

# Department of Geology Graduate Handbook

19 August 2024

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## Personnel

Department Head	Adam Milewski
Associate Department Head	Doug Crowe
Graduate Coordinator	Steven Holland
Office Manager and Academic Program Administrator	Ashley Arnold
Administrative Assistant	Shay Nash
Geology Lab Professional	Michael Durham
Research Coordinator	Julia Cox

## General Information

As a graduate student, you must read and know the policies in this handbook and the Graduate School Bulletin. The Graduate School has policies that apply to all graduate students across the University, and this handbook contains the policies specific to geology students.

## 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 solid technical background. We also hope to develop in these geologists the skills and motivation for continued learning that will permit them to solve new scientific problems during their professional careers.

Proper pursuit of academic and career goals requires that time in graduate school be spent efficiently. Early development of a plan for your coursework and research is essential for allowing you to complete your degree requirements on time. Every effort should be made to ensure you meet 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 your careers, we appreciate your comments on the geology program, and your suggestions help us ensure that we remain 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 discuss their interests and possible research topics with you. The Department includes several committees of faculty to handle specific issues. The Admissions Committee, Student Awards Committee, and Graduate Curriculum Committee are particularly important for graduate students. A 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 Office Manager about individual staff responsibilities. Always treat the staff courteously; they will do everything possible to help you.

## Social Events

The department may host several social functions during the year, such as banquets, receptions, and picnics. You should 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 3:00 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 essential means of broadening your geological education.

## Facilities

### General Equipment

As a professional, you should own essential equipment for fieldwork. We also recommend owning a computer with software for word processing, spreadsheets, computation, and graphics.

### Research-oriented Facilities

Thin-sectioning, rock-crushing, and other sample-preparation equipment are available for research and coursework. 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 also maintains or provides access to analytical equipment 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 maintain a high level of computer security.

You may be provided with a desktop computer 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. Students should not 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), administered jointly by the Geology and Geography departments. 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 the departmental website. Students are free to use the lab when it is not in use. Never interrupt a class in progress. The door combination is changed each semester and can be obtained from IT support.

A large-format printer capable of printing posters is available for official use. To access this printer, contact the Geology Lab Professional to schedule an appointment for printing. Individual faculty members have student-use computers with software applicable to their specialty. Your major professor will provide details. Free and discounted software is available from the UGA EITS website.

## **Office Facilities**

### **Office Space**

Providing 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.

Students must keep their office space clean and undamaged and immediately report any issues. Upon graduation, all students are expected to remove their belongings so that incoming students can move into a clean office.

### **Mail**

There is a shared mailbox for all graduate student mail in the mail room. This mailbox will be used for memos, notes from faculty, official departmental correspondence, and your professional correspondence. Since the box is small and shared, your personal mail should be delivered to your local address or post office box.

### **Keys**

You should obtain from the Geology office staff any keys you need to access labs or classrooms. Keys must be returned to the Geology office staff upon finishing your degree or before an extended leave of absence from the Department. After-hours access to the Geography-Geology building is provided through your UGA student ID card.

### **Telephones**

You will receive an email notification if there is a phone call for you that requires a message to be relayed. If a cell phone signal is unavailable, students who need to make important calls should check with the office staff.

### **Photocopiers**

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

## **Employment**

The Office Manager will answer questions and handle administrative problems relating to employment anytime during the year. Please respond within one business day to emails from the Office Manager regarding employment issues.

## **Assistantships and Fellowships**

The Department annually awards Teaching Assistantships (TAs) and Research Assistantships (RAs) based on recommendations of the Admissions Committee. Factors considered include your transcript and recommendation letters. Teaching effectiveness is also a consideration for returning students, and any assistantship may be re-

voked for failure to perform assigned duties professionally.

Teaching assistantships are typically granted for one year. Continued support depends upon satisfactory performance in 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 the M.S. program and then changing degree objective to the Ph.D. without completing the M.S. degree will be eligible for four years of departmental support in the first five years following their original matriculation as an M.S. student. A student that first completes an 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's of a 40-hour work week). This support comes from the University and is designed to assist in delivering the educational program. A TA also offers graduate students the opportunity to gain teaching experience as part of their education.

The Graduate Coordinator makes TA assignments in consultation with the lecture instructors. Usually, teaching assignments involve 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 and fulfill their duties as assigned. If they cannot meet their assignment, they must arrange a replacement and notify the laboratory coordinator or lecture instructor of the substitution. TAs are expected to make up any time missed from their assigned duties. The lecture instructor or laboratory coordinator will assign such make-up work in consultation with the Graduate Coordinator. TAs that miss two or more obligations without securing a substitute instructor may have their assistantships terminated. The Graduate Coordinator and the Department Head will review such terminations.

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. Immediate supervisors (lecture instructors or laboratory coordinators) will evaluate TAs. TAs will also

be evaluated by students in their classes at the end of each semester.

TAs must take the 1-hour GEOL 6920 Seminar for Geology Teaching Assistants in their first semester as teaching assistants. This course will satisfy UGA's TA policy, which requires GRSC 7770 or an equivalent.

Research assistantships have research-related duties assigned by the faculty member responsible for the RA, generally the student's major professor. RAs are expected to conduct themselves professionally. They are expected to fulfill their duties as assigned. If they cannot 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. The Graduate Coordinator and the Department Head will review such terminations.

## 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, individuals with research grants, and 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 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 the effect of additional work on your progress toward your degree.

## Other Employment

Full-time or part-time employment beyond a teaching or research assistantship will considerably slow progress toward your degree. For this reason, we discourage students from outside work. Although financial concerns may be paramount in some cases, you will typically fare better in the long run if you tolerate some short-term deprivation to earn your degree on time and move to full-time professional employment.

## Taxes

Students are responsible for understanding the tax liability rules. IRS Publication 520 is an essential source of information and is available at the Graduate School Office or the Federal Building in Athens at 355 Hancock Avenue. Remember that tax law may change and that you must 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 registration date.

We recommend that graduate students become residents as soon as possible to avoid these out-of-state fees. The requirements for establishing residency are described 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 seek 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 use 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, the Department Head, or another faculty member appointed for the task.

Plan early for your job search. An excellent first step is to prepare your resumé and a more comprehensive statement of your qualifications, known as a curriculum vitae (C.V.). Your major professor will guide you in preparing these. 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 to begin job hunting, you should meet with representatives of industry and government agencies when they visit the department for interviews or to present seminars. We also recommend interviewing at professional meetings such as GSA and AGU. Planning and practice can improve your interview skills so you can speak coherently and confidently to an interviewer. Interview training 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 funding from outside of the University, called external funding.

The Geology Department offers several grant 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 study 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 issued by the Graduate School
- Graduate School Dissertation Completion Award given by the Graduate School
- Joshua Laerm, Academic Support Award, provided 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, including the National Science Foundation (NSF) and the Environmental Protection Agency (EPA), also provide funding. Students are strongly encouraged to seek support aggressively from external sources. More details and links are available on the departmental website, and web searches for "geology student grants" will also reveal funding sources. Most deadlines are in the Spring Semester (often early), so first-year students are encouraged to be ready to write grant proposals at the start of the Spring Semester. Coordinate with your major professor on how to go about this.

## Requirements of Graduate Programs in Geology

The Graduate School sets most requirements of the M.S. and Ph.D. programs in Geology, and the necessary forms are on their website ([grad.uga.edu](http://grad.uga.edu)). You should become familiar with the policies in the Graduate School Bulletin, particularly those on the M.S. and Ph.D. programs. The requirements listed below are mainly those

specified by the Geology Department, which stands 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 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 entirely “academic,” as the underlying philosophical principles extend to the values you should carry to your future business and professional life. Your adherence to a high standard of values 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 assists and guides you with your academic and research program. In all prescribed duties, the advisory committee should function as an actual 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 and 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 yearly 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 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. To request that a non-UGA member be added, obtain that person’s C.V., write a short paragraph describing how they will benefit your studies, and send both to the Graduate Coordinator. The Graduate Coordinator will return a cover letter, and it and the C.V. should be sent to the Graduate School in your request for an outside committee member.

The Graduate Coordinator may consult with your major professor concerning the membership of your committee. The major professor and the advisory committee members 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 an extended period during a critical phase of your graduate program, it may be necessary to replace that committee member. To do so, you will need the agreement of 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 discuss with their major professor their plans for coursework during the advance registration period. This is necessary for the planning of space and equipment needs as well as for TA scheduling. The Academic Program Administrator announces the advance registration dates for the following semester.

The Graduate School requires all graduate students to complete a program of study during their second semester. The major professor and advisory committee must approve the program of study. Work closely with your major professor and advisory committee to plan a broad academic program involving coursework in areas beyond your area of intended specialization.

First-semester graduate students are required to take the Geology-specific GRSC 7001 (GradFIRST) seminar. Contact the Graduate Coordinator for the specific course number.

To hold a teaching or research assistantship, all graduate students are required by the Graduate School to enroll in at least 12 credit hours per semester. To reflect the workload that you are doing, the Geology Department asks all graduate students to enroll in 15 credit hours per semester. Hours of GEOL 7000 (M.S.) or GEOL 9000 (Ph.D.) should be added to reach 15 credit hours.

## **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. The Admissions Committee or your advisory committee may identify deficiencies in your

background. Your plan of study should outline how you plan to deal with these deficiencies. The Graduate 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 in 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 an assessment of your overall professional development and your capacity for independent and imaginative work is more important. Good grades usually follow if your studies are directed toward long-range professional development.

All graduate students must meet with their committee in the Spring semester and complete an annual evaluation form, available on the Geology department website. You should complete this form before the committee meeting, and you and your committee should sign it at the meeting before submitting it to the Academic Program Administrator. You are responsible for ensuring that the report is completed by a date given by the Graduate Coordinator, typically in mid-April. Failure to make satisfactory progress, as determined by your major professor and advisory committee, will result in an unsatisfactory evaluation. Similarly, failure to submit a signed and completed annual evaluation will result in an unsatisfactory evaluation. In this event, the department reserves the right to terminate any teaching or research assistantship and to discontinue providing a student with office space. Class registration will be permitted only if the annual evaluation form is complete and signed.

All graduate students must present their research results in a public defense. This presentation and an initial round of questions are open to faculty, students, and visitors. A subsequent round of questions is open only to faculty; typically, this will be your advisory committee, but it may include other faculty members. 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 their graduate degree, for courses they 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 for

yourself is to be conversant in all primary 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

All graduate students must prepare a formal, written thesis or dissertation proposal. A well-written thesis or dissertation proposal can 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 are similar. M.S. and Ph.D. proposals should contain the following:

- (1) Cover page with the title of the project and names of the major professor and advisory committee members.
- (2) Statement and explanation of hypothesis or hypotheses to be tested and the project's overall objective.
- (3) Discussion of previous work on the 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 the project.
- (6) Itemized budget, with budget justification and list of grant proposals submitted or to be submitted.
- (7) List of references cited in the proposal.

You must provide a copy of the proposal to all advisory committee members.

All students are required to defend their proposals orally. For master's students, this is typically done at the first annual meeting of the advisory committee in the Spring Semester. For Ph.D. students, the defense is in the third semester, typically the second Fall Semester. If the basic ideas of the proposal have been altered substantially during the research, revised copies should be distributed to the advisory committee.

### Writing

The major professor should be satisfied with the thesis or dissertation before submitting it for comments from other advisory committee members. From the viewpoint of the major professor, the thesis or dissertation should be in excellent form, complete, well-written, and well-edited. Only minor changes should be necessary when the other advisory committee members receive the document. The advisory committee is responsible for making recommendations and suggesting additional changes. You should ensure sufficient time for revisions between the defense and any deadlines required by the Graduate School for thesis or dissertation submission.

The advisory committee members should be given a copy of the thesis or dissertation at least two weeks before the anticipated defense date. Members of the advisory committee must complete their review within two weeks, barring unusual scheduling problems. Reviewers cannot be expected to compromise their standards for quality merely to shorten the schedule.

### **Defense**

To avoid scheduling conflicts, students should schedule their thesis or dissertation defense in consultation with their major professor and advisory committee members. The defense date must be at least one week before the Graduate School's deadline for filing the thesis, dissertation, and related materials. The defense date must be announced to the department at least two weeks before the defense. To schedule a defense, contact the Degree Program Assistant. A physical copy of the thesis or dissertation must be placed for viewing in the department office by the same date the defense is announced. Defenses should be scheduled during the Fall or Spring semesters. Summer defenses are not encouraged and may take place only with the consent of the thesis or dissertation committee.

The major professor and the advisory committee members will evaluate the student's performance in the defense.

### **Change of Degree Objective**

If an M.S. student wants to change their degree objective to a Ph.D., they should meet with their thesis committee to present their progress, declare their desire to switch to the Ph.D. program, and state their plan for 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. The Graduate Coordinator will decide on the change of degree objective, considering the Admissions Committee's vote.

M.S. students should complete the change of degree objective paperwork by their second semester in residence (not counting the Summer semester) and take their Ph.D. preliminary exams in their third semester (not counting the Summer semester), 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 UGA Marine Institute, or the Savannah River Ecology Laboratory, you will be considered in residence at the University of Georgia. 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.

Fieldwork by registered students related to a thesis or another University-related project is considered on-campus work. By special arrangement, thesis work can be done at cooperative laboratories such as 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 quickly. You can make great strides in your research work in the summer because you are free of the day-to-day demands of coursework, TA responsibilities, etc. Failure to devote your summer to research will likely delay the completion of your degree.

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 support available through grants. 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 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 for any accumulated debt. Discuss your plans with your major professor if you are not planning to spend a significant part of the summer on thesis-related research.

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. At most, 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 coursework. The 9



hours above the 12 hours of coursework not open to undergraduates can include 4000/6000 level courses and directed studies. In most cases, these requirements translate into taking seven graduate courses, 4 of which must be graduate-only. It is your responsibility alone to complete all of these requirements and stay on schedule for a two-year completion. The schedules below do not count summer as a semester; for example, the third semester for a student that started in the Fall semester would refer to the Fall Semester 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. In most cases, your major professor will have already been selected based on your interests at admission to the graduate program.

### **Second semester**

Select the other advisory committee members and submit the master's committee form to the Graduate School.

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

Submit your 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 multiple course deficiencies must be removed. In such cases, the proposal should be submitted the semester following the completion of remedial geology courses.

Complete the annual evaluation form and submit it to the Academic Program Administrator by the date announced by the Graduate Coordinator, typically in early April.

### **First summer**

Perform field and laboratory work.

### **Third semester**

Continue thesis research.

### **Fourth semester**

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

Write and defend the thesis. Obtain instructions on thesis preparation from Graduate School. Submit the thesis to the major professor. After the major professor approves the thesis, submit the thesis to the advisory committee at least two weeks before the defense. Submit an early draft of the thesis to the Graduate School for a

format check; check with the Graduate School for this deadline date.

Contact the Academic Program Administrator to announce the defense date to the department and University at least two weeks before the defense. A physical copy of the thesis must be displayed in the Geology office at this time.

Defend the thesis. Results of the defense are reported to the Graduate School through the Academic Program Administrator. Submit an electronic copy of the completed thesis to the Graduate School and 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 coursework 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 dissertation research (GEOL 9000), dissertation writing (GEOL 9300), and directed studies. In most cases, this translates to 6 Ph.D.-level courses. It is your responsibility alone to complete all requirements listed here and stay on schedule for a two-year completion. The schedules below do not count the Summer semester; for example, the third semester for a student that started in the Fall semester would refer to the Fall semester 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. In most cases, your major professor will have already been selected based on your interests at admission to the graduate program.

### **Second semester**

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

Submit the program of study to the Graduate School.

Prepare the first draft of the dissertation proposal and distribute it to your committee for discussion at your Spring Semester committee meeting.

### **First summer**

Begin pilot field and laboratory work related to your research.

### **Third semester**

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

Inform the Degree Program Assistant and the Graduate Coordinator at least three weeks ahead of the date on which you plan to take your comprehensive examination. The major professor must grant permission to take the comprehensive exam.

Through the Academic Program Administrator, inform the Graduate School at least two weeks before the date of the 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 the required coursework.

### **Second summer**

Begin field and laboratory work on your proposed research. Continue this research, including writing dissertation chapters. Dissertation chapters are commonly written as separate stand-alone papers for scientific journals.

### **Final semester**

File Application for Graduation form with Registrar's Office.

Obtain dissertation formatting instructions from Graduate School.

Submit a copy of the dissertation to the major professor for approval. Upon approval, submit a copy of the dissertation to the advisory committee at least three weeks before the defense. Place a physical copy of the dissertation on display in the departmental office.

Submit the dissertation to Graduate School for format check. Check with the Graduate School for the deadline for the format check.

Defend dissertation.

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

Submit an electronic copy of the completed dissertation to Graduate School and 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 matricula-

tion. Taking the exam at this time allows for retaking the exam in the fourth semester if necessary. The comprehensive exam includes a written and an oral part, with the written examination taking place first. The entire comprehensive examination (written and oral) should take place within a three-week period.

### **Written Examination**

The advisory committee has the responsibility to schedule the written examination. The student must inform the Degree Program Assistant and 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 5–10 questions chosen by the major professor from a pool of questions written by the advisory committee. Each committee member submits 2–4 questions to the major professor. The exam will be designed to take at most 20 hours of work and may be open or closed book. The Graduate Coordinator must be contacted in advance for approval if the exam is designed to extend over more than 20 hours of work.

After receiving written pass or fail votes from each advisory committee member, the major professor will make the written exam results available to the student at least three days before the oral exam. The student is encouraged to contact advisory committee members for advice on preparing for the oral exam. If the performance on the written exam is unsatisfactory, the advisory committee may cancel the oral examination by unanimous vote. 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**

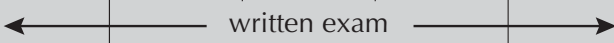
The oral exam examines the breadth and depth of your knowledge comprehensively across the geological sciences and your primary area of interest. Your knowledge of your area of interest will include an oral defense of your written thesis proposal. The oral exam will test your ability to think clearly, synthesize ideas, and express them coherently. The Academic Program Administrator will schedule the oral examination with the Graduate School. The oral examination is open to all members of the University Faculty. At the oral examination, you will briefly present your thesis proposal. 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 oral exam is unsatisfactory, the student will generally be allowed to retake that exam. The advisory committee may, however, decide by unanimous vote to terminate the student's degree program after the semester in which the comprehensive exam was administered. Termination of the degree program encompasses all aspects, including office space, teaching or research assistantships, computer and network access, and library use.

A summary table is presented on the next page to aid in understanding the various outcomes of the written and oral examinations.

## Sample Timeline for Doctoral Exams

S	M	T	W	H	F	S	
	student informs GC of exam dates						<b>Requirements</b>  at least one month before written exam begins, <b>student</b> informs Graduate Coordinator of dates of written exam and details of oral exam
	proposal to committee, advisor solicits questions						
							at least three weeks before the start of the written exam, <b>student</b> provides proposal to committee, and <b>advisor</b> solicits questions from committee.
	questions provided to advisor						
							written and oral exam span no more than three weeks  <b>advisor</b> ensures that written exam spans no more than 20 hours
		announce written exam results			oral exam		<b>advisor</b> reports written exam results to student, committee, and Graduate Coordinator at least three days before oral exam

## Possible Outcomes of First Doctoral Exam Attempt

### Written Exam

- Pass (1 or no failing votes). The oral exam proceeds as scheduled.
- Pass (1 or no failing votes), with deficiencies identified by the advisory committee to be rectified through coursework, independent study, etc. The oral exam proceeds as scheduled.
- 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 the student to retake the written exam. The advisory committee may require deficiencies to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes), and the oral exam is canceled. This option requires unanimous agreement by the advisory committee to cancel the oral exam. In this case, the Graduate School requires the student to retake the written exam. The oral exam must be rescheduled 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) and terminate the student's degree program. There is no oral exam. 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 by the Graduate School in this case. The advisory committee may require deficiencies to be rectified through coursework, independent study, etc.
- Fail (2 or more failing votes) and terminate the student's degree program. This option requires a unanimous vote of the advisory committee to terminate the program.

## Possible Outcomes of Second Doctoral Exam Attempt

### Written Exam

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

### 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.