

# Department of Geology Graduate Handbook

28 April 2021

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## Personnel

Department Head	Paul Schroeder
Associate Department Head	Adam Milewski
Graduate Coordinator	Steven Holland
Business Manager	Rachel Ashton
Academic Program Administrator	Ashley Arnold

## General Information

It is your responsibility as a graduate student to read and know the policies in this handbook and the Graduate School Bulletin.

## Purpose and Goals

The primary aim of the graduate program is to produce professional geologists with a sound grasp of current scientific problems and a strong technical background. We also hope to develop in these geologists the skills and motivation for continued learning that will permit definition and solution of new scientific problems during their professional careers.

Proper pursuit of academic and career goals demands that time in graduate school be spent efficiently. Early development of a coherent plan for your course work and research is imperative so that you may complete your degree requirements on time. Every effort should be made to insure that you are able to complete all requirements, including acceptance of the thesis or dissertation, before you leave campus to accept a job.

Upon graduating, you will likely go on to a position in industry, government, or academia. As you move into the mainstream of professional life, your reflections on the geology program at the University of Georgia will be most welcome. Your suggestions will help us ensure that our program remains at the forefront of geological science.

## Faculty

You should become acquainted with the faculty, particularly in your area of interest, as soon as possible. Faculty will want to talk with you about their interests and possible research topics. The Department includes several committees of faculty to handle specific issues. Some of those that are particularly important for graduate students include the Admissions Committee, Awards Committee, the Watts-Wheeler/Allard Committee, Graduate Curriculum Committee, and the Space Committee. A complete list of all faculty committees with

their current membership and responsibilities is available on request from the Geology staff.

## Staff

The staff members of the Geology Department are vital to the smooth running of the department. A complete list of Departmental Staff can be found on the departmental website ([geology.uga.edu](http://geology.uga.edu)). Please consult with the Business Manager about individual staff responsibilities. Treat the staff with courtesy and they will do everything possible to help you.

## Social Events

During the year, the department may host several social functions, such as banquets, receptions, and picnics. We hope that you will make every effort to attend and enjoy the company of your fellow students and faculty.

## Departmental Seminars

The Geological Sciences Colloquium is a weekly lecture, often given by a distinguished visitor, and is generally scheduled for Friday afternoon at 3:30 in room 200A of the Geography-Geology building. The date or time may occasionally be changed to accommodate the speaker's schedule. Graduate students should attend these seminars regularly, as part of their professional life. The topics of these lectures are usually of current importance and are an important means of broadening your geological education.

## Facilities

### General Equipment

As a professional, you should own your own hand lens, hammer, hard hat, safety glasses, a suitable compass for field work, and your own computer with software for word processing, spreadsheets, computation, and graphics.

### Research-oriented Facilities

Thin-sectioning, rock-crushing, and other sample-preparation equipment is available for use in courses and research. The use of these facilities requires a brief orientation. Continued access to them is contingent on a record of their proper use. Those who fail to use equipment properly, clean up after themselves, or display a lack of safety will be denied use.

The Department maintains an electron microprobe, an X-ray diffractometer, and mass spectrometers for use by qualified students for research. See the appropriate managing technicians or faculty to use this equipment.

### Computing Facilities

The University of Georgia has strict policies about the use of computers, which can be found on the UGA EITS (Enterprise Information Technology Services) website ([www.eits.uga.edu](http://www.eits.uga.edu)). E-mail fraud, privacy, and security are ongoing concerns, and you should do all in your power to stay alert and maintain a high level of computer security.

Students are individually provided with computers on their desks for University-related use. These computers are loaded with software licensed to the University or Department. If your work requires other software, contact IT support for help. Under no circumstances should students attempt to install any software on their own.

Students, faculty, and staff have access to UGAMail, and users must comply with the UGA policies on computer use. Please note that UGAMail is the only email account used by the university for official correspondence. You must therefore check it regularly, as University business will not be sent to your personal email account.

For school-related work, students also have access to computers in the Geoscience Learning Lab (Room B27), which is administered jointly by the Geology Department and the Geography Department. This is primarily a classroom for courses that require instructional computers. A calendar indicating when the classroom is in use is posted on the door of the lab and on the departmental website. Students are free to use the lab when it is not in use. Never interrupt a class in progress. The door com-

bination is changed each semester and can be obtained from the IT support.

A large-format printer capable of printing posters is located in Room 122. In order to access this printer you must consult with Dr. Adam Milewski ahead of time. Individual faculty members have student-use computers with software applicable to their specialty. Details will be provided by your major professor. Free downloads and software at discounted prices are available from the UGA EITS website.

### Office Facilities

#### Office Space

Office space for graduate students is a high priority within the department. Except in unusual situations of a space shortage, graduate students will receive space for an office. The Academic Program Administrator will assign this space.

#### Mail

You will be assigned a mailbox in the Geology Office. These boxes will be used for memos, notes from faculty, official departmental correspondence, as well as your professional correspondence. Since the boxes are small and may need to be shared, your personal mail should be delivered to your local address or post office box.

#### Keys

You should obtain an outside door key to the Geography-Geology building, a key to classrooms and general labs, and a key to your office space from the Geology office staff. Keys must be returned to the Geology office staff upon finishing your degree or before an extended leave of absence from the Department.

#### Telephones

A brief message can be placed in the student's departmental mail box for incoming calls on department lines. In the unlikely event that cell phone signal is not available, students who need to make important phone calls should check with the office staff.

#### Photocopiers

A photocopier is available in room 302 of the Geography-Geology building. All teaching assistants will be assigned a code for this photocopier, for use in copying lab assignments. The code is not to be used for personal needs. For instructions on the use of the photocopier, ask a Geology office staff member. Photocopiers are available for personal use (including the printing of theses and dissertations) at the University Libraries and at the Tate Center.

## Employment

Anyone on a university payroll should see the Business Manager in the Department Office immediately upon starting employment and at the beginning of each year. The Business Manager will answer questions and handle administrative problems relating to employment at any time during the year.

## Assistantships and Fellowships

The Department awards Teaching Assistantships (TAs) and Research Assistantships (RAs) each year. Recommendation for appointment of these is made by the Admissions and Awards Committee. Factors considered include, for incoming students, your prior GPA, GRE scores, and recommendation letters. For returning students, factors considered include your progress in the program, current GPA, and teaching effectiveness for TAs.

Teaching assistantships are normally granted for one year. Continued support depends upon satisfactory performance in both teaching and degree progress, as determined by the annual evaluation. M.S. students are eligible for a maximum of two years of departmental support during the first three years following matriculation. Ph.D. students are eligible for a maximum of four years of departmental support during the first five years following matriculation. A student entering into the M.S. program and then changing degree objective to the Ph.D. without completing the M.S. degree will be eligible for a total of four years of departmental support the first five years following the original matriculation as a M.S. student. A student that first completes a M.S. degree at UGA and then enters into a Ph.D. degree program will be eligible for a maximum of four years of departmental support during the first five years following matriculation as a Ph.D. candidate. Any departmental support beyond these eligibility limits depends on the specific teaching needs of the department.

A TA is a 4/9's assistantship and therefore requires 18 hours of service per week (4/9 x 40-hour work week). This support comes from the University and is designed to assist in the delivery of the educational program. A TA also offers graduate students the opportunity to gain teaching experience as part of their education.

TA assignments are made by the Graduate Coordinator in consultation with the lecture instructors. Normally the assignments involve teaching laboratory sections of some courses. Other duties include coordinating large laboratories (GEOL 1121 and 1122) and assisting lecture instructors. Graduate students with concerns about which classes they are qualified to teach should contact the Graduate Coordinator.

TAs are expected to conduct themselves professionally. They are expected to fulfill their duties as assigned. If they are unable to meet their assignment, it is their responsibility to arrange for a replacement and to notify the laboratory coordinator or lecture instructor of the substitution. TAs are expected to make up any time missed from their assigned duties. Such make-up work will be assigned by the lecture instructor or laboratory coordinator in consultation with the Graduate Coordinator. TAs that miss two or more obligations without securing a substitute instructor may have their assistantships terminated. Such terminations will be reviewed by the Graduate Coordinator and the Department Head.

TAs will be evaluated in the classes they teach. Lecture instructors will meet with the TAs early in the semester to review their expectations and to go over TA evaluations. TAs will be evaluated by their immediate supervisors, that is, lecture instructors or laboratory coordinators. TAs will also be evaluated by students in their classes at the end of each semester.

Research assistantships generally have research-related duties assigned to them by the faculty member responsible for the RA, often but not always the student's major professor. RAs are expected to conduct themselves professionally. They are expected to fulfill their duties as assigned. If they are unable to meet their duties, it is their responsibility to discuss this immediately with the supervisor of the RA. Students that frequently do not meet these obligations may have their assistantship terminated. Such terminations will be reviewed by the Graduate Coordinator and the Department Head.

## Part-time Employment

Hourly employment, that is, work paid by the hour and lasting for various lengths of time, may be available from the Department, from individuals with research grants, and from elsewhere in the University. Anyone interested in hourly employment should contact the Department Head or faculty with research grants.

Because a student can be employed no more than half-time (20 hours total), a 4/9's assistant is limited to a maximum of 2 additional hours per week from the University. Other awards and fellowships may restrict additional employment or prohibit it altogether. Be sure to check into such restrictions before beginning any hourly work to avoid jeopardizing your primary source of income. Consider as well the effect any additional work will have on progress towards your degree.

## Other Employment

Full-time employment or part-time employment beyond a teaching assistantship or research assistantship will considerably slow progress towards your degree. For this reason, the Geology Department discourages stu-

dents from such work. Although financial concerns may be paramount in some cases, experience has shown that you will be better off in the long run if you tolerate some short-term deprivation so that you earn your degree on time and move to full-time professional employment.

## **Taxes**

Students are responsible for understanding the rules covering tax liability, and you should read Publication 520 of the IRS. Get your copy at the Federal Building in Athens at 355 Hancock Avenue or in the Graduate School Office. Remember that tax law may change at any time and that it is your responsibility to check with the IRS regarding your obligations.

## **Requirements for Resident Fee Status**

All students working one-third time or more as teaching or research assistants are exempted from out-of-state tuition fees. Students not so employed are subject to out-of-state tuition rates until they have been a legal resident of Georgia for at least twelve months immediately preceding the date of registration.

We recommend that graduate students become residents as soon as possible to avoid these out-of-state fees. The requirements for establishing residency can be found in the Graduate School Bulletin. Currently enrolled students may also call the Registrar's Office at 542-4040.

## **Future Professional Employment**

You will soon graduate and be seeking professional employment. We are interested in helping you find the best possible position for which you are qualified. Advertised job openings may be posted on the bulletin board across from the Department Office. You should also make use of the University Placement Office and watch their announcements of interviews on campus. When interviewers visit the Geology Department, appointments will be organized by the Graduate Coordinator.

You should begin planning now for your job search and a good first step is to prepare your resumé, as well as a longer statement of your qualifications, known as a curriculum vitae (C.V.). Your major professor will guide you in preparing these. You should also begin organizing a personal portfolio with copies of publications, abstracts, reports, research proposals, letters of recommendation, awards, evaluations, certificates or licenses, and other material bearing on your professional life. Much of this material can be placed on a personal web page.

Even before you are ready for active job hunting, you should meet and talk with representatives of industry and government agencies as they visit the department for interviews or to present seminars. Your interview skills

can be improved with planning and practice, which are necessary to present relevant facts coherently and confidently to an interviewer. Training for interviews can be arranged with the Career Planning and Placement Office in Clark Howell Hall.

## **Research and Travel Funding**

Funding for research and travel is available from many sources, including the Department, the University, and external grants, that is, funding from outside of the University.

The Geology Department offers four main grants programs. The Miriam Watts-Wheeler Scholarship Fund supports research and travel to meetings, and it is open to all Geology graduate students. The Gilles and Bernadette Allard Geology Award Fund supports field research in geology. The Joseph W. Berg Scholarship in Geophysics is limited to support of geophysical research by graduate and undergraduate students. The John Sanford Levy Memorial Fund supports graduate research in modern marine settings. Details on all of these awards are given on the departmental website.

Other groups within the University also offer graduate-student funding, and graduate students are encouraged to apply for these awards. Some of these include:

- Dianne C. Davison Scholar Award administered by the University Women's Club
- J. William Fanning Graduate Award administered by the Graduate School
- Graduate School Dissertation Completion Award administered by the Graduate School
- Joshua Laerm Academic Support Award administered by the Georgia Museum of Natural History
- Hamilton Lokey Graduate Scholarship, administered by the Graduate School

Finally, many scientific organizations have well-funded student-grant programs, including the Geological Society of America (GSA), the American Association of Petroleum Geologists (AAPG), and Sigma Xi. More specialized and regional scientific societies also have student-grant programs. Governmental agencies do as well, including the National Science Foundation (NSF) and the Environmental Protection Agency (EPA). Students are strongly encouraged to seek support aggressively from the external sources. More details and links are available on the departmental website, and web searches for "geology student grants" will also reveal other sources of funding. Most deadlines are in the spring, often early in the semester, so first-year students are encouraged to be

ready to write grant proposals at the start of Spring Semester. Coordinate with your major professor on how to go about this.

## Requirements of Graduate Programs in Geology

Most requirements of the M.S. and Ph.D. programs in Geology are set by the Graduate School, and the necessary forms are on their website ([grad.uga.edu](http://grad.uga.edu)). You should become familiar with the policies as laid out in the Graduate School Bulletin, particularly those pertaining to the M.S. and Ph.D. programs. The requirements listed below are mainly those specified by the Geology Department, and these are in addition to the Graduate School requirements.

### Academic Honesty

Academic honesty refers to the personal acceptance and adoption of a strict standard of values for your work and life in the academic world. Written regulations cannot encompass all the ramifications of such a system of values. Academic honesty includes respect for your own work and the work of others; complete truthfulness in your dealings with faculty, administrators, and fellow students; and care and respect for the academic resources in our libraries and labs. Academic honesty is not completely “academic”, as the underlying philosophical principles extend to the values you should carry on to your future business and professional life. Your adherence to a high standard of values in this regard will be a significant factor in our evaluation of your potential as a professional. You should obtain and read the pamphlet “A Culture of Honesty” prepared by the Office of the Vice President for Academic Affairs.

### Major Professor and Advisory Committee

The advisory committee exists to assist and guide you with your academic and research program. In all prescribed duties, the advisory committee should function as a true committee; all members should be intimately involved in establishing the program of study, selecting and executing thesis research, reviewing thesis writing, and scheduling examinations. You or your major professor (also called your advisor) should call periodic meetings of the full committee to review your progress, and you should take prompt, specific actions as advised. At a minimum, the advisory committee meets once per year to evaluate your progress toward the degree.

For an M.S. candidate, the advisory committee consists of the major professor and two other members. For a Ph.D. candidate, the advisory committee consists of the major professor and at least two other members. A Ph.D. committee must include three members of the

University’s Graduate Faculty. You may include an additional member from outside of the University of Georgia, and Ph.D. students are strongly encouraged to include a non-UGA member in their advisory committee. Appointment of non-UGA members requires approval of the Graduate School and a letter of support from the Graduate Coordinator. It is the responsibility of the Ph.D. student and the major professor to supply the C.V. of the non-UGA member to secure a favorable decision by the Graduate School. The Graduate Coordinator may consult with your major professor concerning the membership of your committee. The names of the major professor and the members of the advisory committee will be reported to the Graduate School by the Graduate Coordinator and Academic Program Administrator. All graduate students should select a major professor and advisory committee by the end of their second semester in residence.

If a member of your advisory committee is absent from campus for a long period during a critical phase of your graduate program, and you need to replace that committee member, you may do so by agreement with your major professor, the remaining members of your advisory committee, and the Graduate Coordinator.

### Coursework and Program of Study

All teaching and research assistants must pre-register for their courses, regardless of whether formal registration is completed at that time. We strongly urge that you register during the advance registration period, rather than wait until late registration. All graduate students should advise their major professor of their plans for course work during the advance registration period. This is necessary for planning of space and equipment needs as well as for TA scheduling. The dates of advance registration for the following semester are announced by the Academic Program Administrator at the beginning of every semester.

The Graduate School requires all graduate students to complete a program of study during your second semester, to be approved by your major professor and advisory committee. You should work closely with your major professor and advisory committee to plan a broad academic program involving course work in areas beyond your area of intended specialization.

### Course Deficiencies

The undergraduate geology curriculum required for the B.S. at UGA is our benchmark for determining deficiencies in your undergraduate training in geology and other subject areas. Deficiencies in your background may be identified by the Admissions Committee or by your advisory committee. Your plan of study should outline how you plan to deal with these deficiencies. The Gradu-

ate Coordinator will determine whether a program of study satisfies any identified deficiencies. Students are limited to including one deficiency course (4000/6000 level) as a graduate course on their program of study. You may seek exemption from any prescribed course by demonstrating proficiency in the subject to your major professor, advisory committee, and Graduate Coordinator.

## Evaluations

At the undergraduate level, grades on exams and courses are often the only factor in evaluating your academic achievement and potential. Grades are important in graduate school, too, but assessment of your overall professional development and your capacity for independent and imaginative work is more important. If your studies are directed towards long-range professional development, good grades will generally follow.

All graduate students must meet with their committee in the spring semester and complete an annual evaluation form, available on the departmental website. You should complete this form before the committee meeting, and it should be signed by you and your committee at the meeting, before turning it in to the Academic Program Administrator. It is your responsibility to ensure that the report is completed and submitted by the end of spring semester. Failure to make satisfactory progress as indicated by your major professor and advisory committee or failure to submit a signed and completed annual evaluation will result in an unsatisfactory evaluation. In this event, the department reserves the right to discontinue departmental support, including the termination of office space and assistantships. Registration will not be permitted if the annual evaluation form is not completed and signed.

All graduate students are required to present their research results in a public defense. This presentation and an initial round of questions is open to faculty, students, and visitors. A subsequent round of questions is open only to faculty. This defense is not only a defense of your research as presented in your thesis or dissertation, but may also be a comprehensive test of the breadth and depth of your knowledge of geology.

We recommend that all graduate students do some general reading in geology as preparation for examinations given as part of your graduate degree, for courses you may have to teach, and for employment after graduate studies. While it may seem too basic, we recommend you read cover-to-cover first-rate elementary texts in physical and historical geology. A reasonable goal to set for yourself is to be conversant in all main topics in these texts at the level developed for beginning geology students. See your major professor or advisory committee for recommended texts.

## Thesis and Dissertation

### Proposals

A formal, written thesis or dissertation proposal is required of all graduate students. A well-written thesis or dissertation proposal should form the basis for a competitive student research grant proposal; consequently, we recommend an outline below that parallels the construction of a GSA student grant proposal. Although the timing and procedure for evaluating M.S. and Ph.D. proposals differ, the format and content is essentially the same. M.S. and Ph.D. proposals should contain the following:

- (1) Cover page with title of project and names of major professor and members of advisory committee.
- (2) Statement and explanation of hypothesis or hypotheses to be tested and the overall objective of the project.
- (3) Discussion of previous work on problem, both in terms of the larger discipline and regional studies, as well as the importance of the project.
- (4) Description of methods used to test the stated hypotheses.
- (5) Timeline for completion of project.
- (6) Itemized budget, with budget justification, and list of grant proposals submitted or to be submitted.
- (7) List of references cited in proposal.

Copies of proposals should be submitted to members of the advisory committee and one copy should be submitted to the Academic Program Administrator.

All students are required to defend their proposals orally. If the basic ideas of the proposal have been altered substantially as a result of its defense, revised copies should be distributed to the advisory committee and to the Academic Program Administrator.

### Writing

The major professor should be satisfied with the thesis or dissertation before submitting it to other members of the advisory committee. From the viewpoint of the major professor, the thesis or dissertation should be in excellent form, complete, well-written, and well-edited. By the time the other members of the advisory committee receive the document, only minor changes should be necessary. The advisory committee has the right and responsibility to make recommendations and suggest additional changes. You should leave sufficient time for revisions between the defense and any deadlines required by the Graduate School for thesis or dissertation submission.

Members of the student's advisory committee should be given a copy of the thesis or dissertation at least two weeks before the anticipated defense date. Members of the advisory committee will in turn complete their review

within two weeks, barring unusual scheduling problems. Reviewers cannot be expected to compromise their standards for quality merely for the sake of shortening the schedule.

### **Defense**

Students should schedule their thesis or dissertation defense in consultation with their major professor and members of their advisory committee to avoid scheduling conflicts. The defense date must be at least one week before the Graduate School's deadline for filing the thesis or dissertation and related materials. The defense date must be announced to the department at least two weeks before the defense and a copy of the thesis or dissertation must be placed on file in the department office at this time. Defenses should be scheduled during fall or spring semesters. Summer defenses are not encouraged, and may take place only by the consent of the thesis or dissertation committee.

The student's performance in the defense will be judged by the major professor and the members of the advisory committee.

### **Change of Degree Objective**

In some cases, a M.S. student may wish to change their degree objective to a Ph.D. To do so, the student should meet with their M.S. thesis committee to present their progress to date, to state their desire to change to the Ph.D. program, and to state their plan of Ph.D. research. Based on this meeting, the thesis committee should forward a recommendation through the major professor to the admissions committee, based on their evaluation of a student having made adequate progress and showing the potential to work at the Ph.D. level. The admissions committee will vote on the change of degree objective and the graduate coordinator will follow the committee's guidance on approving or disapproving the change of degree objective paperwork.

M.S. students should complete the change of degree objective paperwork by their second semester in residence (not counting summer semester) and take their Ph.D. preliminary exams in their third semester (not counting summer semester), in order to stay on schedule as a Ph.D. student.

### **Off-Campus Academic Work**

If you work on a thesis or course at the Skidaway Institute of Oceanography, the Marine Institute on Sapelo Island, or the Savannah River Ecology Laboratory, you will be considered in residence at the University. While at these institutions, should you need help with Graduate School forms or special advice regarding your program, contact the Graduate Coordinator or the Academic Program Administrator.

Field work by registered students related to a thesis or special project is also considered on-campus work. By special arrangement, thesis work can be done at cooperative laboratories such those belonging to the Oak Ridge Associated Universities, of which the University of Georgia is a member.

### **Summer Plans**

Your summer plans should be chosen to allow you to complete your degree program in the shortest possible time. The summer is the time when you can make great strides in your research work because you are free of the day-to-day demands of course work, TA responsibilities, etc.

In most cases, the Geology Department does not have the resources to offer graduate students summer support. We recognize that this may cause some financial difficulties for students and we have found several successful ways these can be minimized. First, budget your assistantship stipend to cover your expenses through the calendar year, not just the academic year. Second, seek grant support to cover summer research expenses. In some cases, your major professor may have such support available. Third, you will generally reap a long-term economic benefit if you obtain a student loan to cover your expenses rather than working at a low-paying job simply to pay the bills. Time on a job will slow your pace to graduation. Once you graduate and become employed, your earning capacity will quickly make up any accumulated debt. If you are not planning to spend a significant part of the summer on thesis-related research, you should discuss your plans with your major professor.

Faculty members are likely to travel during the summer for extended periods for research and other professional pursuits. Students should make their summer plans sufficiently in advance to verify that faculty members will be available when necessary.

### **The M.S. Program**

An M.S. degree program should be completed in two years and is limited by the Graduate School to a maximum of six years. For the M.S. degree, the Graduate School requires a minimum of 30 semester hours, of which at least 12 hours must be in 6000 or higher level courses not open to undergraduates. No more than 6 hours of research (GEOL 7000) and 3 hours of thesis (GEOL 7300) can be counted towards the 30 minimum hours, leaving a minimum of 21 hours of course work. The 9 hours in excess of the 12 hours of course work not open to undergraduates can include 4000/6000 level course and directed studies. In most cases, these requirements translate into taking 7 graduate courses, 4 of which must be graduate-only. It is your responsibility



alone to complete all necessary requirements as listed here and to stay on schedule for a two-year completion. The schedules given below do not count summer as a semester; for example, the third semester for a student that started in the fall would refer to the fall of the second year.

## **Timeline for Degree Completion**

### **First semester**

Select your major professor, who must be a member of the Regular or Provisional Graduate Faculty.

### **Second semester**

Select the other members of the advisory committee and submit the masters committee form to the Graduate School.

Complete program of study form and submit it to the Graduate School.

Submit thesis proposal to your major professor and discuss it with your advisory committee. A copy of the proposal should be given to the Academic Program Administrator to be placed in your file. Thesis proposals should be submitted by the end of your second semester, except where large numbers of course deficiencies must be removed. In such cases, the proposal should be submitted the semester following completion of remedial geology courses.

Complete the annual evaluation form and submit to Academic Program Administrator.

### **First summer**

Perform field and laboratory work.

### **Third semester**

Continue work on thesis research.

### **Fourth semester**

Application for Graduation form must be filed the first week of classes during the semester in which you plan to graduate.

Write and defend thesis. Obtain instructions on thesis preparation from Graduate School. Submit thesis to major professor. Once thesis is approved by major professor, submit thesis to advisory committee at least two weeks before the defense.

The defense date must be announced to the department through the Academic Program Administrator no less than two weeks before the defense. A copy of the thesis must be placed on display in the Geology office at this time.

Results of the defense are reported to the graduate school through the Academic Program Administrator. Thesis must be submitted to the Graduate School for a format check. Check early with the Graduate School regarding the scheduling of this format check.

If thesis will not be defended by end of semester, complete annual evaluation form and submit to Academic Program Administrator. Submit electronic copy of completed thesis to Graduate School and to the Academic Program Administrator.

## **The Ph.D. Program**

Ph.D. requirements should be completed within four years. The Graduate School sets upper limits for completion of six years after first registration for the course work and five years after admission to candidacy for the dissertation work. For the Ph.D. program the Graduate School requires at least 16 hours of 8000 or higher level courses in addition to research (GEOL 9000), dissertation (GEOL 9300) and directed studies. In most cases, this translates to 6 Ph.D.-level courses. It is your responsibility alone to complete all necessary requirements as listed here and to stay on schedule for a two-year completion. The schedules given below do not count summer as a semester; for example, the third semester for a student that started in the fall would refer to the fall of the second year.

## **Timeline for Degree Completion**

### **First semester**

Select your major professor, who must be a member of the Regular or Provisional Graduate Faculty.

### **Second semester**

Select the remaining members of the advisory committee and submit committee form to the Graduate School.

Submit program of study to the Graduate School.

Prepare first draft of dissertation proposal.

### **First summer**

Begin pilot field and laboratory work related to your research.

### **Third semester**

Prepare dissertation proposal and distribute to advisory committee after approval by your major professor. All Ph.D. proposals must be submitted prior to the oral comprehensive examination.

Inform Graduate Coordinator at least three weeks ahead of the date on which you plan to take your comprehensive examination. Permission to take comprehensive exam must be granted by the major professor.

Inform Graduate School, through the Academic Program Administrator, at least two weeks ahead of time of date of oral comprehensive exam. Geology faculty should also be informed of the date of this exam through the Academic Program Administrator.

Take written and oral comprehensive exams.

Submit admission to candidacy form to the Graduate School, immediately after successful completion of qualifying exams.

#### **Fourth semester**

Complete most of required course work.

#### **Second summer**

Begin field and laboratory work on your proposed research.

#### **Final semester**

File Application for Graduation form with Registrar's Office.

Obtain dissertation formatting instructions from Graduate School.

Submit copy of dissertation to major professor for approval. Upon approval, submit copy of dissertation to advisory committee at least three weeks before the defense.

Take dissertation to Graduate School for format check.

Defend dissertation.

Report results of defense to Graduate School, through the Academic Program Administrator.

Submit electronic copy of completed dissertation to Graduate School and to the Academic Program Administrator.

### **Comprehensive Examination**

#### **Overview**

The Ph.D. comprehensive examination is given at an early stage of a Ph.D. program, generally before the completion of the third semester following matriculation, which allows time in the fourth semester for retaking the exam if needed. The comprehensive exam includes a written and an oral part. The Ph.D. written and oral exam constitute a logical whole designed to take place over a period of no more than three weeks.

#### **Written Examination**

The advisory committee has the responsibility to schedule the written examination. The student must inform the Graduate Coordinator at least a month before the exam date. There are only two exceptions to this schedule. (1) Former M.S. candidates who decide to work directly toward the Ph.D. should take the examination as soon as the Graduate School has approved their request for a change in degree objective. (2) New Geology majors having non-geology M.S. degrees and thus inadequate backgrounds, should take the examination in the semester following the completion of coursework required to satisfy core-curriculum deficiencies.

The written examination will consist of 5 to 10 questions chosen by the major professor from a pool of

questions written by the advisory committee. Normally, each committee member submits 2 to 4 questions to the major professor. The exam will be designed to take no more than 20 hours of work and may be open or closed book. If the exam is designed to take over a longer period, contact the Graduate Coordinator.

After receiving written pass or fail votes from each advisory committee member, the major professor will make the results of the written exam available to the student no fewer than three days before the scheduled date of the oral exam. The student is encouraged to contact members of the advisory committee informally for advice on how best to prepare for the oral exam. If the performance on the written exam is unsatisfactory, the advisory committee may by unanimous vote cancel the oral examination. If the written exam reveals deficiencies in training, the committee may require the student to take specific remedial actions, such as additional coursework or guided study.

#### **Oral Examination**

The oral exam is designed as a comprehensive examination of the breadth and depth of your knowledge in the geological sciences generally, and in your chief area of interest particularly. Your knowledge of your area of interest will include an oral defense of your written thesis proposal. The oral exam will also test your ability to think clearly, synthesize ideas, and express them coherently. The oral examination will be formally scheduled with the Graduate School by the Graduate Coordinator, through the Academic Program Administrator, and is open to all members of the Faculty. You will make a short oral presentation of your thesis proposal, after which faculty members will question you on the proposal and related subjects. At the end of the oral exam, the advisory committee will consult and vote on the outcome of both the written and oral exams. Results will be communicated to the student and forwarded to the Graduate School.

If the performance on the written or the oral exam is unsatisfactory, the student will normally be allowed to retake that exam. The advisory committee may, however, decide by unanimous vote to terminate the student's degree program at the conclusion of the semester in which the comprehensive exam was administered. Termination of the degree program encompasses all aspects of the degree program, including office space, teaching or research assistantships, computer and network access, and library use.

To aid in understanding the various outcomes of the written and oral examinations, a summary table is presented on the next page.

## Possible Outcomes of First Exam Attempt

### Written Exam

- Pass (1 or no failing votes).
- Pass (1 or no failing votes), with deficiencies identified by the advisory committee to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), with the oral exam proceeding as scheduled. This option requires that at least one member of the advisory committee state that the oral exam should proceed. In this case, the Graduate School requires that the student must retake the written exam. The advisory committee may require deficiencies to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), with the oral exam being cancelled. This option requires unanimous agreement by the advisory committee to cancel the oral exam. In this case, the Graduate School requires that the student must retake the written exam. The oral exam must be rescheduled to take place after the second written exam. The advisory committee may require deficiencies to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), with termination of the student's degree program. This option requires a unanimous vote of the advisory committee to terminate the program.

### Oral Exam

- Pass (1 or no failing votes).
- Pass (1 or no failing votes), with deficiencies identified by the advisory committee to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), with the oral exam to be retaken, as required in this case by the Graduate School. The advisory committee may require deficiencies to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), with termination of the student's degree program. This option requires a unanimous vote of the advisory committee to terminate the program.

## Possible Outcomes of Second Exam Attempt

### Written Exam

- Pass (1 or no failing votes).
- Pass (1 or no failing votes), with deficiencies identified by the advisory committee to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), and the student's degree program is terminated, following the Graduate School's requirement.

### Oral Exam

- Pass (1 or no failing votes).
- Pass (1 or no failing votes), with deficiencies identified by the advisory committee to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), and the student's degree program is terminated, following the Graduate School's requirement.