

Graduate Handbook

Requirements for the M.S. and Ph.D. Degrees in Geoscience

A. General Requirements

A.1 INTRODUCTION

This document sets forth the requirements and procedures for graduate students working on the MS and PhD degrees in the Department of Geoscience. This document includes all departmental requirements and many of the relevant requirements of the Graduate School.

Nothing in this document alters or supersedes the university-wide requirements for the MS or PhD degrees set forth in the Graduate Catalog and the Graduate School Academic Guidelines. While many of the Graduate School requirements are contained herein, certain topics (admissions and thesis format, for example) are not discussed here. Students should familiarize themselves with the Graduate School requirements set out in the Academic Policies and Procedures <https://grad.wisc.edu/acadpolicy/>.

A.2 GUIDANCE AND EVALUATION (G&E) COMMITTEE

By the start of their first semester, each student will have an Advisor. Students admitted to Geoscience must have an advisor or co-advisor with a tenure home in Geoscience. Affiliate faculty members may be a co-advisor but may not be the sole primary advisor for students in Geoscience.

The student's Advisor(s) will select, in consultation with the student, additional members of the Guidance and Evaluation (G&E) Committee. The Department requires a G&E Committee meeting annually for all MS and PhD students with written and verbal feedback provided to the student. The meetings should occur no later than two weeks before the end of classes in the spring semester. For entering students, it is recommended that the G&E Committee meet during the first semester.

A.2.1 COMPOSITION

The G&E Committee is composed of 3 faculty members. The Advisor will be a Geoscience faculty member (an Assistant, Associate, or Full Professor) and the chair of the committee. If there are co-advisors for the student's thesis, one will be appointed chair for purposes of record. The second member will be a regular member of the Geoscience faculty with specialty in an area related to the student's subject of interest. The third member may be a Geoscience faculty member, an affiliated Geoscience faculty member, or a UW-Madison faculty member from outside the department if appropriate, or may be from any of the following categories: Graduate Faculty, Tenure-track faculty from a department without a graduate program, Academic Staff (including emeritus faculty), Visiting Professors, Faculty from other institutions, externally-

funded researchers, postdoctoral scholars, or other individuals deemed qualified by the Graduate Studies Committee.

Members of the G&E Committee, including the advisor, may be changed by obtaining agreement of the prospective member (or advisor) and the advisor and notifying the Director of Graduate Studies and Graduate Program Manager in writing of the change.

A.2.2 RESPONSIBILITIES OF THE G&E COMMITTEE

The G&E Committee provides guidance and assistance to students as they work toward a graduate degree. In particular, the G&E Committee evaluates student research to verify that the student is making satisfactory progress. A brief report of required committee meetings should be forwarded by the Committee Chair to the Graduate Program Manager to be placed in the student's file. These reports are submitted annually, and a current version of these reports can be obtained from the Graduate Program Manager.

The chair of the G&E Committee (i.e. the student's advisor) has primary responsibility to evaluate student progress in research and course work to ensure that requirements are met in a timely fashion. The Advisor requests from the Graduate Studies Committee any exceptions or variances from regular degree requirements originating from the student, the advisor, or the G&E Committee. For MS students, the entire G&E Committee will approve the thesis, and, if asked to do so, will provide a recommendation for continuation in Geoscience PhD program. PhD students require an expanded Thesis Committee (which replaces the G&E Committee) for the Preliminary Examination and Final Oral/Defense (see specific requirements for PhD students, section C).

Actions of the G&E Committee or the Graduate Studies Committee may be appealed using the procedures for academic grievances defined on the Department of Geoscience Graduate Guide (<https://guide.wisc.edu/graduate/geoscience/geoscience-ms/#policiestext>). More information can be found on the L&S Policy for Academic Appeals: <https://kb.wisc.edu/lis/page.php?id=147805>

A.2.3 SATISFACTORY PROGRESS IN THE DEPARTMENT OF GEOSCIENCE

There are two main components to satisfactory progress in our graduate program: academic progress and research progress.

Academic progress is measured through the program of coursework completed, earned grades, and departmental examinations. Academic probation, triggered by a cumulative GPA below 3.0, is handled by the Graduate School, but the GPA is also a consideration in departmental evaluations. Failure to address identified coursework deficiencies may also be considered in assessing academic progress.

Research progress is monitored and evaluated by the student's Advisor in conjunction with the G&E Committee. Research progress is evaluated on two principal criteria: 1) Demonstrated

ability to conduct independent research and produce scientific results through a productive working relationship with an Advisor; and 2) Ability to clearly and fairly present scientific research results, both orally and in writing (including at G&E meetings, conference presentations, thesis and dissertation defenses, professional publications, etc.).

The Graduate School expects students to make satisfactory progress toward their degrees by enforcing minimum standards. While the Graduate School sets minimum standards that all graduate students in the university must meet, departments set their own standards and policies for determining and informing students about their progress, and many have additional requirements that exceed the Graduate School's standards. The definition of satisfactory progress therefore varies by program. More information about the Graduate School minimum requirements for satisfactory progress can be found on their website here: <https://grad.wisc.edu/documents/satisfactory-progress/>.

Examples of not meeting expectations in the Department of Geoscience for satisfactory progress can range from incomplete grades not being resolved on time, not making departmental deadlines for major exams (e.g. Qualification Exam), not registering for sufficient credit hours each semester, not making satisfactory progress in student research, GPA standards not being met, and so forth. The student's Committee are responsible for regularly monitoring student progress and determining if they are not making satisfactory gains.

If the student's Committee and/or Advisor believe that a student is at risk of falling behind and not making satisfactory progress, the student will receive a formal written letter from the Committee indicating why they are not meeting expectations as well as explicit to-do items and associated deadlines (mutually agreed upon by the Committee and in consultation with the student) that need to be met in order to remain in satisfactory progress.

If the student does not meet the deadlines that were formulated by the Committee in consultation with the student, or it is clear to the Committee that they are unlikely to do so, they will then receive a written letter from the Director of Graduate Studies on behalf of the Department indicating that the student is at risk of moving into unsatisfactory progress and again, laying out explicit to-do items, associated deadlines, and resources for support as needed in order to stay in satisfactory progress. The details of the letter are mutually agreed upon by the Director of Graduate Studies and the Committee in consultation with the student.

If the student does not meet the deadlines laid out by the Director of Graduate Studies, they will then receive a letter from the Director of Graduate Studies indicating that they are in a state of unsatisfactory progress. This letter will again lay out explicit to-do items and associated deadlines that must be met to return to a state of satisfactory progress. Again, the details of this letter are mutually agreed upon by the Committee and the Director of Graduate Studies in consultation with the student. If a student does not address concerns outlined in the letter by the indicated deadlines, the Graduate Program Manager will then inform the Graduate School that the student is not making satisfactory progress. The student may be asked to leave the program entirely and may also be ineligible to receive university funding (TA-ships and fellowships).

Students can enter a state of unsatisfactory progress at any time. Note that students who did not meet the expectations laid out in the year prior are not necessarily automatically entered into unsatisfactory progress. Instead, the underlying reasons will be considered by the student's Committee and determined accordingly (e.g., if delays were caused by things outside of a student's control such as major illnesses, unexpected issues with research, etc.).

At the University of Wisconsin–Madison, departments set their own standards and policies for determining and informing students about their progress. However, the Graduate School does have minimum requirements for satisfactory progress (<https://grad.wisc.edu/documents/satisfactory-progress/>).

A.3 GENERAL REQUIREMENTS FOR GRADUATE STUDY

A.3.1 COURSEWORK AND RESEARCH PLANNING

Upon entering the program, the student and the G&E Committee will develop a plan of specific courses and research activities appropriate to the student's area of interest and specific research topic, and progress toward fulfillment of those plans will be reviewed at each G&E committee meeting. The Advisor in consultation with other members of the G&E Committee and the student determines the student's research and degree track (MS or PhD). The student and Advisor shall submit an Annual G&E Meeting Progress Report to the Graduate Program Manager as a record of the meeting (<https://geoscience.wisc.edu/wp-content/uploads/2024/01/GE-Meeting-and-Progress-Report.pdf>)

A.3.2 REMOVAL OF DEFICIENCIES

Students admitted with more than one formally identified coursework deficiency must file a plan for removal of those deficiencies with the Graduate Studies Committee and Graduate Program Manager upon arrival for graduate work and remove the deficiencies during the first year. In some cases, it may be permissible, by petition to the Graduate Studies Committee, to complete deficiency coursework later than the first two semesters.

The plan must be approved by the student's G&E Committee and made a part of the student's graduate record. Failure to meet the schedule for deficiency removal may be considered as not making satisfactory progress toward a degree. In some cases, promising students with excessive deficiencies may be allowed to enter as Special Students and to petition later for regular graduate student status. They cannot, however, be supported by a departmental financial guarantee while in Special Student status. Each case will be judged separately. A link to Special Student Status can be found on the Graduate School Website: <https://grad.wisc.edu/documents/special-student-status/>

A.3.3 PROBATION

If students were admitted on probation and they satisfy the conditions outlined at the time of admission, probationary status will be removed automatically.

A.3.4 GRADE POINT AVERAGE

Each student must maintain a cumulative GPA of 3.0 or better since starting their graduate studies at UW-Madison. Here “cumulative GPA” refers to the GPA calculated from all courses taken since the onset of graduate study at UW-Madison. Should the cumulative GPA drop below 3.0 at the end of any semester, the student will be given one additional semester on probation in which to bring it up to the required level. Failure to maintain a sufficient cumulative GPA for two consecutive semesters is considered to be not making satisfactory academic progress toward a degree.

A.3.5 INCOMPLETE COURSEWORK

Grades of Incomplete should be removed within 30 days of the start of the first semester (excluding summer sessions) following receipt of the Incomplete. An Incomplete that is not removed by the end of that semester is considered by the Graduate School to be an unsatisfactory grade. All Incompletes must be removed before a degree can be awarded. Failure to remove Incompletes within the allotted time is considered not be making satisfactory academic progress toward a degree.

A.4 CREDIT REQUIREMENTS

A.4.1 The minimum graduate degree credit requirement is at least 30 credits for Master’s degrees and 51 credits for Doctorate degrees (may include Master’s, minor, and dissertator credits). See Academic Policies and Procedures (<https://grad.wisc.edu/acadpolicy/>) for minimum graduate residence credit and minimum graduate course work requirements.

The minimum credit residence requirement for PhDstudents must be completed prior to achieving dissertator status.

A.4.2 Each student is required to take a minimum of 8 credits during each fall and spring semester on campus, until they have attained Dissertator status (see C.1.8). Exceptions to this rule can be granted only by permission from the student’s G&E Committee or by the Director of Graduate Studies for the student’s first semester in residence.

A.4.3 There is no restriction on the number of research credits that can be counted toward the minimum graduate degree credit requirement.

A.4.4 After the first two weeks of each fall and spring semester, a student may not drop a course if dropping lowers their total credit load below 8.

A.5 CONFLICT RESOLUTION AND STUDENT GRIEVANCE AND APPEAL PROCESS

A.5.1 A graduate student’s research is primarily supervised by the Advisor. The Guidance and Evaluation Committee is designed to fulfill both roles implied by the name: the members are charged with both advice and support (guidance) of the student’s efforts toward the degree and

with judging and approving those efforts and the progress they represent (evaluation). The other members of the G&E Committee besides the Advisor are charged with, among other duties, ensuring that the student's best interests are being served. In the event that a student feels that there is an actual or potential disagreement with their Advisor about academic expectations, proper academic roles, progress towards the degree, degree track, or if any conflict arises, then the other members of the G&E Committee are the first level of consultation for the student. Any such issues should be brought by the student to the G&E Committee in a timely manner. The G&E Committee should consider the advisor's published expectations documents and other documentation produced by the student and advisor during their evaluation.

A.5.2 Should an academic issue arise, that cannot be resolved within the G&E Committee, then the student may bring the matter to the attention of the Director of Graduate Studies. The Director of Graduate Studies has the responsibility to ensure that departmental policies are fairly and equitably applied to all students and to attempt to resolve issues which might arise between a student and the Advisor and/or G&E Committee. It is at the student's discretion whether to appeal a G&E Committee decision to the Director of Graduate Studies through verbal discussion or in writing. If the student feels it necessary, bringing the matter to the attention of the Department Chair or the Associate Chair is the next level of grievance pursuit.

A.5.3 Should nonacademic misconduct arise by faculty, staff, and/or students then the UW-Madison Department of Geoscience Code of Conduct should be consulted for guidance (<https://geoscience.wisc.edu/community/diversity-and-inclusion/>). Nonacademic misconduct is defined by the university as including discrimination, bias, sexual violence, hazing or other issues that may work against the university's living and learning environment that is safe and free from violence, harassment, fraud, theft, disruption, and intimidation.

A.5.4 If an academic issue arises which the student feels cannot, due to the nature of the issue, be pursued with a member of the G&E Committee, the Director of Graduate Studies, the Department Chair, the Department Associate Chair, or any other member of the faculty of the Geoscience Department, then the processes described in the Graduate School "Grievances and Appeals" section of the Academic Policies and Procedures Manual should be followed (see <https://grad.wisc.edu/documents/grievances-and-appeals/>). The Graduate School policy for grievances explicitly states that the procedures found in our Department's Graduate Guide (<https://guide.wisc.edu/graduate/geoscience/geoscience-ms/#policiestext>) should first be followed. Our policy and the Graduate School Grievance and Appeals policy identify the College as the first option outside of the Department for pursuing an academic grievance. For the Department of Geoscience, this means bringing the matter to the attention of the L&S Assistant Dean for Graduate Student Academic Affairs. The Department of Geoscience Graduate Program Manager can be consulted if any questions about the grievance process arise, but this member of the staff is not an arbiter in the grievance process.

A.5.5 Graduate students have the right to appeal an academic decision related to an L&S graduate program if the student believes that the decision is inconsistent with published policy.

Academic decisions that may be appealed include:

- Dismissal from the graduate program.
- Failure to pass a Qualifying or Preliminary examination.
- Failure to achieve satisfactory academic progress.
- Academic disciplinary action related to failure to meet professional conduct standards.

Issues such as the following cannot be appealed using this process:

- A faculty member declining to serve as a graduate student's advisor.
- Decisions regarding the student's disciplinary knowledge, evaluation of the quality of work, or similar judgements. These are the domain of the Department faculty.
- Course grades. These can be appealed instead using the L&S Policy for Grade Appeal.
- Incidents of bias or hate, hostile and intimidating behavior, or discrimination (Title IX, Office of Compliance). Direct these to the linked campus offices appropriate for the incident(s).

The academic grievance appeal process steps are provided in our Department's Graduate Guide (<https://guide.wisc.edu/graduate/geoscience/geoscience-ms/#policiestext>).

A.5.6. Graduate students who believe that a specific provision of their employment status as a Teaching, Project, or Research Assistant has been violated may pursue a non-academic grievance related to their employment status. The process steps for doing so are defined in Graduate Assistantship Policies and Procedures (<https://policy.wisc.edu/library/UW-5082>).

B. REQUIREMENTS SPECIFIC TO THE MASTER OF SCIENCE (MS) DEGREE

B.1 SUMMARY REQUIREMENTS FOR THE MS DEGREE

B.1.1 By the start of the first semester, each student will have an Advisor who will select, in consultation with the student, additional members of the G&E Committee.

B.1.2 Advisors may be changed at any time with the approval of the Graduate Studies Committee and the new Advisor. An Advisor may cease to advise a candidate at any time with notification to the student and the Chair of the Department. The Chair of the Department, or in some cases the Director of Graduate Studies or Associate Chair, will work with the student to find an alternative plan to facilitate completion of a graduate degree. Students must have an advisor or co-advisor with a tenure home in Geoscience, and while the Chair of the Department or their alternate will work with student to find a new advisor, they cannot guarantee that a suitable and new advisor will be found.

B.1.3 The minimum number of UW-Madison graduate level credits that must be taken for a UW-Madison degree is 30 for the MS (see the Graduate School's Minimum Graduate Coursework (50%) Requirement, Minimum Graduate Degree Credit Requirement, and Minimum Graduate Residence Credit Requirement: <https://grad.wisc.edu/acadpolicy/>). A candidate who does no graduate work for a period of five or more consecutive years will be considered to have lost all credit. Other program requirements can be found in the University Graduate Guide: <https://guide.wisc.edu/graduate/geoscience/geoscience-ms/#requirements>

B.1.4 The normal Master's degree program typically takes no longer than two years; candidates working toward a single MS degree should obtain their degree at the latest by the end of five full semesters of credit (summers excluded). Any student who has not finished in five full semesters may be considered to not be making satisfactory progress toward a degree.

B.1.5 In order to receive their degree, the successful candidate shall:

1. At least 3 weeks before the MS Thesis defense, ask the Graduate Program Manager to request a warrant from the Graduate School.
2. Present a public, department-wide oral presentation as part of the formal defense of the results of their research before the G&E Committee.
3. Meet in a closed-door session following oral summary with all Committee members.
4. Receive approval of the completed thesis from their G&E Committee.
5. Deliver the signed Master's warrant to the Graduate Program Manager (see paragraph B.2).
6. Arrange with the Museum Curator for deposit of selected thesis material (see para. B.3).
7. File the thesis in the Memorial Library no later than the last day of the session or by any other deadline imposed by the Graduate School (<https://grad.wisc.edu/current-students/masters-guide/>).

B.2 THESIS APPROVAL

MS students must ask the Graduate Program Manager to procure the warrant from the Graduate School 3 weeks before the defense. To document approval of the Thesis, the student is required to obtain signatures of all committee members on the warrant and return it to the Graduate Program Manager electronically.

B.3 DEPARTMENTAL DEPOSIT OF THESIS MATERIAL

All samples and other materials referenced in the thesis must be put on permanent deposit with the department. See the Museum Curator well in advance of finishing the thesis, in order to arrange for a specimen file number, and for labeling instructions. The curator must approve thesis samples in writing unless an exception is required in writing by the Advisor.

C. REQUIREMENTS SPECIFIC TO THE DOCTOR OF PHILOSOPHY (PHD) DEGREE

“The Doctor of Philosophy degree is the highest degree conferred by the University. It is a research degree and is never conferred solely as a result of any prescribed period of study, no matter how faithful... The degree is only granted on evidence of general proficiency, distinctive attainment in a special field, and particularly on ability for independent investigation as demonstrated in a thesis presenting original research or creative scholarship with a high degree of literary skill.”

UW-Madison, Graduate School

C.1 SUMMARY REQUIREMENTS FOR THE PHD DEGREE

C.1.1 Students may be admitted to the doctoral degree program either after completing a Master's degree or by direct entry from the Bachelor's degree. UW-Madison Department of Geoscience MS degree students who request to continue in the PhD program must have been certified to enter doctoral study by their final G&E Committee and have completed the MS degree.

C.1.2 Students must have an identified Advisor at the time of admission to the PhD program. Advisors may be changed at any time with the approval of the Graduate Studies Committee and the new Advisor. An Advisor may cease to advise a candidate at any time following notification to the student and Department Chair. The Chair of the Department, or in some cases the Director of Graduate Studies, will work with the student to find an alternative plan to facilitate completion of a graduate degree. Students must have an advisor or co-advisor with a tenure home in Geoscience, and while the Chair of the Department or their alternate will work with student to find a new advisor, they cannot guarantee that a suitable and new advisor will be found.

C.1.3 The candidate must have completed a minimum of 51 UW-Madison graduate-level credits for the PhD. (See the Graduate School's Minimum Graduate Coursework (50%) Requirement, Minimum Graduate Degree Credit Requirement, and Minimum Graduate Residence Credit Requirement: <https://grad.wisc.edu/acadpolicy/>). A student who does no graduate work for a period of five or more consecutive years will be considered to have lost all credit. Other program requirements can be found in the University Graduate Guide: <https://guide.wisc.edu/graduate/geoscience/geoscience-phd/#requirementstext>.

Transcripts showing MS completion must be filed with both the Graduate School and Graduate Program Manager.

C.1.4 MINOR FIELD

The student must successfully complete a minor program selected for its relevance to their research topic and/or post-graduate career path. The purpose of the minor is to give breadth to a PhD major. There are two options:

Option A (external): Requires a minimum of 9 credits in a doctoral minor program (single disciplinary or multi-disciplinary). Fulfillment of this option requires the approval of the doctoral minor program.

Option B (distributed): Requires a minimum of 9 credits taken in multiple departments that form a coherent topic. Fulfillment of this option requires the approval of the doctoral major program. The distributed minor must contain a minimum of 3 credits outside the Geoscience department (teaching pedagogy classes, such as from the Delta program, count as outside the Geoscience department). Any courses taken inside the department must fulfill the minor's goal of academic breadth and thus should not be directly related to the student's thesis work and

should be clearly justified in the student's one-page minor description (see below). Selection of this option requires endorsement by the G&E Committee and final approval by the Director of Graduate Studies, or in some instances the entire Graduate Studies Committee.

The minor is intended to represent a coherent body of work and should not be simply an after-the-fact ratification of a number of courses taken outside the major subject area. To ensure coherence, a PhD Minor form must be submitted within the first year of entering the PhD program. In addition, if the PhD candidate chooses Option B, the minor form must also have a one-page description of how the classes form a coherent topic. Copies of the PhD minor form are available from the Graduate Program Manager.

The Graduate School's minimum course requirements for the doctoral minor include:

- An average GPA of 3.00 on all minor coursework.
- Coursework must be graded courses numbered 300 or above; no audits or pass/fail.
- Maximum 3 credits of independent study (e.g., 699, 799, 899, 999).
- Research and thesis cannot be used to satisfy the minor (e.g., 790, 890, 990).
- No more than 5 credits of coursework completed more than 5 years prior to admission to the doctoral program; coursework taken 10 years ago or more may not be used.

Updated information on the Graduate School's minimum course requirements for doctor minors can be found here: <https://grad.wisc.edu/documents/minors/>.

C.1.5. ASSESSMENT & QUALIFYING EXAM

C.1.5.1 Purpose

The "Assessment and Qualifying Exam" (Qualifying Exam) is administered by the G&E Committee. It is intended as an examination of scientific breadth in the broadly defined discipline, depth of familiarity within the sub-discipline(s) that are most relevant, and overall capacity for scientific reasoning and research design.

C.1.5.2 Timing

For students intending to go straight to the PhD (either because of a prior Master's or through the direct Bachelor's – PhD path), the exam will be taken by the end of the first year after entry. For students pursuing the PhD after completing the Master's in our program, the exam will be taken in the first semester after the successful Master's defense. Any exceptions to the timing of the exam must be petitioned to the Graduate Studies Committee.

C.1.5.3 Format and Evaluation

The Qualifying Exam will be administered as an examination with both Written and Oral Components. Alternate exam formats other than those listed below must be submitted by the student and their Advisor and approved by the Graduate Studies Committee.

At least one month before the Qualifying Exam takes place, the G&E Committee will deliver a description of the exam format details, including when the written and oral components will be assigned and due, what portion of the exam, if any, is “open book”, and expectations regarding citations or use of sources.

Questions for the Written Component of the Qualifying Exam will be written by the student’s G&E Committee and will seek to assess the student’s breadth of geologic knowledge and depth in their particular research field. The G&E Committee shall write the exam such that completion within 6 hours is reasonable, and such that it reflects the breadth and depth of knowledge necessary for continued doctoral work. Students should expect roughly half of the exam to focus on “breadth” questions in the field of geoscience as a whole and the other half will focus on the student’s subdiscipline and field of planned research. Responses to the Written Component of the Qualifying Exam must be returned to the G&E Committee on the date specified by the Committee.

The G&E Committee will schedule the Oral Component of the Qualifying exam to occur within a week after the Written Component’s due date. The Oral Component of the exam will consist of up to 3 hours of oral questioning. During the Oral Component, the G&E Committee may revisit sections of the Written Component to explore topics in further depth and/or may ask questions relevant to general geologic knowledge and the student’s area of research. Each member of the student’s G&E Committee can contribute to questioning during the Oral Component.

Following completion of both components of the exam, the G&E Committee will meet privately and will apply the following criteria in assessing the graduate student’s performance on the Qualifying Exam:

- The student demonstrated sufficient breadth in their geologic knowledge, at a level appropriate for teaching introductory undergraduate coursework in geoscience.
- The student demonstrated sufficient depth in their area of specialty to be able to continue research effectively.
- The student demonstrated an ability to reason and solve problems.

There are four possible outcomes of the Assessment and Qualifying Exam:

1. **Pass:** the student demonstrated that they are well prepared in terms of both breadth and depth to pursue doctoral research and should proceed with prospectus development and preparation for the Preliminary Exam.
2. **Conditional Pass:** the student demonstrated that they are generally on the way to being fully prepared for doctoral research. However, some areas were identified in which the student is encouraged to focus on strengthening their knowledge and/or skills in order to be ready for the Preliminary Exam. The student may be required to retake the qualifying exam up to one additional time, provide additional evidence of qualification (e.g., written documents), or pass additional coursework, as required by the G&E Committee.

3. **Program track change:** This outcome only applies to those who entered the PhD program with a bachelor's degree (or a Master's in a substantially different field). This outcome requires the student to first complete a Master's thesis and be re-evaluated for continuation in the PhD program upon successful defense of the Master's thesis.
4. **Non-continuation:** the student did not demonstrate a satisfactory level of general and specific competency and is not making adequate progress in the program. This is equivalent to a G&E committee designation of "not making satisfactory progress."

The Qualifying Exam outcome is reported to the Graduate Program Manager in an Assessment memo from the examining committee. In cases where a student does not receive a passing evaluation (i.e., Pass or Conditional Pass) of their Qualifying Exam, the G&E Committee's Assessment memo should document the Committee's reasoning and be provided to the Director of Graduate Studies. Students can appeal the committee decision by following the Department (see A.5) and L&S Appeals Policy (<https://kb.wisc.edu/lis/page.php?id=147805>).

C.1.6 PRELIMINARY EXAMINATION COMMITTEE

The Preliminary Examination (see below) and Final Oral (see C.1.10 and C.1.11) Committees represent the continuing responsibility of the faculty to provide guidance, direction, assistance and evaluation to a Ph.D. student. Their makeup and responsibilities are described below.

In advance of the Preliminary Examination by at least one month, upon the initiative of the Advisor, a Preliminary Examination Committee is appointed which replaces the G&E Committee and assumes its duties. The Advisor will be a Geoscience faculty member (an Assistant, Associate, or Full Professor) and the chair of the committee. The Committee must have a minimum of 4 members, 2 members must be Geoscience faculty members (an Assistant, Associate, or Full Professor; 3 members are recommended), and all committee members are required to be UW-Madison graduate or current affiliate faculty and hold appointments in graduate degree granting programs (e.g. Extension faculty do not necessarily qualify, unless affiliated with a graduate degree granting program). One committee member must be from outside the field of geoscience (as defined by the specialties represented in the UW-Madison Department of Geoscience). Note that if a committee member is external to UW-Madison, but is still in the field of geoscience (as defined by the specialties represented in the UW-Madison Department of Geoscience), they DO NOT satisfy the requirement of a committee member "outside the field". Three or more committee members must be a UW-Madison Department of Geoscience faculty member, affiliate faculty member, or former faculty within one year of resignation or retirement. In some cases, exceptions to this policy will be considered by the Graduate Studies Committee.

At least two weeks in advance of the examination, the candidate must submit to the examination committee a formal prospectus as to the nature and scope of the proposed doctoral dissertation.

The Advisor shall be the chair of the Preliminary Examination Committee. Members of the Preliminary Examination Committee can be changed at any time with the approval of the Advisor and the prospective new member.

C.1.7 PRELIMINARY EXAMINATION

C.1.7.1 Purpose

The purpose of the Preliminary Examination is threefold:

- (a) to examine the proposed dissertation topic for originality, scientific importance, and likelihood of completion as an acceptable PhD dissertation,
- (b) to examine the student's proposed methodology for pursuing the dissertation research, and
- (c) to examine the student's preparation and knowledge of those subjects and methods that the proposed research may require.

C.1.7.2 Timing

All candidates are expected to take the preliminary exam by the start of the fifth semester after entering the PhD program.

The candidate must pass a PhD preliminary examination:

- (a) within five years after entrance to graduate school at UW-Madison if they do not hold a Master's degree,
- (b) within three years after entrance to the graduate school if the student holds a Master's degree from another University, or
- (c) within three years after attaining their Master's degree at UW-Madison.

Any candidate who has not satisfied these requirements may be considered not to be making satisfactory research progress toward a degree. Completion of the minor is certified by the signature of the Minor Department Chair or the Geoscience Graduate Studies Chair on the preliminary examination warrant.

C.1.7.3 Format and Evaluation

The Committee should describe the exam format details to the student at least one month before the Preliminary Examination takes place. The Preliminary Examination is usually oral. The student may also be expected to give a presentation to the Committee on their plan for continued PhD research during the Examination, in addition to their written prospectus. At

the discretion of the examining Committee, the Preliminary Examination may be written, or partly oral and partly written.

Following completion of the Preliminary Examination, the Committee will meet privately and will apply the examination criteria described above (C.1.7.2) in assessing whether the graduate student may advance to Dissertator status.

There are two outcomes of the Preliminary Examination: Pass or Fail. The student will be notified of the outcome at the completion of the Preliminary Examination and to the Graduate Program Manager using the Preliminary Exam Assessment Memo form.

If the candidate does not pass the PhD Preliminary Examination on the first attempt, it may be taken a second time at the discretion of the Preliminary Examination Committee. Failure to pass after the second time will result in non-continuation in the PhD program.

Following the Preliminary Examination, it is common practice that the Committee will provide feedback or request changes to the prospective research based on their discussion.

Students can appeal the committee decision by following the Department (see A.5) and L&S Appeals Policy (<https://kb.wisc.edu/lis/page.php?id=147805>).

C.1.8 DISSERTATOR STATUS

Students are formally admitted to status as PhD candidates (dissertators) upon successful completion of the Preliminary Examination, major requirements, minor requirements (C.1.4), and the Minimum Graduate Residence Credit Requirement (32 credits) (see <https://grad.wisc.edu/acadpolicy/#minimumgraduateresidencecreditrequirement>).

C.1.8.1 Dissertators engaged in research and writing, whether on campus or not, must be enrolled for exactly three graduate level credits each semester until the PhD dissertation is filed in Memorial Library. They must also register for exactly three dissertator level credits in the regular eight-week summer session during any summer in which they use University facilities such as laboratories, libraries, or faculty time. Students who file a dissertation in the Memorial Library during the summer must be registered for three graduate level credits for the summer. Tuition and fees will be assessed in accord with the actual Wisconsin resident or non-resident status of the student.

C.1.8.2 If dissertators fail to maintain continuous registration, a degree completion fee equal to twelve times the current per-credit dissertator rate is required. The fee will be assessed by the Graduate School at the time the dissertation is brought to the Graduate School for final review. The completion fee is based on the actual Wisconsin resident or non-resident status which existed at the last term of registration. Students who re-enter and complete the degree in less than four continuous terms will pay the 12-credit fee minus all continuous registration credits paid since the time of re-entry and before graduation.

C.1.8.3 For fee assessment purposes, a student who has fulfilled the continuous registration requirements and registers in a given semester or summer session is permitted to complete the PhD degree (including the filing of the dissertation in the Library) on any date before the first day of classes of the next academic session (semester or summer). However, fee assessment and degree conferral periods do not coincide. The PhD degree will be awarded on the first degree-granting date following its completion.

C.1.8.4 Fee assessment and registration decisions are made by the Graduate School, and dissertators are urged to consult with the Graduate School Catalog, the Graduate School Academic Guidelines, or the Graduate School office for further details.

C.1.9 THE PHD DISSERTATION

The PhD dissertation is expected to be an original and creative research contribution presented with a high degree of literary skill.

C.1.9.1 The Candidate should review the Graduate School Academic Guidelines to comply with the detailed rules and regulations of the Graduate School and Memorial Library.

C.1.9.2 The Final Oral Examination Committee is approved by both the Advisor and the Dean of the Graduate School. Candidates are required to present a draft copy (not the final version) of the dissertation to the PhD Examination Committee one month in advance of a proposed examination date. Examination may not be scheduled until the draft is in the hands of the examining committee.

C.1.10 THE FINAL ORAL EXAMINATION COMMITTEE

The Final Oral Examination Committee must have a minimum of 4 members, 2 members must be Geoscience faculty members (an Assistant, Associate, or Full Professor; 3 members are recommended), and all committee members are required to be UW-Madison graduate or current affiliate faculty and hold appointments in graduate degree granting programs (e.g. Extension faculty do not necessarily qualify, unless affiliated with a graduate degree granting program). The Advisor will be a Geoscience faculty member (an Assistant, Associate, Full, or Emeritus Professor within one year of retirement) and the chair of the committee. All members of the committee must be a “reader”, i.e. they are required to read the dissertation before the defense. One committee member must be from outside the field of geoscience (as defined by the specialties represented in the UW-Madison Department of Geoscience); this person could be from UW-Madison or some other institution. Note that if a committee member is external to UW-Madison, but is still in the field of geoscience (as defined by the specialties represented in the UW-Madison Department of Geoscience), they DO NOT satisfy the requirement of a committee member “outside the field”. Three or more committee members must be UW-Madison Department of Geoscience faculty members, affiliate faculty members, or former faculty within one year of resignation or retirement. In some cases, exceptions to this policy will be considered by the Graduate Studies Committee. All committee members have voting rights. To receive a

doctoral degree, students cannot receive more than one dissenting vote from their committee on the final degree warrant.

C.1.11 THE FINAL ORAL EXAMINATION

The Final Oral Examination is administered by the Final Oral Examination Committee and is to ascertain the suitability and quality of the PhD dissertation. It is typically given in closed session following a public, oral summary of the PhD research, but may be given at another time.

C.1.11.1 Copies of the dissertation must be provided to all members of the examining committee one month before the scheduled exam. This dissertation draft must have approval of the main Advisor.

C.1.11.2 The Final Oral Examination may not be given until all other requirements are satisfied and any Incompletes removed.

C.1.11.3 The Final Oral Examination must be taken within five years of passing the Preliminary Examination; a student is required to take another Preliminary Exam and be readmitted to candidacy if more than 5 years has elapsed as outlined by the Graduate School (<https://grad.wisc.edu/documents/preliminary-examinations/>). Extensions to this time limit are occasionally granted for cause, but must be requested, in writing, by petition to the Graduate School. The Final Oral Examination cannot take place in the same semester as the Preliminary Examination.

C.1.12 To complete the degree the candidate will:

1. At least 3 weeks before the dissertation defense, complete the “Requesting a Ph.D. Degree Warrant” form and email it to the Graduate Program Manager.
2. Present a public, oral summary of the results of their research.
3. Meet in a closed-door session following the oral summary with all Committee members.
4. Obtain Final Oral Examining Committee signatures on warrant and deliver to the Graduate School Office.
5. Submit the electronic copy of the complete dissertation and abstract to the Graduate School Office for approval, not later than the last day of the session or by whatever other deadline may be imposed by the Graduate School (see <http://grad.wisc.edu/currentstudents/degree/>).
6. Arrange with the Museum Curator for deposition of selected dissertation material (see para. C.2).
7. File the thesis in the Memorial Library no later than the last day of the session or by any other deadline imposed by the Graduate School (<https://grad.wisc.edu/current-students/doctoral-guide/>).

C.2 DEPARTMENTAL DEPOSIT OF DISSERTATION AND DISSERTATION MATERIAL

All samples and other materials referenced in the dissertation must be put on permanent deposit with the department. See the Museum Curator well in advance of finishing the dissertation, in order to arrange for a specimen file number and for labeling instructions. The curator must approve thesis samples in writing unless an exception is requested in writing by the Advisor.