarian on the use of the collection and on the method of searching for information in the geological sciences.

Frederick W. Stoss, Associate Librarian

Biological Sciences, Ecology/Environmental Science and Studies, Geology, Mathematics Librarian

Telephone: 645-1337

E-mail: [fstoss@buffalo.edu](mailto:fstoss@buffalo.edu)

## **GEOLOGICAL COLLECTIONS**

The geological collections are maintained by the department curator, Susan Bratcher, who is available to assist individuals in the use of these resources. The collections consist of organized suites of rocks and thin sections from localities world-wide, the Church Mineralogical Collection, and special collections which include geological structures, meteorites, and other phenomena. The curator also maintains an inventory of rock and mineral material to support faculty and student research.

## **PEGRUM LECTURE SERIES**

In an effort to familiarize students and faculty with current research by specialists in the varied fields of geology, the Department has frequently scheduled lectures presented by visiting scientists as well as members of this Department. These lectures are considered as valuable part of the education in UB Geology.

## **FACILITIES**

The Department maintains facilities for advanced study in the geological sciences. These include X-ray, geophysical, geochemical, sedimentation, clay mineralogy, petrographic, hydrologic, photogrammetric, volcanology, remote sensing and morphometric analysis. The Department has a PC computer laboratory for image processing, GIS and data analysis

## **THE UB GEOLOGY CLUB**

As a geology major, you are encouraged to join the UB Geology Club, an active undergraduate student organization that sponsors field trips, movies, visiting lectures, picnics and outings. Past activities have included going to the Royal Ontario Museum in Toronto, Canada, camping trips, spelunking, fossil hunting, and hikes around the Western New York region. UB Geology Club is also a good source to

learn about the geology job market and current geologic issues as the club may bring in speakers from time to time to discuss various topics. If you are interested in geology or joining the club ask the Director of Undergraduate Studies about it.

## **DEPARTMENTAL REGULATIONS**

**Departmental Equipment:** All students expecting to use department equipment must be certified either by an instructional technician or the faculty member in charge as to their qualifications. Field equipment is available and can be signed out by contacting the faculty, staff member, or student assigned that responsibility.

**Departmental Space for Students:** The Geology Department has a space for student use in Cooke 129. Its primary purpose is to provide an effective space for students to study, work on projects, plan Geology related activities and so on. To gain access to the room, students are required to sign a form in the main office before receiving the key code to the room. We look forward to keeping this room assigned for use by our students to act as an effective gathering and learning environment. Please remember that Cooke 129 is a professional work space and the Geology Department expects that it will be treated and used as such. This includes, but is not limited to keeping the room clean and tidy, keeping noise at a respectful level, conducting appropriate activities, and acting responsibly. Keep in mind that there are other professional offices and laboratories in close proximity.

**Home Address and Phone Number:** Students should keep their permanent and local addresses as well as phone numbers updated in the HUB. A forwarding address is required when leaving for a long period of time.

**Computer Use:** A high performance computer laboratory is maintained by the department that offers 24 hour access to 21 PC workstations. This laboratory primarily a teaching facility but is available to students outside of class time. To access the lab, students must be registered for a Geology course or request access from the Geology office. There is absolutely **NO DRINKING OR EATING ALLOWED IN THE LAB**. Students who are caught with food or drink in the laboratory will lose access privileges. Problems with computers and software in the lab should be forwarded first to Science and Engineering Node Support (SENS) via [senshelp@buffalo.edu](mailto:senshelp@buffalo.edu)

**UB HUB:** The HUB on-line system provides many services for students and is the main way to access records, registration, and financial information. Students can retrieve this information by accessing the HUB Student Center. This is done by clicking the HUB Student Center tab from MyUB ([www.myub.buffalo.edu](http://www.myub.buffalo.edu)). In the Student Center you can manage academics, finances, and personal information. Aids to using HUB can be found at <http://hubtraining.buffalo.edu/training/index.php>.

- **YOUR A.A.R.** : Your Academic Advisement Report, or AAR, will help you track your progress through both UB and your major. It is accessible through HUB at the Academic Requirements tab. You should check it every semester, and if you see any discrepancy, you should report it to the Geology Director of Undergraduate Studies or to the CAS Advisement Office in 275 Park Hall, immediately.

**E-Mail:** The University supplies all of your professors and the departments with your UB e-mail address (@buffalo.edu). **You must check this account daily** or set a forwarding address to an account that is checked daily such as gmail or hotmail, ect.. The website **to set up a forwarding address** is <http://ubit.buffalo.edu/ubmail/>.

**Printing:** All UB students, faculty, & Staff receive a page allowance or allocation, to print, for each fall and spring semester. This allocation covers 650 single sided pages, which rolls over from semester to semester, resetting at the start of each academic year. (Please note you must use iPrint at least once a semester to receive allocation for that semester.) For more information see <http://www.buffalo.edu/ubit/service-guides/printing.html>.

**Computer Help:** Most computer problems students encounter should be addressed by visiting the UB Information Technology website: <http://www.buffalo.edu/ubit/get-help.html> or emailing [senshelp@buffalo.edu](mailto:senshelp@buffalo.edu). For any problems regarding your account, you should send an e-mail to [cit-helpdesk@buffalo.edu](mailto:cit-helpdesk@buffalo.edu).

**Paychecks:** All paychecks must be picked up in the main office each payday. Research Foundation (RF) paychecks come every other Friday, student assistant and work-study paychecks come every other Thursday.

**Safety Training Seminar:** All students participating in laboratory research in our department MUST attend a yearly safety-training seminar that lasts approximately an hour. This training is coordinated by one of our Instructional Support Technicians. If you cannot attend the departmental scheduled seminar you will be required to setup your own appointment with Health and Safety.

## **ACADEMIC INFORMATION**

**Advisor:** At the time of your acceptance into the Geology Department, the Director of Undergraduate Studies will become your academic advisor.

**Advisement:** You **must** meet with the Director of Undergraduate Studies at least once a semester prior to registering for the following semester. You should contact the Director of Undergraduate Studies for an appointment or sign up during “Advisement Week”. Check the department website or ask in the Geology front office who the current the Director of Undergraduate Studies is.

At the time of your advisement appointment, your academic record (all University, General Education, and Departmental requirements) will be reviewed and satisfactory/unsatisfactory progress will be noted. The advisor will try to answer any questions you might have.

All areas of your academic record will be reviewed and any concerns should be discussed. Any errors on your record should be brought to the attention of the office staff so that a change request form may

be submitted to have corrections made in time for degree conferral. (No changes can be made to your academic record after the conferral of a degree).

Any **exceptions** to the departmental requirements require the completion of the **Department of Geology Undergraduate Petition Form**. This form requires the approval and signature of the Director of Undergraduate Studies.

When the appointment is concluded both you and your advisor will sign the advisement record and the form will be returned to the office to be kept in your file.

**Dropping/Adding Courses:** New courses may be added by registered students during the add period which lasts approximately two weeks in the fall and spring semesters by using the HUB Student Center. The last period to drop courses without **financial** liability is the first week of class. Students may drop courses without **academic** penalty until the end of the eleventh week of classes, however financial penalties may be incurred. For full details and deadline dates visit [registrar.buffalo.edu](http://registrar.buffalo.edu).

**Forced Registration:** If the need arises for a student to be forced into a course, a forced registration form must be completed, signed by the professor teaching the class, and submitted to the office. The office can only force register a student into a geology course and only after all windows of registration have closed. If a student wishes to be forced into a class offered by another department, the student must contact that department and follow their rules.

**Transfer Credit:** To receive credit for a course taken at an accredited university or college, you must request an official transcript from the school where you took the course be sent directly to the Office of Admission, 12 Capen Hall, University at Buffalo, Buffalo, NY 14260. The office of admissions will evaluate the course and have it added to your UB record.

The Department of Geology has articulation agreements with several colleges in the region. Students should consult with the advisement office at their present college for more details. The College of Arts and Sciences Student Advisement and Services Office at UB also may be consulted. To request a transfer of credit for a geology course not listed at either advisement office, submit a request to the director of undergraduate studies along with a course description from the college catalog and a course syllabus.

**Before you take a course, check with CAS advisement (courses outside geology) or the Director of Undergraduate Studies in Geology (geology courses) to make sure that is equivalent to the course offered here at UB.**

**OFFICIAL RECORDS:** Your official records are kept in the office and it is extremely important that the office has copies of every aspect of your education at UB. This includes information about awards received, research being conducted, all nominations for awards, grants, fellowships and scholarship, placement in internship programs and other significant achievements. This sort of information is beneficial when the faculty review students' records for departmental awards and writing letters of recommendation.

## **DEGREE REQUIREMENTS**

For program requirements, please refer to the Official University at Buffalo Undergraduate Course Catalog at the following website: <http://undergrad-catalog.buffalo.edu/>. Click on Academic Programs, then Geological Sciences to get to the page for Geology. The most up-to-date requirements for each of the degrees offered (BA, BS, Minor, BA/MA) can be found by clicking on “Degrees & Policies” on the left hand side.

## **HONORS IN GEOLOGY REQUIREMENTS**

The Department of Geology offers an honors program in addition to the usual academic honors offered to students upon graduation.

### **Admission Requirements:**

Candidates accepted into the honors program must have at least junior status in the BS program, a minimum GPA of 3.25 in geology courses (including the Chemistry, Math, and Physics courses required for the major), and have completed at least three courses in geology.

### **Apply in Writing (email):**

To the Director of Undergraduate Studies, list the courses that you have taken within the major and grades received. You should have made preliminary contact with a potential senior thesis advisor and indicate in your letter to whom you have spoken and whether the faculty member has agreed to supervise your research. You will receive written notification of your acceptance into the Honors Program.

### **Requirements:**

Maintenance of a 3.25 GPA and final approval of a senior research experience, as well as the usual departmental BS degree requirements.

### **Senior Research Experience:**

- Select** a faculty mentor based on your interests and the faculty member’s willingness to advise you.
- Register** for three (3) hours of GLY 498 (undergraduate research) or 499 (independent study) with your advisor for two consecutive semesters.
- Meet** with your advisor and develop a research plan early in the first semester.
- Meet** with your advisor frequently for guidance.
- Complete** a capstone product\* in your second semester that is accepted by your faculty member.

\*The Senior Research Project must conclude with a capstone product, such as a term paper/thesis guided and approved by your faculty mentor; we strongly encourage presenting research as a talk or poster at a conference.



## **Academic Honors from the University**

### Latin Honors

Students earning baccalaureate degrees are eligible to receive Latin honors based on the UB cumulative GPA on the following scale:

Average (based on a 4.0 = A)

3.20 cum laude

3.50 magna cum laude

3.75 summa cum laude

To qualify for Latin honors, students must present a minimum of 60 credit hours of UB undergraduate coursework, at least 54 of which must be graded credits (i.e., not satisfactory or unsatisfactory [grades of 'S' or 'U']).

## **AWARDS**

The Department of Geology has the following awards available for undergraduate students. These awards are presented at the Departmental Awards Ceremony at the end of the academic year.

### Reginald H. Pegrum Award

This award is available to graduating geology majors. Dr. Reginald H. Pegrum, founder of the department, established an annual award to be presented to an outstanding senior majoring in geology. The student selected is presented with a check and a certificate.

### Gilbert Jaffe Memorial Award

This award is given to a graduating senior in geology, with preference given to a student excelling in marine geology or environmental science. The award consists of a check and a certificate.

### Duttweiler Field Camp Award

Thanks to the generosity of alumna Dorthea Duttweiler, this award is given to one or more outstanding student(s) attending the Department of Geology's summer field camp, with preference given to females as specified by the donor. An award is presented to the top UB attendees.

### James P. Owens Fund

To be used by the Dean of the College of Arts and Sciences, in conjunction with the Chairperson of the Geology Department, to provide an annual scholarship to a deserving student in Geology.

## **GRADUATION REQUIREMENTS:**

- ❖ **A student must be formally admitted into the department**
- ❖ **A minimum GPA of 2.3 in all courses required for the degree**
- ❖ **Completion of all of the University Requirements**  
(See: <http://undergrad-catalog.buffalo.edu/policies/index.shtml>).

### *Application for Degree:*

Undergraduate students must apply for graduation via the HUB Student Center (<http://www.myub.buffalo.edu>). The deadlines\* are:

<b>Term</b>	<b>Application Deadline</b>	<b>Conferral Date</b>
Fall	October 15	February 1
Spring	February 22	June 1
Summer	July 15	September 1

If you are graduating with more than one degree, both must be applied for at the same time.

Make sure your name and addresses are up to date in your HUB Student Center. Your name and address as it appears in the HUB at the time of the conferral date is how your diploma will be processed.

### *Settlement of Obligation:*

All balances on your student account must be paid in full to be eligible for graduation. Students must also satisfy any financial obligations incurred in connection with student activities and return all books belonging to the Libraries. Diplomas will be sent only when all financial obligations to the University have been met.

### *Commencement:*

The “Countdown to Commencement” page (<http://www.student-affairs.buffalo.edu/commencement/>) contains all the information you need for the big day. A checklist guides you step-by-step through sign-up requirements and contact information for everything from ordering your cap and gown to obtaining tickets for friends and family. Be sure to start visiting this site a semester or two prior to your expected conferral date to make sure you are ready.

<http://www.student-affairs.buffalo.edu/commencement/>

\*Check the registrar website (<http://registrar.buffalo.edu/degrees/index.php>) for deadline updates as they may change. This website also has a degrees and graduation checklist that may be useful to follow.