



Graduate Student Handbook

Department of Earth and Environmental Sciences
Michigan State University

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1. Getting Started

Welcome to the Department of Earth and Environmental Sciences (EES) at Michigan State University (MSU).

1.1 The Graduate Handbook

This handbook is designed for students entering the M.S. or Ph.D. Programs in Earth and Environmental Sciences, Environmental Geosciences, and Environmental Geosciences/Toxicology. It provides an overview of the program, specifies program requirements, and contains information about policies that relate to the graduate experience. In general, the policies in effect when a student enters the program remain applicable to that student through completion of their degree program.

You should be aware of two key issues with respect to using this handbook. First, it covers the primary requirements established by the Program, Department, College, and University, but there may be additional expectations established by your advisor. It is essential that you communicate as soon as possible on arriving at MSU and regularly throughout the year with your advisor. You should ask them directly about their expectations of you regarding the frequency and approach to regular communication. Second, this handbook does not cover all the applicable rules, especially those relating to special circumstances. If you have any questions or concerns relating to your graduate experience, requirements, or policies, you are encouraged to discuss them as soon as possible with your academic advisor or other relevant faculty and staff. Please note that you are responsible for all requirements including those that may not be specified in this handbook.

General policies regarding graduate training are established on four general levels of administration: University, The Graduate School, College, and Department. This system tends to separate general policies into four categories and results in no single reference giving a complete statement of policy. This handbook is intended to bring together these policies as they pertain to the Department of Earth and Environmental Sciences and to clarify those that may appear contradictory.

In general, university policies override Graduate School and college policies which, in turn, override departmental policies. In most cases policies regarding graduate training are established at the departmental level except when preempted at a higher level. As presented in this handbook, the various policies are not distinguished but are presented as a uniform group. This system reflects the true nature of the university and places more responsibility upon the department, or more specifically, upon you, your major professor, and your guidance committee. Your later accomplishments will reflect the training you received here as a graduate student.

Many of the questions you are likely to have are answered in the pages to follow including additional benefits such as office space and use of departmental facilities. There are, of course, many other questions that may require specific answers and cannot be covered here. The office staff in the Department of Earth and Environmental Sciences is there to assist you in any way possible. Please do not hesitate to use this valuable source of information.

1.2 The Graduate Experience

The responsibilities of graduate degree-granting units, administrators, faculty advisors, graduate committees, and graduate students with respect to graduate studies are outlined in the Guidelines for Graduate Student Advising and Mentoring Relationships (available online at: <https://grad.msu.edu/sites/default/files/content/researchintegrity/guidelines.pdf>). However, the graduate experience has aspects not fully articulated in either the Academic Programs catalog or the Guidelines for Graduate Student Advising and Mentoring Relationships. Graduate training is a period of learning and research experience in your area of interest and to that end, the courses you decide to take are largely your own choice, in consultation with your guidance committee.

There are many ways to gain experience and knowledge in the Earth and Environmental sciences and these may be gained in ways other than taking course work alone. Because these sciences are multidisciplinary and draw heavily from other fundamental sciences, you may find it advantageous to take courses in biology, physics, mathematics, chemistry, or engineering. These areas can contribute to your formulation of a research problem and to your general understanding of the natural sciences. Much can be gained by talking with your fellow graduate students: What research problems are they working on? How do they go about identifying a problem in their specialty and, once found, how do they plan their research to solve this problem?

As part of the learning experience, students are required to attend the Alumni Distinguished Lecture Series for a 1 semester credit in their first year (GLG901) and are then expected to attend these guest lectures throughout your graduate program when course/teaching schedules permit. These lectures are generally scheduled at a time that is convenient for most students and faculty in the Department and are advertised in advance of the lecture date. In addition, attendance at thesis and dissertation defenses is encouraged, particularly as it will help you learn about the examination process and expectations.

You should be aware that it is possible that the break between semesters may be occupied with your research activities, literature research in the library, or in some other aspect of your program. If you have a teaching assistantship, you may have duties preparing laboratory materials before classes start.

The Graduate School regularly offers workshops, seminars, and fellowships that can enhance your graduate education. We encourage you to explore these opportunities at <https://grad.msu.edu/>. The Graduate School is located in Chittenden Hall. In addition, Chittenden Hall houses the TA program staff, the Ph.D. Career Services, Graduate Life and Wellness, and the Council of Graduate Students (COGS). Thus, Chittenden Hall is the graduate education “neighborhood”.

1.3 The Program and Degrees

The Department of Earth and Environmental Sciences offers the following programs:

- Master of Science in Environmental Geosciences (Plan A and B, with/without thesis)
- Master of Science in Geological Sciences (Plan A)
- Doctor of Philosophy in Earth and Environmental Geosciences
- Dual Doctor of Philosophy in Earth and Environmental Geosciences and Environmental Geosciences-Environmental and Integrative Toxicology
- Dual Doctor of Philosophy in Earth and Environmental Geosciences and Doctor of Philosophy in Ecology, Evolutionary Biology and Behavior

Specializations within Earth and Environmental Sciences Department:

- Master of Science specialization in Ecology, Evolutionary Biology and Behavior.
- Master of Science specialization in Environmental Toxicology.
- Doctor of Philosophy specialization Environmental Science and Policy, Ecology, Evolutionary Biology, and Behavior
- MSU offers several other specializations and certificates that may interest you. A full listing can be found here: <http://www.reg.msu.edu/AcademicPrograms/>

1.4 People

List and contact information for department can be found in the following hyperlinks:

[Graduate Director and Secretary](#)

[Staff](#)

[Faculty](#)

[Joint and Adjunct Faculty](#)

[Research Associates and Support Staff](#)

[Emeritus Faculty](#)

[Graduate students](#)

1.5 Key Dates

1.5.1 University Deadlines and Key Dates

The [University Calendar](#) is annually updated with the following bullet-pointed events, among others, important for graduate students. The [Graduate School Calendar](#) maintains more detailed additional information to inform graduate students. The individual dates for these events change annually and are not directly updated here. Links are provided with University, College, and Department resources which are updated annually. It is the responsibility of each graduate student to remain informed on the individual events below.

- Start, breaks, and end dates of each semester, including summer.
- Research and Teaching Assistants report to the department on August 16 to December 31, January 1 to May 15, and May 16 to August 15 for the fall, spring, and summer semesters, respectively.
- A [New TA Orientation](#) is scheduled annually in August prior to the start date of classes and is required for all students.
- Deadlines for enrollment late fees for graduate, graduate certificate, professional students, and teacher interns.
- End date of online open add period of each semester.
- End date of tuition refund period of each semester.
- Mid-point of semester
- Deadline for degree candidates to apply for graduation within a given semester.
- [Deadline](#) for FINAL APPROVAL of an electronic Thesis or Dissertation at the Graduate School.

1.5.2 Departmental Calendar

- **Orientation:** A graduate student orientation will be conducted by the Department Chair and/or the Graduate Director the week prior to the beginning of fall semester classes to inform students of the policies and procedures of the Department, and of the expectations of the students. Students commencing their graduate program in the spring or summer semester will be required to meet with the Graduate Director or Department Chair upon arrival at MSU for this purpose.
- **Departmental Calendar:** The department maintains a calendar of Key Dates, which can be found [here](#).
- **Distinguished Speaker series:** Additional and more focused information on important events, such as our weekly distinguished speaker series, can be found [here](#).

1.5.3 At-a-glance milestones for graduation

In addition to your required classwork (see Sections 4 and 5), there are several departmental requirements prior to graduation. These are discussed in detail in Sections 2 and 3. Table 1 below provides a summary of key milestones.

Table 1. Summary of key milestones/deadlines for graduation beyond the required classwork.

Degree	M.S. (Plan A)	M.S. (Plan B)	Ph.D. (w/ M.S. from EES)	Ph.D. (w/o M.S. from EES)
Guidance Committee Selection	By mid-point of second semester in program			
Completion of Annual Progress Report and Annual Committee Meeting	March 15, annually			
Thesis/ Dissertation Proposal	3rd semester	N/A	4th semester	5th semester
Written and Oral Comprehensive Exam*	N/A		4th semester	5th semester
Department Research Presentation	At least once	N/A	At least once	
Final Oral Defense	By 6th year	N/A	By 8th year & prior to application to graduate	
Degree Completion Time Limit	Within 6 years		Within 8 years	

*Must be retaken if degree not received within eight-year degree time limit

1.6 New Student Checklist

Below is a checklist of activities that should be completed by the first week of classes during your first semester in graduate school. The list below applies to all graduate students (unless noted otherwise).

- Check and add important dates to your personal calendar (see Section 1.5)
[MSU Academic calendar](#)
[Graduate School calendar](#)
[EES calendar](#)
- University Picture ID: 427 N. Shaw Ln, Room 170, International Center 517-355-4500.
- Set up University email account: see <https://netid.msu.edu/>
- If necessary, apply for social security card: Applications are available at the office for International Students & Scholars, 103 International Center, 353-1720.
- Complete I-9 Form (TA/RA graduate assistants ONLY): Come to department front office, 207 Natural Science, and speak to the office manager to complete the form electronically. Please bring your driver's license or passport with you. You will need to know your social security number. International Students – Please go to OISS, 103 International Center
- Set up East Lansing and Lansing Income Tax Withholding (Lansing residents ONLY): If you live or work within the East Lansing or Lansing City limits and would like to have this income tax withheld from your pay, you must go to the payroll office, 350 Administration Building, and fill out a withholding form in person.
- Fill out FAFSA form: *This is not required and does not apply to international students.* More than half of the EES endowment funds used to support graduate students can only be distributed to students who the Financial Aid office deems to have a demonstrated need for financial aid. Their current interpretation is that only students who would be eligible to receive Federal financial aid qualify for this, so any student who does not file a FAFSA form will automatically be considered ineligible for those funds. For students who are US citizens or permanent residents, filing the FAFSA allows the department to use those funds, which also results in the freeing up of other non-financial-need-specific funds to be used for other purposes. We stress that not meeting the requirements of financial need will have no negative outcomes for individual students. However, if too few of our students file the FAFSA, our less-restricted funds could run out and the total funds we would be allowed to disburse for all kinds of student support would be decreased.
- Graduate Employees Union deduction/authorization form/membership card: Teaching assistants, except for those TAs specifically excluded by the GEU/MSU agreement, may fill out a payroll deduction authorization and membership card to become full members of the GEU or they may pay a representation fee without becoming a GEU member. Research assistants and fellows may also become GEU members with an annual payment.
- Vehicle Registration: Parking permits are available for graduate assistants from the Department of Police and Public Safety located at 87 Red Cedar Road (517-355-8440). Graduate assistants may apply for a [parking permit on-line](#). Your appointment form must be finalized on the system before you will be allowed to purchase a parking permit.
- University bicycle registration: If you intend on using a bicycle on campus, you must register it with the university police every year and have an associated sticker visible on the frame.

Registration is free and available through the [MSU police website](#). If your bike is ever lost or stolen, and then found by the police, or impounded by the police, registration is required to reclaim it.

- Initial meeting with advisor to determine class schedule and determine the necessity of additional discipline-specific training (e.g. lab safety). See enrollment at <http://www.reg.msu.edu/ROInfo/Enrollment.aspx>.

1.7 Annual Student Trainings Checklist

In addition to lab-specific required trainings (to be determined by advisor and not discussed here), MSU requires several annual trainings for all students and employees related to Responsible Conduct of Research (RCR), Relationship Violence and Sexual Misconduct (RVSM), and Diversity, Equity, and Inclusion (DEI) training. These should be completed within the student's first semester and annually thereafter. *The grad student handbook does not provide the details of these policies, but it is expected that the students have received their training and are aware of the consequences of misconduct.* A checklist is provided below. In some cases, you will automatically receive emails directing you to the training modules, but you can get started using the links below. In addition to any required training, the Graduate School offers [a suite of RCRSCA resources](#) to aid units and faculty.

- Complete Responsible Conduct of Research (RCR) Training. See <https://michiganstate.sharepoint.com/sites/AbilityTrainingSystemHelpFAQ/SitePages/CITIPrograms.aspx>. Detailed guidelines found here: <https://grad.msu.edu/researchintegrity>
- Complete Relationship Violence and Sexual Misconduct (RVSM) Trainings. See <https://bit.ly/POE-FAQ>
- Complete Diversity, Equity and Inclusion (DEI) training. See [https://michiganstate.sharepoint.com/sites/AbilityTrainingSystemHelpFAQ/SitePages/Diversity.-Equity.-Inclusion-\(DEI\).aspx](https://michiganstate.sharepoint.com/sites/AbilityTrainingSystemHelpFAQ/SitePages/Diversity.-Equity.-Inclusion-(DEI).aspx)

2. Formation and Roles of the Guidance Committee and Advisor

In accordance with [GSRR, section 2.4.2](#), students have both the responsibility to constitute their guidance committee and the right to concur with any changes in its membership. *All EES students within both the Masters and PhD programs are required upon entry to already be assigned an academic advisor and then must subsequently construct a Guidance Committee via the following steps and deadlines. The graduate forms for degree progress can be found [here](#) and further details are given in the subsequent sections:*

EES relies on [MSU's Guidelines for Mentoring & Advising Graduate Students](#) in many aspects of their work. This is referenced here because it informs annual evaluation forms; is used in faculty development;

and referenced when designing and evaluating mentoring initiatives, among other uses. The Graduate School's website, "[Optimizing Mentoring](#)," contains ideas and resources for implementing the Guidelines plus mentoring trainings and workshops.

2.1 Selection and Composition of the Guidance Committee

In consultation with the advisor, a Guidance Committee must be selected no later than March 1 of the second semester in the program. A report from the Guidance Committee is due March 20th, annually. The Guidance Committee Report serves as the official forum for selection of the Graduate Committee.

The guidance committee consists of at least 3 faculty members, with one being the student's advisor. If desired, more than three persons may be members of the Guidance Committee. At least two of the core Committee must be from the Department of Earth and Environmental Sciences. In addition to the Committee Chair, the core of the Guidance Committee must consist of a minimum of two other Michigan State University faculty who are regular faculty members. As defined in the Faculty Handbook, the "regular faculty shall consist of all persons appointed under the rules of tenure and holding the rank of professor, associate professor, or assistant professor and all persons appointed as librarians".

With the approval of the Chair, an exception may be granted to allow an Emeritus faculty member to serve as one of the three required faculty members on the Guidance Committee. In addition, with approval of the Chair an Emeritus faculty member may continue to serve as the Chair of the Guidance Committee following the granting of Emeritus status but may not serve as Chair of a newly formed committee. A non-tenure stream faculty member, with the approval of the Dean of The Graduate School, may serve on the Guidance Committee as one of the three required faculty members or as the Chair of the Guidance Committee. Contact the Chair promptly if you want to do this, because such appointments need to be approved by the College and Graduate School as well, and the process can be slow.

2.2 Changing the Composition of the Guidance Committee

A change in composition of the Guidance Committee can be made upon the request of either the student or a member of the Guidance Committee. Such a request must be made in a simple electronic letter addressed to the Department Chair that is signed by the student, all members of the current Guidance Committee, and the new member of the Guidance Committee. The student must have discussed the membership change with all current Guidance Committee members and the new member prior to submitting the written request. Upon approval by the Department Chair, a copy of the signed letter will be returned to the student, all members of the current Guidance Committee and the new committee member.

2.3 Guidance Committee Report for the Program of Study

In conjunction with the Guidance Committee, the student must submit a report listing all degree requirements approved by the Committee and Department Chair, by the mid-point of their second semester in the program (dated listed in calendar in section 1.5.1). Separate Guidance Committee Report forms are available for the M.S. in Environmental Geosciences and the M.S. in Earth and Environmental Sciences; both can be found [here](#). This Guidance Committee Report, as changed or amended in full consultation between the student and the Committee, shall be regarded as the statement of program

requirements. If by this deadline (excluding summer semester) a Guidance Committee Report is not filed with all approving signatures, permission for subsequent registration will be denied until such time as this requirement has been met. Changes in the Guidance Committee Report require the concurrence of all Committee members and the student and must be filed with the Department Chair and the Dean. If concurrence is not reached among the committee members, the student may petition the Department Chair for assistance in resolving the conflict.

2.4 Changing the Advisor

A change in the advisor can be made upon the request of either the student or the advisor and is subject to the mutual agreement of the student, the proposed new advisor, and the Department Chair. The student must discuss the advisor change in person with both the current advisor and the new advisor prior to submitting the written request. Such a request must be made electronically to the Department Chair, and signed by the student and the new advisor. Upon approval by the Department Chair, a copy of the signed letter will be returned to the student, the previous advisor, and new advisor.

2.5 Review of Academic Progress

Students and their advisor(s) will complete an annual progress report. The forms are available at <http://grad.msu.edu/forms>. These are to be discussed with all committee members and turned in by March 15 to the Graduate Secretary. At the same time, the student is to turn in an updated CV (*ask advisor and visit other faculty websites for a template*). These should be turned in as 1 single pdf.

The faculty advisor(s), committee, and graduate student will meet to discuss this evaluation and sign the annual progress report document. Copies of this report should be distributed to the student and the advisor(s), with the original submitted to the Graduate Secretary for placement in the student's academic file. A student who disagrees with the content of this evaluation, or who wishes to provide additional documentation, has the right to appeal in writing to the Department Chair or Graduate Director. A copy of this response will be given to the advisor(s), with the original placed in the student's academic file. If necessary, the student has the right to petition the Department Chair for a hearing (see Article 22 for details). The student can refer to MSU Graduate Student guidelines in the preparation of the petition.

The Graduate Director will review these evaluations and as necessary work with the Graduate Affairs Committee on recommendations concerning completion of requirements, changes from provisional status, and action to be taken for students not making satisfactory progress toward a degree. Students and their respective advisors will be notified of any such actions.

When it has been determined, by either the advisor(s), the Graduate Affairs Committee, or the Department Chair that a student is not meeting departmental standards, a conference will be held between the Guidance Committee, the Department Chair, and the Graduate Director. If they determine that these deficiencies endanger the student's status in the program, a statement shall be written to this effect and the statement shall be signed by the advisor and the student and a copy placed in the student's file.

In addition, the annual progress report will be used by the Graduate Secretary to monitor each semester that the students are on time with the expectations for their degree (see DEGREE REQUIREMENT TIMELINES AT A GLANCE for the schedule) and send out reminders to the student and advisor(s) with

a copy to the Graduate Director if these expectations are not being met. If deadlines are not met, appropriate holds on enrollments will be placed through the Dean's office of the College of Natural Science.

2.6 GRAD Student Information System

Students must enter their program plan into [GRAD.SIS](#). Grad.SIS is developed for Ph.D. students to lay out their Ph.D. program of study, record faculty approval, and make notes on all the requirements as they are completed. GRAD.SIS is also the only way a final degree certification/degree audit will be conducted. The Graduate School will certify the acceptance of each dissertation final format using Grad.SIS. The Office of the Registrar will access Grad.SIS to complete degree certification once a student completes an application for graduation. Please check regularly with the departmental graduate secretary for inquiries or questions regarding GRAD.SIS.

3. Registration and Enrollment

3.1 Registration Enrollment Requirements—Academic Year

A Graduate Assistant must be registered each semester in which an assistantship is held. Employment periods are August 16 to December 31, January 1 to May 15, and May 16 to August 15. Below are the maximum and minimum credit loads for various types of assistantships during the academic year.

Doctoral students with quarter-time or half-time assistantships must carry at least 3 credits until they have successfully completed their comprehensive exams, after which the minimum is 1 credit. If there are explicit written conditions that require that you enroll for more than 1 credit (some external or international fellowships may require more), please let your graduate secretary know and provide a copy of the written requirement so a special waiver request can be processed. Excluding 999 credits, you may carry a maximum of 16 (1/4 time) or 12 (1/2 time) course credits. Enrolling with these minimum credits meets the 1 credit requirement needed to be exempt from IRS withholding for FICA and Medicare.

Master's students with quarter-time or half-time assistantships must carry at least 6 credits. Excluding 999 credits you may carry a maximum of 16 (1/4 time) or 12 (1/2 time) course credits. Enrolling for the 6 credits meets the 5 credit requirement needed to be exempt from IRS withholding for FICA and Medicare.

Doctoral and master's students with three-quarter-time assistantships must carry at least 3 credits. The minimum enrollment for doctoral students who have successfully completed their comprehensive exams, however, is 1 credit. For Doctoral students, if there are explicit written conditions that require that you enroll for more than 1 credit (some external or international fellowships may require more), please let the graduate secretary know and provide a copy of the written requirement so a special waiver request can be processed. Excluding 999 credits, you may carry a maximum of 8 course credits. However, you need to enroll in 5 credits (MS) and 3 credits (PhD) in order to be exempt from IRS withholding for FICA and Medicare.

3.2 Registration Enrollment Requirements—Summer

A 3-credit minimum registration is required for all types of assistantships during summer semester unless you have successfully completed the comprehensive exam, after which the minimum is 1 credit. Students may be paid on an hourly basis during the summer, in which case there is no registration requirement.

3.3 Candidates on Provisional Status

Time Limit: Provisional requirements must be completed within the first year of residency, and prior to the acceptance of the thesis/dissertation proposal. Students requiring more time to complete provisional courses may petition the Graduate Student Affairs Committee with a request for a specific extension.

Minimum Grade Requirement: Credit must be earned (2.0 or above) in courses taken to fulfill undergraduate deficiencies.

Course requirements: Provisional students are required to take at least 9 credit hours of which at least 6 must be regular graduate credit courses. Special problems courses or seminar courses do not count as regular graduate credit courses.

Minimum Grade Point Average: Students on a provisional program are required to attain a 3.0 grade point average by the end of the second semester; this includes courses taken to complete undergraduate deficiencies and any science courses taken outside the department.

Withdrawal from Program: Failure to complete the provisional agreement will result in the student being required to withdraw from the program.

3.4 Part-time Status

A part-time student will be required to:

1. Submit a statement from their employer stating that they will give the student release time to complete courses.
2. Enroll in a minimum of 3 credits per semester. (1 credit for PhD students who have passed the comprehensive examination.)
3. Maintain a 3.0 GPA after two semesters.
4. Adhere to the same timelines for completing department requirements as for full-time students unless otherwise approved by the Graduate Student Affairs Committee and Department Chair.

3.5 Time Limitations on Financial Aid

All financial aid (N.D.E.A., company fellowships, research assistantships, etc.) shall be considered as equivalent to a teaching assistantship. Normal time limits for holding a teaching assistantship or a combination of fellowships (etc.) and teaching assistantships for a Ph.D. is 4 years and for a M.S. is 2 years. An advisor may fund a student on a Research Assistantship for a longer period, and in circumstances where the department needs additional students for Teaching Assistantships, students may be offered additional funding on a semester-by-semester basis.

3.6 Deadlines in Order to Graduate

University deadlines pertaining to degree certification and dissertation submission will be adhered to. The Graduate School's deadlines for thesis submission are available online at <http://grad.msu.edu/etd>.

3.7 Exceptions

Any student who considers that their case is an exception to the above rules may petition the Department Chair for a hearing.

3.8 Evaluation criteria guidelines

3.8.1 Academic standards: Each graduate student must meet the minimum academic standards of the College of Natural Science (see 3.2.1 above, and also <https://reg.msu.edu/AcademicPrograms/>).

3.8.2 Research: Graduate students should be capable of pursuing meaningful research. The evaluation of a student's research ability is the responsibility of their Guidance Committee.

3.8.3 Academic progress: Each graduate student shall make normal progress toward their degree. This includes meeting the expectations outlined in DEGREE REQUIREMENT TIMELINES AT A GLANCE at the beginning of this handbook. In addition, as a general guide, the Department suggests 4-5 years for full-time students.

3.9 Dismissals and Withdrawals

A student whose work is deficient will have received an evaluation from their advisor stating these deficiencies. After this warning notice has been given, if adequate improvement is not made during the following semester in which the student is enrolled (excluding summer), the Chair of the Department, in consultation with the Guidance Committee and Chair of the Graduate Affairs Committee, will terminate the student's candidacy for a degree. A student who fails to meet the academic standards for any program may, on recommendation of the Chair, be required by the Dean to withdraw at the end of any semester.

EES dismissal procedures are harmonized with college & university level policies (e.g., [GSRR sections 2 and 5](#)). A few notes:

1. EES has its own hearing board ([GSRR 5.1.2](#)) as does CNS ([GSRR 5.1.3](#)), and the hearing board procedures are on file with the MSU Ombudsperson office and the Graduate School.
2. Programs may not dismiss any student from the college or the university; such may only be decided by the college hearing board or University Graduate Judiciary, respectively.
3. [GSRR/MSRR/LSRR](#) (section 2.3.2) entitle students to accurate, timely, written updates on their academic status with the university.

3.10 Appeal of Academic Dismissal

Any student who does not agree with the Department’s or Dean’s decision to terminate their candidacy for a degree may petition the Department Chair for a hearing. See [here](#) for the details of the adjudication of cases involving graduate student rights and responsibilities.

3.11 Transfer from M.S. to Direct Ph.D.

Persons entering as an M.S. candidate wanting to change to a direct Ph.D. program may, upon the approval of their advisor, petition the Department Chair through the Graduate Affairs Committee for a change of status.

4. Master of Science Degrees

4.1 University, College, and Departmental Requirements: Master of Science in Geological Sciences (Degree code 3925)

The university and college requirements for graduation for non-provisional, full-time students are outlined below in Table 2.

Table 2. Summary of the university and college requirements for advancement and graduation.

		Masters
University Requirements	<i>Maximum Course Credit Load per Semester</i>	16 (¼-time appointment), 12 (½-appointment), or 8 (¾-time appointment) credits per semester. A student load above these credits (not counting GLG 899/999) requires Dean approval.
	<i>Full Time Enrollment</i>	9 credits/semester
	<i>Half Time Enrollment</i>	5-6 credits/semester
	<i>Minimum Registration</i>	All students using University and/or faculty services must register for a minimum of one credit/semester.

	<i>Minimum Credits Required for Graduation:</i>	30 credits: <ul style="list-style-type: none"> ● ≥ 16 at 800 level, including thesis research credits. ● 4-7 thesis credits
	<i>Time Limit</i>	6 years from the beginning of the first semester in which credit was earned toward the degree.
College Requirements	<i>Minimum Academic Standard</i>	a.) ≥ 3.0 GPA in required courses stated in the Guidance Committee Report. b.) No grades < 3.0 in > 3 program courses of ≥ 3 credits each. c.) No deferred credits in > 3 program courses of ≥ 3 credits each at any given time. d.) No combination of b&c in > 4 courses.
	<i>Transfer Credit Limitation (if grade > 3.0):</i>	≤ 9 credits
	<i>Residence Minimums:</i>	6 credits in residence
Departmental Requirements	<i>Research Credit Limitations</i>	≤ 1 thesis research credit (GLG 899)/semester; 4-7 total Thesis (research) credits (GLG 899)
	<i>Research Methods</i>	All students are expected to attend the EES speaker program; Enroll 1 time in GLG 898 (1 credit) and GLG 901 (1 credit).
	<i>Course credits</i>	Program course credits: 23-26 at 800 level
	<i>Thesis</i>	See section 4.3

4.2 Departmental Requirements: Master of Science in Environmental Geosciences (Degree code 3928)

For regular admission under Plan A, the student must have:

1. A bachelor's degree in a physical or biological science or in engineering from a recognized educational institution.
2. Completed the courses in physics, chemistry, and mathematics that are required for the Bachelor of Science degree with a major in Earth and Environmental Sciences at MSU, or equivalent courses.
3. At least 12 credits in Earth and Environmental Sciences courses.
4. A grade-point average of at least 3.0.

Provisional admission may be granted to an applicant who has not completed the course work referenced in items 2 and 3 above. Deficiencies must be removed by completing collateral courses.

For regular admission under Plan B, the student must have:

1. Completed a Master of Science degree in the geosciences for which a thesis was required.

2. A grade-point average of at least 3.0.

Requirements for Both Plan A and Plan B

The student's program of study must be approved by the student's guidance committee. The student must meet the requirements specified below:

Total credits (minimum of 16 credits, including GLG 899, at 800 level) 30

1. Tier I Requirement^{1,2} 10-12

- a. General Component:

GLG 423 Environmental Geosciences (*course no longer offered*) 1

- b. Soil Component (One of the following):

CSS 455 Pollutants in the Soil Environment 3
CSS 825 Clay Mineralogy and Soils Genesis 4
CSS 855 Surface Chemistry of Soils and Colloidal Systems 4

- c. Chemical Component (One of the following):

GLG 421 Environmental Geochemistry 3
GLG 821 Aqueous Geochemistry 3 (*course no longer offered*)
GLG 823 Isotope Geochemistry 3 (*course no longer offered*)

- d. Hydrogeology Component (One of the following):

CE 421 Engineering Hydrology 3
CE 821 Groundwater Hydraulics 3
GLG 411 Hydrogeology 4

2. Tier II Requirement (One of the following):^{1,2,3} 3-4

GEO 408 Soil Geomorphology Field Study 4
GLG 412 Glacial Geology and Climate Change 3
GLG 422 Organic Geochemistry 3 (*course now offered at 800 level*)
GLG 471 Applied Geophysics 4
GLG 481 Reservoirs and Aquifers 4
GLG 822 Biogeochemistry 3 (*course no longer offered*)
GLG 824 Stable Isotope Biogeochemistry 2 (*course no longer offered*)
GLG 863 Mineral-Water Interactions 4 (*course no longer offered*)

Additional Requirements for Plan A

1. Tier III Requirement (courses must be approved by student's guidance committee)
7-13 credits
2. Tier IV Requirement: Thesis Research (GLG 899). The research area may focus on any topic that may have applications related to the environment. The student must include in the thesis proposal a paragraph that addresses the environmental applications of the thesis topic selected. 4-7

Additional Requirements for Plan B

1. Tier III Requirement (courses must be approved by student's guidance committee) 13-16
credits
2. Tier IV Requirement: 1 credit

GLG 898 Special Problems in Environmental Geosciences⁴

¹A student who completed any course listed in the Tier I requirements or in the Tier II requirement prior to enrollment in the program must substitute another course approved by the student's guidance committee.

²A given course may be used to satisfy either the Tier I or the Tier II requirement, but not both of those requirements.

³With the approval of the guidance committee, a student may substitute a course listed in the Tier I requirements for one of the courses listed below.

⁴The student must complete a research paper or project while enrolled in GLG 898. The topic of the paper or project must be mutually agreed upon by the student and the student's academic advisor.

4.3 M.S. Degree Requirements (Plan A)

Plan A (with thesis) M.S. degrees are offered in Environmental Geosciences and Geological Sciences. A summary of degree requirement timelines can be found in the DEGREE REQUIREMENT TIMELINES AT A GLANCE table at the beginning of this document. Each student working toward a Master of Science (Plan A) must conduct original research upon which a thesis which makes a significant contribution to knowledge is to be prepared and published. The research is to be under the direction of and acceptable to the guidance committee. A multi-investigator publication, in which the student is not first author, is not accepted as a thesis chapter, however the student may rewrite their contribution to the multi-investigator publication as a thesis chapter with the approval of their committee.

4.3.1 Thesis Proposal

Your ability to synthesize knowledge that demonstrates proper preparation to conduct independent and original research is assessed through the development of a thesis proposal and presentation to your graduate committee. In consultation with the Guidance Committee, the student must submit a thesis proposal no later than the mid-point of the third semester in the program (see the Thesis/Dissertation Proposal Title/Signature Page available online). The proposal is to be presented orally at a meeting of the Guidance Committee and if approved (after possible revision), signed by them and the Department Chair.

4.3.2 Thesis Work Presentation

All graduate students will present their work publicly during their grad program. Forums include but are not limited to: a department colloquium, department grad symposium, conferences. This will be done at least once prior to the oral defense.

4.3.3 Thesis

The final structure of your thesis will be determined by discussions with your advisor or guidance committee. Guidelines for formatting and submission to the university are available at <http://grad.msu.edu/etd/>.

The Department has a collection of theses/dissertations that can be reviewed. Arranging this review is handled through the department office staff.

Some important policies and guidelines:

1. A public or lay audience Abstract is to precede the conventional disciplinary/technical one. The formatting requirements for this additional abstract are identical to those for the conventional abstract. This abstract will also be posted on the Department's web site.
2. In addition to the main body of a thesis or dissertation, the Graduate School now permits the submission of supplementary materials to ProQuest. These supplemental materials will not be reviewed by the Graduate School for formatting requirements, but they must be acceptable by ProQuest and comply with ProQuest's criteria and storage limits. All supplementary materials need the written approval of the thesis/dissertation committee chair.
3. The MSU library may accept supplementary materials approved by the thesis/dissertation committee chair per their collection criteria. The Graduate School does not review these materials for formatting requirements. Questions about submission of these materials to the MSU library should be directed to the Assistant Director for Digital Information.
5. For a Thesis or Dissertation that consists of one or more chapters that are already published papers (a) multi-investigator publications in which the student is not first author, are not directly accepted as one of the Thesis/Dissertation chapters; however the student may rewrite their contribution to the multi-investigator publication as a thesis chapter with the approval of their committee. (b) these chapters must be introduced with the list of all authors, citation for the publication, and include a copy or notation of the written permission from the publisher (who generally holds the copyright) to reprint the article, and (c) if multiple articles make up the document, these must be "tied together" with a required general introduction and summary/discussion. The dissertation/guidance committee chair will decide any further requirements.

The advisor will approve the distribution of a preliminary draft of the completed thesis to the Committee. This draft must be submitted to the committee members at least two weeks prior to the anticipated examination date unless all committee members agree to a shorter review period.

Within one week, after a preliminary review of the thesis, each committee member will determine if they believe the thesis is defensible. If so, they will sign a form agreeing to a defense date that is mutually

acceptable to the committee and student. If more than one member of the Committee does not certify that the thesis is defensible at this stage, the thesis defense cannot be scheduled.

Committee members will return a copy of the thesis with comments and suggestions to the student prior to or at the defense.

After the student incorporates any recommended changes and corrections to the thesis, the advisor needs to approve the final document before submitting it to The Graduate School. If committee members wish to review the final copy, they need to inform the advisor and student of this at the defense.

4.3.4 Thesis Defense

The purpose of the thesis defense is to assess your ability to communicate the results of your research to an audience of peers as well as to a broader community and your ability to defend the results of your work. Thus, the defense is not only the culmination of your graduate education, but also an integral part of your training to conduct research and other professional activities in the future. The student must have written permission from the Guidance Committee to set an oral examination date (see Thesis/Dissertation Review/Examination Approval form page *xiii*). In circumstances in which a committee member cannot attend the defense the Committee may ask another qualified faculty member to serve in their place. No more than one substitute will be allowed.

i.) Notice of the examination time will be circulated to the faculty after the appropriate signatures have been included on the Thesis/Dissertation Review/Examination Approval form.

ii.) The final oral defense consists of two parts. The first is a presentation that is open to faculty members and members of the public without a vote. Only dissertation committee members may attend the second part, which is the examination portion of the defense.

At the end of the examination, the Committee will file with the Department Chair a recommendation regarding the Master's degree.

i.) When the Guidance Committee has reviewed and approved the thesis and the student has passed an oral examination, the student shall incorporate in the thesis any recommended changes and corrections before submitting it to the Graduate School.

ii.) The thesis examination must be approved by at least two-thirds of the voting examiners and with not more than one dissenting vote from among the core Committee members, as defined in section above.

iii.) A failed thesis examination may be retaken once within one calendar year of the initial examination.

Enrollment: Students must be enrolled for a minimum of 1 credit during the semester in which the thesis is defended.

4.3.5 Deadlines in Order to Graduate

University deadlines pertaining to degree certification and thesis submission will be adhered to. The Graduate School's deadlines for thesis submission are available online at <https://grad.msu.edu/etd>.

4.4 M.S. Degree Requirements (Plan B)

A Plan B (without thesis) M.S. degree is offered in Environmental Geosciences. A summary of degree requirement timelines can be found in the DEGREE REQUIREMENT TIMELINES AT A GLANCE table at the beginning of this document.

4.4.1 Final Evaluation Format

The Guidance Committee, in consultation with the student, shall determine the format of the final evaluation (oral or written) when the Guidance Committee Report is filed. This format is to be included in the appropriate section on the Guidance Committee Report. The purpose of the final evaluation is to evaluate the knowledge and skills you have gained in the graduate program.

The final evaluation will be administered by the Guidance Committee during the semester in which the student receives the degree. The Guidance Committee, in consultation with the student, shall determine the format of the final evaluation when the Guidance Committee Report is filed. This evaluation should be related to the courses taken to complete the M.S. program and test the student's ability to carry out professional work in these areas.

The student must be enrolled during the semester in which the evaluation is completed.

At the end of the evaluation, the Committee will file with the Department Chair a recommendation regarding the M.S. degree.

The evaluation must be approved by at least two-thirds of the voting committee members and with not more than one dissenting vote from among the core committee members.

A failed evaluation may be retaken once but must be passed within one semester of the initial date of the evaluation.

5. Doctor of Philosophy Degrees

Ph.D. degrees are offered in Earth and Environmental Sciences, Environmental Geosciences-Environmental and Integrative Toxicology.

Dual doctoral degrees can be obtained but must be approved by the Dean of the Graduate School. A request for the dual major degree must be submitted within one semester following its development and within the first two years of the student's enrollment at Michigan State University. A copy of the guidance committee report must be attached. [See Academic Programs](#) for details.

Each student working toward a Doctor of Philosophy degree must conduct original research upon which a dissertation which makes a significant contribution to knowledge is to be prepared and published. The research is to be under the direction of and acceptable to the guidance committee. The Department

requires that at least one paper from the Dissertation work be submitted for publication in a peer reviewed journal prior to graduation. A multi-investigator publication, in which the student is not first author, is not accepted as a Dissertation chapter, however the student may rewrite their contribution to the multi-investigator publication as a Dissertation chapter with the approval of their committee.

A summary of degree timelines can be found in the DEGREE REQUIREMENT TIMELINES AT A GLANCE Table 1 at the beginning of this document. All doctoral students must register for and successfully complete a minimum of 24 credits and no more than 36 credits of doctoral dissertation research (course number 999). Requests for overrides to exceed the maximum of 36 (24 in the College of Education) credits of 999 must be directed to the Office of the Registrar. To do so, access the **Request for RNR Override** at the Registrar's Online Forms Menu at <https://www.reg.msu.edu/Forms/FormsMenu.aspx>. **Select the RN override and fill in the requested information.** Should the total number of credits go above 45, the RO will confer with the Graduate School before considering the request for an override. For additional information see [Costs in the General Information, Policies, Procedures and Regulation](#).

5.1 University, College, and Departmental Requirements Summary

5.1.1 Doctor of Philosophy in Earth and Environmental Sciences (Degree code 7152)

Degree Requirements are summarized below in Table 3.

Table 3. Summary of the university and college requirements for advancement and graduation.

		PhD
University Requirements	<i>Maximum Course Credit Load</i>	16 (¼-time appointment), 12 (½-appointment), or 8 (¾-time appointment) credits per semester. A student load above these credits (not counting GLG 899/999) requires Dean approval.
	<i>Full Time Enrollment</i>	6 credits/semester
	<i>Half Time Enrollment</i>	3 credits/semester
	<i>Minimum Registration</i>	All students using University and/or faculty services must register for a minimum of 1 credit/semester
	<i>Minimum Credits Required for Graduation</i>	24-36 total dissertation research credits (GLG 999); additional course credits to be determined by the Guidance Committee. If approved by graduate advisors, students request dissertation research credits through the department office.
	<i>Time Limit</i>	<u>*Complete all requirements:</u> 8 years from the beginning of the first credited semester.

		<u>Complete qualification:</u> within 2 years (with MS) and 3 years (without MS).
College Requirements	<i>Minimum Academic Standard</i>	a.) ≥ 3.0 GPA in required courses stated in the Guidance Committee Report. b.) No grades < 3.0 in > 3 program courses of ≥ 3 credits each; c.) No deferred credits in > 3 program courses of ≥ 3 credits each at any given time; d.) No combination of b&c in > 4 courses.
	<i>Transfer Credit Limitation (if grade > 3.0):</i>	At discretion of the Guidance Committee. Must complete within the time limit for PhD completion
	<i>Residence Minimums:</i>	2 consecutive semesters of ≥ 6 graduate credits/semester
Departmental Requirements	<i>Research Credit Limitations</i>	≤ 7 dissertation research credits/semester (GLG 999).***.
	<i>Research Methods</i>	All students are expected to attend the EES speaker program and enroll 1 time in GLG898 (1 credit) and GLG 901 (1 credit) during Ph.D..
	<i>Coursework</i>	A student must complete, or have completed prior to admission, 9 credits of course work in Earth and Environmental Sciences including 3 credits in 800-level course work.
	<i>Comprehensive Exam</i>	All portions must be passed during the second year of enrollment in the program (if coming in with a Master's degree) or third year of enrollment in the program (if coming in with a Bachelor's degree). See Section 5.2 for additional details
	<i>Dissertation</i>	Refer to Section 5.3 and Graduate School's online Formatting Guide for specific requirements regarding the formatting.

* Note: Application for extensions of the eight-year period of time toward degree must be submitted by the department/school for approval by the dean of the college and the Dean of the Graduate School. Upon approval of the extension, doctoral comprehensive examinations must be passed again.

**Lifelong Education enrollment status, and the Graduate Certificate level with no more than 9 credits from each category, except for 12 graduate certificate credits permitted in the College of Education

***Until a proposal is submitted, subsequent research credits will not be allowed and students who enroll for GLG 899/999 credits in excess of the above limits must drop these credits immediately upon notification. If a student fails to drop these credits, the Department will drop these credits from the student's schedule; the student will be notified of the action

5.1.2 Doctor of Philosophy in Environmental Geosciences-Environmental Toxicology (Degree code 3968)

For information about the dual-degree Doctor of Philosophy degree program in Environmental Geosciences-Environmental Toxicology, refer to the statement on [Multidisciplinary Doctoral Programs in Integrative Toxicology](#).

5.2 Comprehensive Exam The comprehensive exam is divided into 4 distinct steps, which are outlined in detail during the following sections. **We note that while each of the proposed “Steps” below are required for completion of the comprehensive exam, that the order at which these steps are completed may be altered at the discretion of the committee.**

Step 1: Ph.D. Dissertation Proposal

Step 2: Ph.D. Dissertation Proposal Oral Defense

Step 3: Written Comprehensive Exam

Step 4: Oral Comprehensive Exam

5.2.1 Step 1: Ph.D. Dissertation Proposal

The student is charged with writing a proposal that outlines proposed research within their field of study. The student’s advisor and committee will provide guidance on the expected format (e.g., NASA, NSF) as well as the topic. The proposal and writing must represent the student’s original work; however, at the discretion of the student’s advisor, the proposal may include ideas discussed and made in collaboration with others as well as input from the academic advisor.

After approval from the student’s academic advisor, the student must submit an approved dissertation proposal to the remaining members of the graduate committee no later than the fourth semester in residence (PhD with MS) or the fifth semester in residence (PhD without MS). **A draft of the proposal must be submitted to the committee members at least one week before the oral presentation (Step 2 below).** The student then must organize a meeting for their Ph.D. proposal defense (Step 2 below) that gives each member of the committee reasonable time to review the proposal.

5.2.2 Step 2: Ph.D. Dissertation Proposal Defense

At the scheduled Ph.D. Dissertation Proposal Defense, the proposal is to be presented orally at a meeting to all members of the Guidance Committee. This typically consists of a 15-20 minute presentation outlining the proposed research, which is then followed by questions by the committee regarding the proposal or the presentation. The time frame of the meeting is typically ~1.5 hours, but this may be altered at the committee’s discretion. If the proposal defense is approved (after possible revision), it must then be signed by the student’s Guidance Committee and the Department Chair.

At the end of this meeting, the student and committee should determine, if not already decided, the topic areas of the written comprehensive exam. These areas are to be included in the appropriate section on the Guidance Committee Report. The student and committee should also establish a timeline for finishing the written and oral comprehensive exam that aligns with department requirements and student and faculty schedules.

All dissertation committee members must evaluate the student's original proposal and vote on whether to **pass**, **fail**, or **revise**. If any committee member judges the proposal as insufficient, then the committee must meet to discuss the course of action. Then expectations need to be explained during an in-person meeting with the student and the full committee, followed by written documentation affirming the expectation for revision. The Adviser is required to record this information on the EES Written Comprehensive Exam Form which will be signed by all members of the dissertation committee and submitted to the Graduate School.

If the decision is to **revise**, the student will have only one opportunity to produce a proposal that meets the expectations of the dissertation committee. The decision to revise implies that the exam contains significant shortcomings. These problems must be specified in writing to the student with a clear statement of the expectations for the revisions necessary to pass, along with a firm deadline for receipt of the revised prospectus. "Revise" should not be used for minor flaws. It suggests that the student is close to failing and that they will have only one opportunity to produce a written product that meets the expectations for the doctoral program. If the student did not make the expected improvements within the timeline allotted, then the student may be recommended for discontinuation from the degree program.

Students who **fail** do not advance to candidacy and may exit the program. If any committee member judges the student as not meeting this expectation, or believes that the written examination indicates that the student is unable to write a dissertation, then the committee must meet to discuss whether the student should continue with the comprehensive exam, or whether they should be recommended for dismissal from the program.

5.2.3 Step 3: Written Comprehensive Examination

The written comprehensive exam format is at the discretion of the guidance committee, but typically follows the following format:

- i.)* By the conclusion of the Ph.D. Dissertation Proposal Defense (Step 2), the student should be aware of the topic areas that each member of the guidance committee will focus on for the written examination.
- ii.)* The student should follow up individually with each member of the guidance committee to discuss specific topics relevant to the comprehensive exam. The amount of information and details of this discussion vary at the discretion of the committee member, but the committee member may provide advance notice of specific topics; provide a list of specific areas within the topic framework that the exam covers; or provide a list of readings important for the examination. It is the student's responsibility to initiate this discussion with each committee member and both the student and committee member should work together to ensure that the expectations of the committee member are clear.
- iii.)* Each committee member will be given a time frame of up to 8 hours for the student to take their portion of the exam. Shorter time frames can be used. Individual faculty, or the committee, may determine the format of the exam. For example, it could be open book, electronic, done from home, directly supervised by the committee member, etc. The student should be made aware of these expectations well in advance of the exam.
- iv.)* Once the student has turned in the exams from each of the individual committee members, the committee shall determine whether the student has:

PASSED with no conditions: Proceed to the Comprehensive Oral Exam (Step 4 below). This should be scheduled for a period of <3 hrs and include all members of the guidance committee.

PASSED with conditions: Proceed to the Comprehensive Oral Exam (Step 4 below) but with required followup related to the written exam at the committee's discretion

FAILED: The student will be given 1 additional chance to take the written examination. If the exam is failed a second time, the student will be expelled from the program.

Note: If the committee cannot come to a common resolution, a vote of PASS (with or without conditions) from all but one of the committee will constitute a "PASS with conditions" recommendation and require followup at the discretion of the individual members.

5.2.4 Step 4: Oral Comprehensive Examination

The date and time of the oral comprehensive exam should be scheduled immediately following the determination of a "PASS" for the written comprehensive exam. The exam should include all committee members and take less than 3 hours. The format can vary at the discretion of the committee, but typically consists of questions from the committee to the student in a closed-door, closed-book format. The nature and topics of the questions is at the discretion of the committee. At the conclusion of the oral exam, the committee shall determine whether the student:

PASS: A unanimous "PASS" vote or up to only one dissenting vote. The qualification exam process is now complete and the student becomes a "PhD Candidate".

FAIL: More than one "FAIL" vote on the committee constitutes a "FAIL". The student will be given 1 additional chance to take the oral examination. If the exam is failed a second time, the student will be expelled from the program.

5.3 Ph.D. Dissertation

The topic, length, and other specifications of your Dissertation are at the discretion of your advisor and Guidance Committee.

Refer to the Graduate School's online [Formatting Guide](#) for specific requirements regarding the formatting.

Once a draft is complete, the following steps should be taken:

i.) The advisor will approve the distribution of a preliminary draft of the completed dissertation to the Committee. This draft must be submitted to the committee members at least four weeks prior to the anticipated dissertation defense date.

ii.) The Committee will return the corrected copy to the student within two weeks. During this period all efforts will be made to resolve major differences between the student and the committee members concerning the content of the dissertation. If more than one member of the Committee does not approve of the dissertation at this stage, the dissertation examination cannot be scheduled.

iii.) A completed hardcopy of the dissertation essentially in final form, but not bound, will be returned to each committee member at least one week before the Ph.D. Oral Dissertation Defense (see next section). Committee members may opt to receive an electronic copy instead of hardcopy.

iv.) The Graduate School maintains a deadline each semester for when the dissertation must be turned into the graduate school for final approval to graduate that semester. Prior to final submission to the Graduate School, the dissertation must be approved by all members of your committee.

For the PhD degree it is also required that at least one student first-authored paper be submitted to a peer reviewed journal for graduation. Guidelines for formatting and submission to the university are available at <http://grad.msu.edu/etd/>.

Some additional policies and guidelines:

1. A public or lay audience Abstract is to precede the conventional disciplinary/technical one. The formatting requirements for this additional abstract are identical to those for the conventional abstract. This abstract will also be posted on the Departments web site.
2. In addition to the main body of a thesis or dissertation, the Graduate School now permits the submission of supplementary materials to ProQuest. These supplemental materials will not be reviewed by the Graduate School for formatting requirements, but they must be acceptable by ProQuest and comply with ProQuest's criteria and storage limits. All supplementary materials need the written approval of the thesis/dissertation committee chair.
3. The MSU library may accept supplementary materials approved by the thesis/dissertation committee chair per their collection criteria. The Graduate School does not review these materials for formatting requirements. Questions about submission of these materials to the MSU library should be directed to the Assistant Director for Digital Information, currently Shawn Nicholson (nicho147@mail.lib.msu.edu).
5. For a Thesis or Dissertation that consists of one or more chapters that are already published papers (a) multi-investigator publications in which the student is not first author, are not accepted as one of the Thesis/Dissertation chapters, (b) these chapters must be introduced with the list of all authors, citation for the publication, and include a copy or notation of the written permission from the publisher (who generally holds the copyright) to reprint the article, and (c) if multiple articles make up the document, these must be "tied together" with a required general introduction and summary/discussion. The dissertation/guidance committee chair will decide any further requirements.

5.4 Ph.D. Oral Dissertation Defense

5.4.1 Dissertation Work Presentation

All graduate students will present their work publicly during their grad program. Forums include but are not limited to: a department colloquium, department grad symposium, conferences. This will be done at least once prior to the oral defense.

5.4.2 Enrollment

Students must be enrolled at MSU the semester in which the dissertation is defended.

5.4.3 General

The purpose of the dissertation defense is to assess your ability to communicate the results of your research to an audience of peers as well as to a broader community and your ability to defend the results of your work. Thus, the defense is not only the culmination of your graduate education, but also an integral part of your training to conduct research and other professional activities in the future. The student must have written permission from the Guidance Committee to set an oral examination date. In circumstances in which a committee member cannot attend the defense the Committee may ask another qualified faculty member to serve in their place. No more than one substitute will be allowed.

- i.) Notice of the examination time will be circulated to the faculty after the appropriate signatures have been included on the Thesis/Dissertation Review/Examination Approval form.
- ii.) The final oral defense consists of two parts. The first is a presentation that is open to faculty members and members of the public without a vote. Only dissertation committee members may attend the second part, which is the examination portion of the defense.

5.4.4 Examination Results

At the end of the examination, the Committee will file with the Department Chair a recommendation regarding the Ph.D. degree.

- i.) When the Guidance Committee has reviewed and approved the dissertation and the student has passed an oral examination, the student shall incorporate in the dissertation any recommended changes and corrections before submitting it to the Graduate School.
- ii.) The dissertation examination must be approved by at least three-fourths of the voting examiners and with not more than one dissenting vote from among the core Committee members, as defined in section above.
- iii.) A failed dissertation examination may be retaken once within one calendar year of the initial examination.

6.0 Student Resources

6.1 Professional Behavior and Conflict Resolution

MSU Programs (or colleges, in the case of the medical colleges) must make codes or standards of professional behavior known and available to students upon their first enrollment (see [GSRR/MSRR/LSRR](#) (section 2.3.2)). The establishment and maintenance of the proper relationship between instructor and student, or between student and student, are fundamental to the University's function, and require both faculty and students to recognize the rights and responsibilities which derive from it. The relationship between faculty and student as individuals, or student and student as individuals, should be founded on mutual respect and understanding together with shared dedication to the education process. As the primary functions of an academic community, learning, teaching, scholarship, and public

service must be characterized by a fundamental commitment to academic freedom and maintained through reasoned discourse, intellectual honesty, mutual respect and openness to constructive criticism and change. The graduate student shares with the faculty the responsibility for maintaining the integrity of scholarship, grades, and professional standards (Article 2.3.7 in the Graduate Student Rights and Responsibilities (GSRR)). Graduate students and faculty members share the responsibility for maintaining professional relationships based on mutual trust and civility (Article 2.3.11 of the GSRR). Refer to Article 2.3 of the GSSR in its entirety.

Conflicts, disagreements, and issues sometimes arise during the course of a graduate program. Students are encouraged to address problems relating to their academic performance by first speaking informally with their advisor(s). This may be followed by presenting the issue to the Graduate Director, the Department Chairperson, and the Associate Dean for Graduate Studies, generally in this order. If the problem cannot be resolved informally, a student may petition the Department Chair for a hearing (See [here](#) for the details of the adjudication of cases involving graduate student rights and responsibilities). Students' rights and responsibilities, including grievance procedures are detailed in the AFR. Procedures more specifically designed for graduate students may be found in the GSSR. In accordance with the AFR and the GSRR, the GLG Department has established the Hearing Board procedures. See also <http://splife.studentlife.msu.edu/#Spartan%20Life%20Student%20Handbook>).

If you find that you have exhausted the internal resources for resolving the issue, you may contact the Office of the University Ombudsperson. The Office of the University Ombudsperson is impartial and provides assistance to students, faculty, and staff in resolving University-related concerns. Such concerns include: student-faculty conflicts; communication problems; concerns about the university climate; and questions about what options are available for handling a problem according to Michigan State University policy. The University Ombudsperson also provides information about available resources and student/faculty rights and responsibilities. The office operates as a confidential, independent, and neutral resource. It does not provide notice to the University - that is, it does not speak or hear for the University.

Contact the Ombudsperson at any point during an issue when a confidential conversation or source of information may be needed. The Ombudsperson will listen to your concerns, give you information about university policies, help you evaluate the situation, and assist you in making plans to resolve the conflict.

Contact information:

Office of the University Ombudsperson
129 N. Kedzie Hall
(517) 353-8830
ombud@msu.edu
<https://ombud.msu.edu>

6.2 Resources Short List

- [Department of Earth and Environmental Science](#)
- [College of Natural Science](#)
- [Michigan State University](#)
- [Information for Students](#)

- [Research](#)
- [E-mail](#)
- [Admissions](#)
- [Financial Aid](#)
- [Registrar](#)
- [Academic Calendars](#)
- [Academic Programs Catalog](#)
- [Description of Courses](#)
- [Schedule of Courses & Schedule Planner](#)
- [Enrollment System](#)
- [The Graduate School](#)
- [Graduate Student Rights & Responsibilities https://grad.msu.edu/gsrr](https://grad.msu.edu/gsrr)
- [Guidelines for Graduate Student Advising and Mentoring Relationships](#)

6.3 Work Related Policies

- [Academic Programs Catalog](#)
- [Anti-Discrimination Policy \(ADP\)](#)
- [Code of Teaching Responsibility](#)
- [Disability and Reasonable Accommodation Policy](#)
- [General Student Regulations](#)
- [Graduate Students Rights and Responsibilities \(GSRR\)](#)
- [Guidelines for Integrity in Research and Creative Activities](#)
- [Integrity of Scholarship & Grades](#)
- [Law Student Rights and Responsibilities \(LSRR\)](#)
- [Medical Student Rights and Responsibilities \(MSRR\)](#)
- [MSU Guidelines for Graduate Student Mentoring and Advising](#)
- [MSU-GEU Contract](#)
- [Policy on Relationship Violence and Sexual Misconduct](#)

6.4 Representation

6.4.1 *Academic Governance*

The Graduate Student Association shall conduct an election including all EES graduate students at the beginning of the fall semester to serve for one year as graduate student representative (with vote) at faculty meetings. When faculty discussions involve matters where the presence of students is not desirable, the Chair may exclude the student from that portion of the meeting. In the event that the student should challenge the decision, a majority vote of the faculty members present shall decide the issue.

6.4.2 *Representation on Department Committees*

Graduate student representatives (with vote) shall serve on all department standing committees with the exception of Faculty Advisory and Promotion/Tenure; they shall serve on appropriate ad hoc committees. Should a dispute arise in defining "appropriate" ad hoc committees, it will be adjudicated in accordance

with university policies (see [here](#) for the details of the adjudication of cases involving graduate student rights and responsibilities).

6.4.3 University Committees

The department graduate students shall elect representatives to the [Council of Graduate Students](#) (COGS) and to the [Graduate Employee Union Steward Council](#) at the beginning of the fall semester. There are opportunities to serve on sub committees. The representatives serve as a liaison between department graduate students and the university graduate/professional population.

6.4.4 The Graduate Employees Union (GEU)

Teaching assistants should be aware of their rights and responsibilities under the current version of the contract between [MSU and the GEU](#). Grievance Procedures: See Article 26 of the MSU/GEU employment contract. Union membership is voluntary; meeting the definition of TA under the GEU contract is independent of union membership. One can be a TA, covered by the contract and enjoy all the rights and responsibilities of the agreement but not a member of the union. Union membership is not tied to the employment relationship and is a private matter between the employee and union.

6.5 General Information for Graduate Assistants

6.5.1 Outside Work for Pay

It is expected that your graduate career and graduate assistantship will be a full-time obligation, and that your first priority when accepting a graduate assistantship is to MSU and the Department of Earth and Environmental Sciences. Outside work for pay, however, is permitted as long as it does not interfere with your responsibilities and obligations as a graduate student and graduate assistant, and you remain in good academic standing.

6.5.2 Traveling

All travel should first be approved by your advisor. In addition, please check with the front office before planning travel in order to avoid complications with reimbursement and authorization. Once travel has been approved by your advisor, follow these steps:

1. Formal travel approval and reimbursements are all handled via the Concur system. [You must first set up a profile](#). This should only need to be completed once prior to your first MSU trip.
2. All MSU employees must obtain [travel approval](#) prior to each trip.
3. If travel has been approved, MSU employees must then fill out an [expense report](#) during or post-travel and submit for approval. Once an expense report has been approved, a reimbursement will be made to the account designated in EBS where you receive your paycheck.

6.5.3 Stipends, Tuition Waivers/Exemptions and Fee Waivers

The information below is subject to yearly change. Please consult The [Graduate School home page](#) for the latest information. Current stipend ranges can be obtained at [Human Resources](#). Within the range established for the University, the stipend depends upon the qualifications of the individual, the availability of funds in the Department, and your prior year's salary, if applicable. Stipends are not tax exempt. For stipend level explanations and advancement information, refer to Article 19 of the MSU/GEU employment contract.

6.5.4 Tuition Waiver

Students holding a graduate assistantship will receive a 9-credit tuition waiver for each semester during the academic year in which the assistantship is held. A 4-credit tuition waiver will be awarded for each summer semester in which an assistantship is held.

Note: Assistantships only cover 9 credits of tuition. Anything over needs to be paid for via external sources.

6.5.5 Out-of-state Tuition Rate Exemption

An out-of-state student holding an assistantship will receive exemption from out-of-state tuition rates for credits over 9 for each semester in which the assistantship is held during the academic year. Also, students holding an assistantship during the entire academic year will receive exemption from out-of-state tuition rates for the summer semester preceding and following their appointment.

6.5.6 Matriculation Fee Waiver

Graduate assistants receive a waiver of their matriculation and infrastructure/technology support fees for each semester included in the appointment.

6.5.7 Grief Absence Policy

For master's (Plan A), master's (Plan B) with research responsibilities, and doctoral students, it is the responsibility of the student to: a) notify their advisor/major professor and faculty of the courses in which they are enrolled of the need for a grief absence in a timely manner, but no later than one week from the student's initial knowledge of the situation, b) provide appropriate verification of the grief absence as specified by the advisor/major professor and faculty, and c) complete all missed work as determined in consultation with the advisor/major professor and faculty. It is the responsibility of the advisor/major professor to: a) determine with the student the expected period of absence – it is expected that some bereavement processes may be more extensive than others depending on individual circumstances, b) receive verification of the authenticity of a grief absence request upon the student's return, and c) make reasonable accommodations so that the student is not penalized due to a verified grief absence. If employed as a RA or TA, the graduate student must also notify their employer. Both employer and student will swiftly communicate to determine how the student's responsibilities will be covered during their absence. Graduate teaching assistants (TAs) should refer to the bereavement policy in the MSU GEU CBU Article 18. Students in the graduate professional colleges (CHM, COM, CVM, LAW) with their own grief absence policies are excluded from the above and should follow their own policies. Students who believe their rights under this policy have been violated should contact the University Ombudsperson.

6.5.8 Disability Accommodations for Graduate Assistants

Graduate assistants (RAs, TAs, and TEs) are both students and employees. They are thus eligible for disability accommodations in both of these roles, and these accommodations are provided through distinct documents coordinated by RCPD: Students receive VISAs (Verified Individualized Services and Accommodations) or VISTAs (Verified Individualized Services and Temporary Accommodations) and employees receive SEADs (Statements of Employee Accommodation Determination). Graduate assistants can register for both situations using [RCPD's MyProfile portal](#).

6.5.9 GEU Stipend Levels and Advancement

Refer to Article 19 of the MSU/GEU employment contract for information regarding stipends, tuition and fee benefits, and health insurance coverage. Stipends are not tax exempt.

6.5.10 Employee Leave Time

Refer to Article 18 of the MSU/GEU employment contract for information regarding leave time related to for example, jury duty, medical issues, etc.

6.5.11 Emergency Fellowship Funding

The Graduate School's Emergency Fellowship Funding is available to graduate students who experience unusual or unforeseen emergency situations that are of a sudden and temporary nature (e.g. short-term recovery from a car crash, short-term needs after an apartment fire). Emergency funds are intended to provide support for one-time unexpected and extraordinary expenses and may be up to \$3,000. Graduate students should be in contact with their faculty advisor about the emergency, and together they should contact the department chair and the associate dean of graduate studies for help filling out the application and finding out what expenses may be covered. More information can be found on the [Graduate School website](#).

6.6 Graduate Teaching Assistants: Special Considerations

6.6.1 English Language Testing: MSU Policy Affecting International Teaching Assistants (ITAs)

MSU candidates for TA appointments who were required to demonstrate English proficiency as a condition for regular admission to Michigan State University must also demonstrate that they meet a minimum standard of proficiency in spoken English before they can be assigned teaching work that involves oral communication with undergraduate students. Those ITAs who received a waiver of the TOEFL or of other accepted tests of English proficiency for admission, must also meet the requirement of proficiency in spoken English before they are assigned to teaching work that involves oral communication with undergraduate students. To meet this requirement, those ITAs may use any of three options listed below:

- Presenting a TOEFL iBT speaking section score of 27 or higher.
- Receiving a score of 50 or higher on the MSU Speaking Test
- Taking AAE 451 or AAE 452 (ITA language support courses) and receiving a score of 50 or higher on the ITA Oral Interaction Test (ITAOI).

Note: The [MSU Speaking Test](#) is difficult to pass but can be appealed, and is often passed on appeal. This is done through the Graduate Affairs Committee at the request of a faculty member who would like one of their graduate students to have a TA appointment. Individual exceptions from these requirements (on a case-by-case basis in rare circumstances) will be considered by the Graduate School in consultation with the ELC upon the request of the department and with the endorsement of the Associate Dean of the College.

6.6.2 Assistantship Selections

The total number of Teaching Assistantships available each semester is determined by departmental course needs and budgetary considerations. The Graduate Director and Department Chair work together to assign teaching assistantships based on balancing department needs, advisor needs, support commitments, student ability and background required to teach particular courses, and satisfactory academic standing.

Further considerations in determining assistantship availability can include grade point average in upper division undergraduate courses, strength of background in supporting sciences (mathematics, physics, and chemistry).

The Graduate Director and Department Chair will utilize the advice of the Graduate Affairs Committee as a general guide in making appointments within the framework of a candidate's willingness to commit themselves at a particular time. The Graduate Director and Department Chair shall, in selecting new graduate teaching assistants, endeavor to maintain a reasonable balance between the various disciplinary areas within the department.

6.6.3 Faculty Evaluation of Teaching Assistants

Every faculty member shall, at the end of the semester, submit to the Department Chair an evaluation of each graduate assistant who has assisted them during that semester. The evaluation will be on a standard form, a signed copy of which will be given to the graduate assistant and faculty supervisor. Additional information pertaining to teaching assistant evaluations can be found in Article 16 of the MSU/GEU employment contract.

6.6.4 Student Evaluation of Teaching Assistants

The Student Instructional Rating System (SIRS) provides an opportunity for students to evaluate the instruction they receive. The purpose of this system is to provide student input toward assessing and improving course design and teaching performance. Typically SIRS data are collected online and students are notified (and reminded) by email when SIRS Online surveys are available for their classes. The notification period, and the period during which the forms are “open” for completion varies depending on whether the class is a sub-term or full-term class. In certain circumstances a professor may choose to use a paper format. A rating consisting of the average grade assigned on these forms to the assistant for their overall teaching ability shall be recorded in a department SIRS file, and the SIRS summaries shall be placed in the student's personnel file. The results of these surveys are made available to the instructor and to teaching assistants, but are not made public. These are made available after grades for the respective semester have been submitted to the Office of the Registrar. Additional information pertaining to student evaluations of teaching assistants can be found in Article 16 of the MSU/GEU employment contract and at the [Student Instructional Rating System](#).

6.6.5 Terminations

Assistantships can be terminated for the following reasons:

Time: Lack of progress for their degree **as determined by the student's guidance committee** may be sufficient reason for withdrawal of the assistantship. For a Master's, if you maintain satisfactory academic and research progress toward your degree and meet teaching expectations

(as a TA), your appointment will continue for at least two years. For a PhD, If you maintain satisfactory academic and research progress toward your degree and meet any teaching expectations (as a TA), your appointment will continue for five years (unless you are continuing here with an EES Master's degree, in which case, your appointment will continue for at least 3 years).

Academic Standards: See Article 12 of the MSU/GEU employment contract.

Lack of funds: University, college or department cutbacks in funds for graduate teaching assistantships can result in withdrawal of the assistantship.

6.6.6 Workload and Duties

The Graduate Director and Department Chair will work in conjunction with the Graduate Secretary to determine graduate teaching assistant assignments.

6.6.7 Office Hours

Graduate teaching assistants must schedule a minimum of two office hours per week, or more as required by the course instructor.

6.6.8 Orientation and Teaching Expectations

New TAs must undergo training by the Graduate School, which is provided each August. TAs should also contact the professor of the course they are teaching several weeks before the beginning of the semester to go over expectations and possible additional training specific to the course.

The general policy of the Department of Earth and Environmental Sciences is that graduate assistants shall not teach lecture sections. Graduate assistants who have unusual expertise in a certain aspect of the Earth and Environmental Sciences, upon specific permission from the Chair and the faculty member involved, may be invited to give one to three lectures to a lecture section.

Graduate assistants assigned to laboratory sections are not expected to develop laboratory exercises; this is the responsibility of the faculty member assigned to the lecture section related to that laboratory. Graduate assistants must follow the laboratory exercises given to them by the faculty member and to do whatever teaching is required to implement the exercise.

Graduate assistants are required to attend an orientation session conducted by the Department Chair or their faculty representative prior to fall semester and may be required to attend a series of training workshops, and/or orientation sessions conducted by the University.

6.7 Graduate Research Assistants

6.7.1 Research Assistantship Selections

Research assistantships are generally offered directly by individual faculty members who have research grant funding available. Students are encouraged to correspond directly with individual faculty members to express their interest in an available research assistantship. A complete list of faculty and their research

areas of interest can be found on the department website. Teaching exempt assistants are selected using the same guidelines as those for teaching assistants. Considerations in judging applicants may include grade point average in upper division undergraduate courses, strength of background in supporting sciences (mathematics, physics, and chemistry), and previous graduate record (if any).