



WESTERN MICHIGAN
UNIVERSITY

WELCOME TO THE DEPARTMENT OF
GEOSCIENCES WESTERN MICHIGAN
UNIVERSITY

2017-2018

GRADUATE STUDENT HANDBOOK

September 8, 2017

Dear new and returning graduate students,

Welcome back (or just welcome) to graduate studies at WMU. We are excited to have you in the Department of Geosciences. Thanks to you (the students) and the work of our faculty, instructors, and staff, we are well-known for the outstanding work that we do across many fields of geoscience!

In this handbook, you will find requirements for completing each of the three graduate programs that we offer (MA Earth Science, MS Geosciences, PhD Geosciences). The handbook also contains copies of the forms and timelines required to navigate to your final degree. If you are ever in doubt of your program requirements, the Graduate Catalog has the current information (<http://catalog.wmich.edu/index.php>, view the "Graduate Catalog 2017-18" from the pull-down menu, then search for your program).

There are two sets of requirements and deadlines that you must be aware of to complete your program. First, the Geosciences Department has requirements for your coursework and credit hours, and (for the MS and PhD programs) presentations/publications and a strict timeline of when each requirement must be fulfilled. These requirements are given in the handbook, listed in the audit letter that you receive each semester, and shown in the WMU Graduate Catalog. Second, the Graduate College has additional requirements and due dates for filing paperwork related to your permanent program, graduate audit, and graduation application. These are on the Graduate College webpage (<http://www.wmich.edu/grad/currentstudents/index.html>) and in the handbook. PLEASE be aware of both sets of timelines and due dates!

If you talk to your advisor and other students in the program, you may hear different advice on what courses you need and when (or even if) you are supposed to complete certain requirements. If you are ever in doubt about your program requirements or your progress, please come to me. My job is to know and enforce the requirements for each graduate program.

At the end of each semester, I will perform an audit of your progress. You will receive a letter each semester noting your progress and any requirements that you need to fulfill. These letters are very important, as they will let you know if you are on track. Please note that there are many of you, but only one of me. Mistakes will happen or paperwork will get mislaid. If you find an error in your audit, please let me know as soon as possible so that it can be corrected. However, it is also your responsibility to be aware of all program requirements and to submit forms in a timely manner. If it is not in your permanent (red) file, I have no way of knowing that you have completed a requirement.

Luckily, my job as graduate advisor goes beyond just writing nasty letters and making you fill out forms. I am your go-to person if you ever have any questions, concerns, or new ideas about your program, your personal situation with your advisor or committee, or graduate study in the department in general. I want to know about problems that you see, and hear about your ideas for how the department can make your life as a graduate student better. If I know what you want to improve, I can work on your behalf to make it happen.

Again, I am happy to meet you all and look forward to a good year. Please see my office door (1137 Rood Hall) for posted drop-in hours – these are a good time to stop by to pick up a form, get a signature, or ask a question. If you need more extensive help, please make an appointment. The best way to reach me is by email.

Cheers, Peter Voice
peter.voice@wmich.edu
269-387-5488

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**PROGRAM
REQUIREMENTS
& FAQs**

Master of Arts in Earth Science (Accelerated)

The accelerated graduate degree program in Earth Science allows undergraduate students in the Geosciences Department at Western Michigan University to begin accumulating credits toward the completion of a Master of Arts in Earth Science degree while completing a bachelor's degree.

When admitted to the accelerated program with senior standing, a student may take up to 12 credit hours of designated coursework that is applied toward both the bachelor's degree and the master's degree. Coursework must be counted from designated classes taken at the 5000-level. Students must earn a grade of "B" or better in order to receive graduate credit for these classes.

An undergraduate degree in geosciences requires a total of 122 credit hours. The Master of Arts in Earth Science requires a total of 35 credit hours. When enrolling in the accelerated program for the maximum 12 graduate credits, a student will earn 145 total undergraduate and graduate credits in contrast to the typical combined 157 undergraduate and graduate credit hours under the usual progression to degree(s). A M.A. in Earth Sciences generally requires 2 to 2.5 years to complete, after earning a Geosciences B.S. degree. The accelerated program can be completed in 12 months after the B.S., if the student takes eligible summer classes, or 1.5 years after completion of the B.S. in Geosciences.

A student will pay undergraduate tuition for courses taken as an undergraduate and these courses will be included in the flat tuition rate. On completion of the undergraduate degree, the student will be reclassified as a graduate student and then will pay graduate tuition rates.

Eligibility

This program is open to undergraduate students who:

- Are enrolled as B.S. students in the Geology, Geochemistry, Geophysics or Hydrology majors.
- Have senior status (minimum 88 credit hours) and have earned a minimum of 30 credit hours at WMU and at least 20 credit hours as a declared major in the Geosciences Department.
- Have and maintain a cumulative overall GPA of at least 3.0 based on at least 88 earned hours, at least 30 of which shall be earned at Western Michigan University.
- Have a cumulative GPA of 3.0 or above in their major classes and a cumulative GPA of 2.5 or above in their cognate classes.

Undergraduate students enrolled in the accelerated program are expected to meet graduate expectations in their designated graduate courses. That is, only courses for which the student receives a grade of 3.0 or better will be transferred into the graduate program.

If a student has received a bachelor's degree, he or she will be ineligible to apply for this program and retroactively claim credits toward the master's degree.

Enrollment

As early as possible in the academic junior year, contact the geosciences graduate advisor to discuss this option and review requirements, timelines and application procedures.

Apply for admission to the Master of Arts in Earth Sciences program in the Geosciences Department.

Upon acceptance, meet with the graduate advisor and the undergraduate advisor to prepare an appropriate program of study that meets the requirements for both the undergraduate and graduate degrees.

A letter advising which courses will be counted in both degrees will be sent to the student and to the Registrar. A copy of this letter also will be included in the student's graduate file.

Admission

WMU has an online graduate application system that allows all students (domestic and international) to submit required information into one system. General application information for the University, as well as specific requirements for individual programs, are captured into this system.

To view the admission requirements for the M.A. in Earth Science program, please visit www.wmich.edu/grad/admissions/single.php?id=110.

Requirements for continuing eligibility and graduation

Completing the undergraduate degree with a GPA within the major of less than 3.0 or a GPA in cognate classes of less than 2.5 will automatically declare a student ineligible for the program.

If a student is admitted to the accelerated program, he or she must follow the program of study developed with the graduate and undergraduate advisors. Failure to follow this program of study may result in ineligibility for the program.

If a student becomes ineligible to continue participation in the program, he or she will be notified in writing by the graduate advisor.

In order to progress automatically into the graduate program, a student must achieve a grade of "B" or better in each of the courses being counted for both the undergraduate and graduate degrees. If the student does not meet this requirement, he or she will have the earned grade applied only to the undergraduate degree. If a student completes the undergraduate degree including a "B" or above in a minimum of 6 credits of the specified courses, he or she will be admitted as a graduate student (with the relevant graduate credit) in the next semester or session after receiving the bachelor's degree.

It is expected that the baccalaureate degree will be awarded within one calendar year after initial accelerated program enrollment. If a student does not meet this time constraint, he or she must reapply to be admitted to the graduate program.

When a student completes the accelerated degree program, it will be noted on his or her undergraduate and graduate transcripts.

A student may withdraw at any time from the program by informing the geosciences graduate advisor in writing. A copy of the request to withdraw must be sent to the Registrar.

A student must complete the requirements for the M.A. degree within 24 months (2 years) from the completion of the bachelor's degree. If the student is unable to meet this requirements, he or she must apply for an extension with the Geosciences Department graduate advisor.

Geoscience courses eligible for the program

- GEOS 5010 - Geologic Communications and Presentations **Credits:** 1 hour
- GEOS 5060 - Introduction to Soils **Credits:** 3 hours
- GEOS 5090 - Surface Water Hydrology **Credits:** 3 hours
- GEOS 5120 - Hydrogeology **Credits:** 3 hours
- GEOS 5200 - Economic Geology **Credits:** 3 hours
- GEOS 5210 - Geological and Environmental Remote Sensing **Credits:** 4 hours
- GEOS 5230 - Hazardous Waste Operation and Emergency Response **Credits:** 1 hour
- GEOS 5240 - Remediation Design and Implementation **Credits:** 1 hour
- GEOS 5250 - Surface Geophysics **Credits:** 1 hour
- GEOS 5260 - Principles and Practices of Aquifer Testing **Credits:** 1 hour
- GEOS 5270 - Principles of Well Drilling and Installation **Credits:** 1 hour
- GEOS 5280 - Principles/Practices of Groundwater Sampling/Monitoring **Credits:** 1 hour
- GEOS 5300 - Plate Tectonics and Earth Structure **Credits:** 3 hours
- GEOS 5350 - GIS Applications in Geological and Environmental Sciences **Credits:** 3 hours
- GEOS 5360 - Glacial Geology **Credits:** 3 hours
- GEOS 5390 - Geologic Mapping **Credits:** 3 hours
- GEOS 5400 - Igneous and Metamorphic Petrology **Credits:** 4 hours
- GEOS 5430 - Petrology and Petrography **Credits:** 3 hours
- GEOS 5450 - Hazardous Waste Remediation **Credits:** 3 hours
- GEOS 5500 - Environmental Field Geochemistry **Credits:** 3 hours
- GEOS 5550 - Introduction to Geochemistry **Credits:** 3 hours
- GEOS 5600 - Introduction to Geophysics **Credits:** 3 hours
- GEOS 5610 - Reflection Seismology **Credits:** 3 hours
- GEOS 5620 - Gravity and Magnetic Exploration **Credits:** 3 hours
- GEOS 5630 - Electrical Methods **Credits:** 3 hours

Master of Arts in Earth Science

The Master of Arts in Earth Science is a non-thesis program that permits students to design programs of study, in consultation with the program advisor, that are compatible with the individual's goals. The program is intentionally flexible; course work may be drawn from geosciences, biological sciences, chemistry, anthropology, economics, political science, communication, and physics, among others.

Admission Requirements

Grade-point average of at least 3.0 (of 4.0) for previous two years of undergraduate work is strongly recommended and is required for full consideration for financial support via teaching assistantships. However, teaching assistantships will be awarded preferentially to students enrolled in the M.S. and Ph.D. Geosciences programs.

Students must have successfully completed GEOS 1300, 1310, 3010 or 3350, and a field experience such as 4380 or 5390, or equivalent, or must complete these courses prior to finishing the degree.

Program Requirements

1. Complete a minimum of thirty-five hours of graduate course work

with at least eighteen hours at the 6000-level or above.

2. A core of eighteen semester hours in Geosciences is required.

3. Hours may include satisfactory completion of

GEOS 7100 - Independent Research Credits: 2 to 6 hours

(may include up to four hours of GEOS 7100)

OR

GEOS 7120 - Professional Field Experience Credits: 2 to 12 hours

(may include up to three hours of GEOS 7120)

4. Students are strongly encouraged to attend weekly departmental seminars.

Master of Science in Geosciences

Advisor: Dr. Peter Voice
Room 1137, Rood Hall

The Master of Science in Geosciences is designed to prepare the student for professional work in geology and for further graduate study. The program has four core areas of specialization: Hydrogeology, Geochemistry and Economic Geology, Geophysics and Tectonics, Stratigraphy and Sedimentary Geology.

Please note: Under exceptional circumstances, a student may request that their advisor petition the faculty for approval of modifications to the timelines stated below. Exceptions may only be granted by a faculty vote.

Admission Requirements

Undergraduate major in geology or a related field. Students must have completed, or will be required to complete as soon as possible upon enrollment in the program, GEOS 1300, 1310, 3010 or 3350 and a field experience such as 5390 or equivalent. Any remedial course work completed upon enrollment in the graduate program must be completed with grade of “B” or better to satisfy this requirement. For students who enter the program with course work deficiencies, program requirement timelines (see below) will begin once remedial work has been satisfactorily completed, rather than upon matriculation in the program.

Grade point average of at least 3.0 (of 4.0) for the previous two years of undergraduate work is strongly recommended and is required for full consideration for financial support via teaching assistantships.

Three letters of recommendation are required of all applicants from persons well situated to evaluate his/her qualifications for graduate study. If they are coming from a faculty member at a college or university, the letter should be on that school’s letterhead. Letters must be submitted through the WMU electronic application system.

Applicants must submit the results of the Verbal Reasoning, Analytical Writing, and Quantitative Reasoning portions of the Graduate Record Examination (GRE).

Program Requirements

1. Choose a graduate advisor by the end of the first semester after matriculation.

No later than the end of the third academic semester, the student should complete three (3) hours of research (GEOS 6340) with this advisor in the preparation of a thesis proposal, and file

appropriate paperwork identifying a thesis committee composed of the primary advisor, at least one other Geosciences department faculty member, and a third committee member who may be internal or external to the department.

2. Qualifying Requirement.

This requirement must be completed no later than the end of the second full year in residence. Students must achieve an average grade of “BA” in two of four core graduate courses. One graduate course in each of the four areas (Hydrogeology, Geochemistry and Economic Geology, Geophysics and Tectonics, Stratigraphy and Sedimentary Geology) will be designated as a “core” course (see graduate advisor for details). In some cases, students may enter the program with a strong background in one or more of the core areas. Such students may be excused from enrolling in one or more core courses by achieving a grade of “B” or better on the final examination for the course(s), provided these result in an average grade of “BA” for two of the core courses. Students who do not achieve a “B” in a core area, or an average of “BA” for two core courses, on their first attempt will be given one additional opportunity to either pass each course or the final examination with a grade of “B” or the grade necessary to achieve an average of “BA” for two of the core courses.

3. Proposal Examination.

By the end of the third academic semester in residence, students must develop a written proposal describing their planned research. This proposal will be presented in a public 15-20 minute talk and will be followed by a closed-door oral examination covering both the proposal and related aspects of Geosciences, to be conducted by the student’s chosen thesis committee. Students who do not pass the proposal exam may be given one additional opportunity to repeat the examination. A second attempt must be made within a timeframe to be determined by the student’s thesis committee, and must occur no later than the end of the next academic semester.

4. Complete at least thirty (30) total graduate credit hours in Geosciences and related areas

(mathematics, physical sciences); at least fifteen (15) credit hours must be at the 6000-level or above, and at least twenty-one (21) of the total credits must be completed in Geosciences. At least eighteen (18) credits of Geosciences coursework must be completed, exclusive of GEOS 6340: Research in Geology and Earth Sciences, GEOS 7100: Independent Research, GEOS 7120: Professional Field Experience, GEOS 7000: Master’s Thesis, and GEOS 7350: Graduate Research.

5. Attend weekly departmental seminars.

6. Satisfactory completion of six (6) hours of the following:

GEOS 7000 - Master's Thesis Credits: 1 to 6 hours

7. At least one scientific presentation must be given at an approved external venue

prior to graduation, or at least one scientific paper must be submitted to an approved refereed journal prior to graduation. Journals and venues must be approved by the student's thesis committee. See the graduate advisor for examples of approved journals and presentation venues.

8. Successfully defend thesis.

The student will give a 30-45 minute public presentation describing the results of his/her research. This will be followed by a closed-door defense to be conducted by the members of the student's thesis committee. See the appropriate section of this Graduate Catalog for policies and procedures in the event of an unsuccessful defense. The final written thesis must conform to the requirements explained in the University's *Guidelines for the Preparation of Theses, Projects, and Dissertations* and may be written according to one of the following options:

a. Option 1:

The student will present a traditional comprehensive thesis based on the master's research. The thesis must include an introduction, review of relevant literature, description of methodology used in the thesis research, presentation of the results (including appendices of data where appropriate), and discussion of the significance of the research.

b. Option 2:

The student will present at least one first-authored journal paper based on the thesis research that has been submitted for publication and is deemed to be publishable by the student's thesis committee. A separately written introduction including a brief literature review, summary of the significance of the work, and appendices of data (where appropriate) must also be submitted.

Doctor of Philosophy in Geosciences

The Doctor of Philosophy in Geosciences is a research degree designed for persons intending to take leadership roles in teaching and research in one of four core areas of the Geosciences: Hydrogeology; Geochemistry and Economic Geology; Geophysics and Tectonics; Stratigraphy and Sedimentary Geology. Applicants will be expected to meet the minimum entrance requirements of the Graduate College and must demonstrate an interest in, and aptitude for, conducting high quality research.

Please note: Under exceptional circumstances, a student may request that the primary advisor petition the faculty for approval of modifications to the timelines stated below. Exceptions may only be granted by faculty vote.

Admission Requirements

Bachelor's or master's degree in geology or related field is required; an M.S. degree is strongly recommended. Students must have completed, or must complete as soon as possible upon enrollment, GEOS 1300, 1310, 3010 or 3350, and a field experience such as 5390 or its equivalent. Any remedial course work completed upon enrollment in the graduate program must be completed with grade of "B" or better to satisfy this requirement. For students who enter the program with course work deficiencies, program requirement timelines (see below) will begin once remedial work has been satisfactorily completed, rather than upon matriculation in the program.

Grade-point average of 3.25 (of 4.0) for prior graduate work. To be admitted without an M.S. degree, a GPA of at least 3.25 (of 4.0) during the previous two years of undergraduate work is required.

Three letters of recommendation are required of all applicants from persons well situated to evaluate his/her qualifications for graduate study. If they are coming from a faculty member at a college or university, the letter should be on that school's letterhead. Letters must be submitted through the WMU electronic application system.

Applicants must submit the results of the Verbal Reasoning, Analytical Writing, and Quantitative Reasoning portions of the Graduate Record Examination (GRE).

Financial Assistance

Several departmental, University and grant-funded fellowships, teaching assistantships, and research assistantships are available. Application forms and additional information are available from the Department of Geosciences and from the Graduate College.

Program Requirements

1. Choose a graduate advisor within two semesters following matriculation.

Within three semesters following matriculation, the student must choose a doctoral committee. This committee will be chaired by the student's primary advisor, and must include one other faculty member from within the Geosciences Department, as well as a third committee member from outside the Geosciences Department. It is strongly recommended that the third committee member be chosen from an outside research facility or university, although members may also be chosen from other programs at WMU, if appropriate. The committee should be chosen to reflect the doctoral student's expressed research interests. The committee will facilitate and guide the student's development within the academic and research programs of the department and University.

2. Complete at least three research credit hours

directed toward preparing a dissertation research proposal, with the student's primary graduate advisor by the end of the second semester of residence.

GEOS 6340 - Research in Geology and Earth Science Credits: 1 to 4 hours

3. Qualifying Requirement.

This requirement must be completed no later than the end of the fourth semester in residence. Students must achieve an average grade of "BA" in three of four core graduate courses. One graduate course in each of the four areas (Hydrology, Geochemistry and Economic Geology, Geophysics and Tectonics, Stratigraphy and Sedimentary Geology) will be designated as a "core" course (see graduate advisor for details). In some cases, students may enter the program with a strong background in one or more of the core areas. Such students may be excused from enrolling in one or more core courses by achieving a grade of "B" or better on the final examination for the course(s). Students who do not achieve a "B" or better in a core area on their first attempt (or an overall average of "BA" for the three courses) will be given one additional opportunity to either pass each core course or the final examination with a grade sufficient to achieve an average of "BA" for the three courses.

4. Proposal Examination:

By the end of the fourth semester, students must develop a written proposal describing their planned doctoral research. This proposal will be presented in a public 20-minute talk. The talk will be followed by a closed-door oral examination, to be conducted by the student's doctoral committee. Students who do not pass the proposal exam will be given one additional opportunity to repeat the examination. A second attempt must be made within a timeframe to be determined by the student's doctoral committee, and must occur within one year of the first attempt. If the

external committee member cannot be present on campus for the proposal examination, they may attend virtually or submit written comments or questions.

5. Complete at least sixty (60) total credit hours

of which thirty (30) credit hours must be at the 6000-level or above. At least eighteen (18) GEOS graduate credit hours of course work is required, not including credit from courses used to fulfill the core course requirement, exclusive of GEOS 6340: Research in Geology and Earth Science, GEOS 7100: Independent Research, GEOS 7120: Professional Field Experience, GEOS 7300: Doctoral Dissertation, and GEOS 7350: Graduate Research.

6. Enroll in the following course for at least one semester:

GEOS 5010 - Geologic Communications and Presentations Credits: 1 hour

7. Complete 15 hours of the following:

GEOS 7300 - Doctoral Dissertation Credits: 1 to 15 hours

8. Demonstrate proficiency in two appropriate research tools.

At least one of the research tools must be completed outside of the student's declared core area of study. Students are strongly encouraged to complete at least one tool via course work or other training outside of the Geosciences Department. For details regarding acceptable research skills, consult with the graduate advisor. Research tools may include:

Achieving a working knowledge of statistics by receiving a grade of "B" or better in an approved course or by showing the ability to apply advanced statistical analysis to the doctoral research.

Demonstrating competence in computer science or programming by receiving a grade of "B" or better in an approved course or by applying computer programming to the doctoral research.

Demonstrating proficiency in areas relevant to the doctoral research, including mathematics, biological sciences, chemistry, geography, remote sensing, physics, or engineering. Proficiency will be demonstrated by achieving a grade of "B" or better in an approved graduate course.

Mastering the design, repair or development of instrumentation used as part of an approved Geosciences course or in the doctoral research.

Demonstrating development, while enrolled in the doctoral program, of reading competency in a foreign language relevant (as deemed by the student's primary advisor) to the student's dissertation research. This skill will be demonstrated by receiving a grade of "B" or better in a 4010 course in the language, by passing a standardized examination, or by successfully translating one or more technical articles assigned by the student's primary advisor.

9. Attend weekly departmental seminars.

In each year in residence following a successful dissertation proposal defense, the student must give a 12-minute seminar presentation. An external presentation at an approved (by the student's doctoral committee) conference will fulfill this requirement in any year of study. The dissertation

defense oral presentation, if completed during the academic year, will fulfill this requirement in the final year of study.

10. Students must give at least one scientific presentation

in an approved (by the student's doctoral committee) external venue prior to graduation.

11. At least one first-authored paper must be accepted for publication in a peer-reviewed journal prior to graduation.

Under exceptional circumstances, the doctoral candidate may petition the Geosciences faculty to allow a first-authored paper submitted to a journal for peer review to be accepted in lieu of an accepted publication. Decisions regarding the petition will be made by majority vote of the faculty.

12. Successfully defend dissertation.

The student will give a 50-minute public presentation. This will be followed by a closed-door defense to be conducted by the members of the student's doctoral committee. See this Graduate Catalog for policies and procedures in the event of an unsuccessful defense. The final written dissertation must conform to the requirements explained in the University's *Guidelines for the Preparation of Theses, Projects, and Dissertations* and may be written according to one of the following two options:

a. Option 1:

The student will write a traditional comprehensive dissertation based on the doctoral research. The dissertation should include an introduction, review of the relevant literature, description of methodology used in the dissertation research, presentation of the results (including appendices of data where appropriate), and discussion of the significance of the research.

b. Option 2:

The student will present at least two first-authored journal papers, which may include the paper written to fulfill program requirement #11, that have been accepted for publication in appropriate peer-reviewed journals. A separately written introduction including a brief literature review, summary of the relevance/conclusions of the studies and an appendix of data (where appropriate) must also be submitted.

Certificate Program in Applied Hydrogeology

The Certificate in Applied Hydrogeology program provides students with field, technical, and analytical skills that prepare them for successful careers in hydro- and environmental geology. Through online offerings, classroom, lab, and field studies students will learn how to collect environmental field data, water and sediment sampling techniques, the principles and practices of near-surface geophysics, drilling and water well installation methods, environmental assessment and hydrogeologic measurement techniques, field geochemistry, scientific writing, data presentation, data analysis, and problem-solving skills. Trained environmental professionals are needed to solve problems concerning drinking water supplies, wastewater treatment, water resources availability, subsurface contaminant transport, water quality and quality assessment, the effects of climate and land-use change on water and wetland resources, and many other environmental issues. Employment opportunities may include work dealing with: environmental consulting, environmental regulations, hydrogeologic investigation, wetland mitigation, flood prediction, pollution abatement and remediation, and environmental geochemistry.

Coursework is fifteen credit hours in Geosciences. The certificate requires completion of 6 credit hours of the Hydrology Field Course and 9 additional credit hours available either online or face-to-face. A list of the appropriate courses is available from the certificate coordinator. The certificate is open to degree and non-degree graduate students.

Prerequisite course or its equivalent

GEOS 5120 - Hydrogeology Credits: 3 hours

Required courses (6 credits)

Hydro field course

GEOS 5230 - Hazardous Waste Operation and Emergency Response Credits: 1 hour

GEOS 5240 - Remediation Design and Implementation Credits: 1 hour

GEOS 5250 - Surface Geophysics Credits: 1 hour

GEOS 5260 - Principles and Practices of Aquifer Testing Credits: 1 hour

GEOS 5270 - Principles of Well Drilling and Installation Credits: 1 hour

GEOS 5280 - Principles/Practices of Groundwater Sampling/Monitoring Credits: 1 hour

Choose three of the following (9 credits)

GEOS 5090 - Surface Water Hydrology Credits: 3 hours

GEOS 6170 - Stable Isotope Geochemistry Credits: 3 hours

GEOS 5450 - Hazardous Waste Remediation Credits: 3 hours

GEOS 6150 - Contaminant Hydrology Credits: 3 hours

GEOS 5360 - Glacial Geology Credits: 3 hours

GEOS 5060 - Introduction to Soils Credits: 3 hours

For retention students must comply with the following:

In order to remain in good academic standing, graduate students must maintain a minimum cumulative GPA of 3.0. Students who fail to meet the program's criteria may be placed on probation or dismissed from the program.

Geosciences Graduate Program Frequently Asked Questions (FAQs)

1. What are the core courses?

Principles of Hydrogeology (GEOS 5120)

Introduction to Geochemistry (GEOS 5550)

Introduction to Geophysics (GEOS 5600)

Sed/Strat (choose one from GEOS 6110, 6450, 6460, 6550, 6560, or 6650)

2. Can I substitute another course for a core course?

No, only the courses listed above count as cores.

3. How many core courses do I need to take and what grade do I need?

MA students are not required to take any core courses. MS students must complete two (of four) with a "BA" grade average by the end of their second full year in residence. PhD students must complete three (of four) with a "BA" grade average by the end of their second full year in residence.

4. Can I test out of a core course?

Yes, you may be excused from enrolling in a core course by earning a grade of "B" or better on the final exam (provided that your average grade across two core courses is a "BA" or better). Contact the instructor of the course to set up the exam, and ask the instructor to send the results of the exam to the Graduate Advisor so that your exemption can be noted in your program file. You should be notified of results within two weeks of taking the exam. Please contact the Graduate Advisor if there is a delay in receiving your exam score.

5. What if I took a core course at another university?

You may test out of the WMU core course by passing the final exam with a grade of "B" or better. Contact the instructor of the course to set up the exam, and ask the instructor to send the results of the exam to the Graduate Advisor so that your exemption can be noted in your program file. You should be notified of results within two weeks of taking the exam. Please contact the Graduate Advisor if there is a delay in receiving your exam score.

6. How many credits should I enroll in?

This depends on your personal and academic situation. If you are on appointment (GA or DA), you are required to enroll in a minimum of 6 credit hours per fall/spring academic semester, and 3 hours per summer semester that you stay on appointment. Students on appointment may enroll in a maximum of 9 credit hour per fall/spring semester, and 3 per summer session. If you have finished all of your program requirements other than thesis/dissertation credits and are on appointment, you may under-enroll (see Graduate Advisor).

If you are not on appointment, you may take as many or as few credits as you wish. However, we strongly recommend not taking more than 9 credits at the graduate level per academic semester. Three credit hours is considered part-time enrollment, and 6 hours is considered full time enrollment.

For the full policy on enrollment, please see the [Graduate Catalog](#) and the [Graduate College](#) webpage.

7. Is there a grade requirement for graduate courses?

Only course that receive a grade of "C" or higher can be counted in a graduate program. The Graduate College requires that students maintain a "B" (3.0) grade point average in all graduate-level coursework. For the full grade policy, please see the [Graduate Catalog](#).

8. What does it mean to be admitted to a graduate program with conditions?

If you are admitted to a graduate program with conditions, these will be noted in your admittance letter. You are required to meet these conditions to remain in and graduate from the program.

If your conditional admit involves undergraduate coursework, you will need to complete the courses noted in your letter prior to your graduation. We strongly recommend that you complete any conditional coursework in your first academic year, as many advanced courses will require these basic courses as prerequisites. Please see the Graduate Advisor for help in planning your program to accommodate this coursework.

9. Can I use undergraduate coursework in a graduate program?

Undergraduate coursework (any coursework not at the 5000, 6000, or 7000 level) may not be counted in a graduate program.

10. Can I transfer coursework from another university or another degree program?

Coursework taken elsewhere or during another degree program at WMU can be transferred to your current graduate program. Only graduate-level courses in which a grade of "B" or better was earned, and taken in the past 6 years (7 years for PhD), may be transferred.

The maximum amount of transfer credits allowed differs by degree program. MA and MS students may transfer a total of 6 credit hours. PhD students may transfer a total of 9 credit hours. Independent study, thesis and dissertation credits may not be transferred.

Coursework transferred from another university may be used to fulfill general program credit hour requirements. It may not be used to fulfill requirements of GEOS coursework or core courses.

11. Can I earn a graduate certificate while enrolled in a graduate program?

Yes, you may be enrolled in both a certificate program and a graduate program. You may "double count" the coursework you are applying toward your MA, MS, or PhD toward a graduate certificate program. And you may apply graduate certificate coursework toward the MA, MS, or PhD program. For example, the courses you take for the Hydrogeology Graduate Certificate can also be applied to your MA, MS, or PhD.

You need to apply to the graduate certificate program in addition to your MA, MS, or PhD program. You also need to apply for graduation separately for the certificate program and for the MA, MS, or PhD.

12. Can I earn a graduate certificate and then apply that coursework toward a graduate degree?

Yes, you may complete a graduate certificate program, and then enroll in the MA, MS, or PhD program. The coursework you took toward the certificate can be applied to the graduate degree program provided that the coursework was at the graduate level, taken within the last 6 years, and earned a grade of "C" or better.

13. Do I have to attend seminar?

MS and PhD students are required to attend the weekly department seminar each semester. MA students are strongly recommended to attend. If you are unable to attend due to your residence or work schedule, please contact the Graduate Advisor.

Any missed seminars need to be made up by attending extra seminars in Geosciences, attending a seminar in another department, attending a student presentation (such as a thesis/dissertation proposal defense, or a thesis/dissertation defense), or by attending a conference outside of WMU (counts at 1 seminar).

Please remember to complete the seminar form each time you attend a regular or make-up seminar. Without the form, there is no way to track your attendance.

14. How do I fulfill my external presentation and/or publication requirements?

For a publication, please send a copy of the email indicating acceptance of your paper to the Graduate Advisor. A copy will be put in your graduate file. For a presentation, please give a copy of your accepted abstract and/or the program page showing the time and date of your presentation to the Graduate Advisor. These will be put in your graduate file. Both oral and poster presentations are acceptable.

15. How can I fulfill the annual presentation requirement for the PhD program?

In each academic year following your dissertation proposal approval, you must present your research in either an oral or poster format. This presentation may take place at an external conference (for example, GSA or AGU), a conference internal to WMU, during the department seminar, or in another format approved by your advisor. Submit a copy of the abstract and/or program page showing the time and date of your presentation to the Graduate Advisor to be recorded in your file. Your dissertation defense may be used to fulfill this requirement in your final year.

16. How do I switch between programs?

You are permitted to internally switch between degree programs if your circumstances change and you can no longer continue in your current program. If you are switching within a program (MA to MS, or MS to MA), or from PhD to MA/MS, you do not need to reapply to the university. If you are switching from the MA/MS program to the PhD program, a new application through the Graduate College is required.

To switch from the MS to MA program, consult with the Graduate Advisor.

To switch from the PhD to the MS or MA program, consult with the Graduate Advisor.

To switch from the MA to MS program, you will need to first take the GREs and identify a faculty member who is willing to serve as your thesis advisor. This faculty member will need to contact the Graduate Admissions Committee chair with your request to change programs. The Admissions Committee will consider your request. If approved, consult with the Graduate Advisor to plan your program.

To switch from the MA or MS to the PhD program, you are required to apply to the university. You must take the GREs (if not done already) and identify a faculty member who is willing to serve as your dissertation advisor. This faculty member will need to contact the Graduate Admissions Committee chair with your request to change programs. The Admissions Committee will consider your request. If approved, consult with the Graduate Advisor to plan your program.

17. When and how do I choose an advisor?

MS students must choose an advisor by the end of their first semester enrolled in the program. PhD students must choose an advisor by the end of their second semester. Both MS and PhD students indicate their choice of advisor by filing the *Declaration of Advisor* form with the department office.

It is assumed that your advisor will be the chair of your thesis/dissertation committee. Therefore, your advisor must be a tenured or tenure-track faculty member in the Department of Geosciences.

18. When and how do I form my thesis/dissertation committee?

A committee can be formed at any time, but no later than the end of the third semester of enrollment (for both MS and PhD programs). Fill out the [Committee appointment](#) form, collect signatures, and submit it to the department office.

19. Who can be on my thesis/dissertation committee?

A committee has a minimum of three members (one chairperson/advisor and at least two members). The chairperson must be a tenured or tenure-track faculty member in the Department of Geosciences. For the MS program, at least one member (in addition to the chairperson) must be from within the Geosciences department. For the PhD program at least one member must be from outside of the Geosciences department. See the Thesis & Dissertation Policy document for additional details.

20. How do I change advisors (or change who is on my thesis/dissertation committee)?

If you have not yet formed a thesis/dissertation committee, you may indicate a change of advisor simply by filing a new *Declaration of Advisor* form with the department office. If you have already formed a thesis/dissertation committee and wish to change your advisor or your committee membership, you must file a new [Committee appointment](#) form with the main office and the Graduate College.

If you have already passed your thesis/dissertation proposal defense, you may change your advisor, committee, and/or your thesis/dissertation topic. However, you will be required to pass a second thesis/dissertation proposal defense for your new project.

21. When can I schedule my thesis/dissertation proposal defense?

After your committee chairperson and members have approved of the written proposal you may schedule your defense by submitting a signed copy of the *Presentation Scheduling Approval Form* to the main office. The form should be submitted at least two weeks prior to the defense date.

22. How long will my thesis/dissertation proposal defense take?

A 2 hour block should be scheduled to accommodate the 20 minute public presentation and 20-30 minutes of public questioning, plus up to 1 hour for the closed-door oral examination. Proposal defenses may only be scheduled during the Fall, Spring, and Summer I semesters. At the conclusion of the proposal presentation, audience members will have an opportunity to question the student about the intended research. Following the open questioning period, the student will remain with his/her committee for a closed-door oral examination. At the end of the oral examination, the committee will excuse the student and render a pass/no pass decision.

23. When can I start taking thesis/dissertation credits?

You must have completed 3 credits of GEOS 6340 with your advisor and have formed a committee (by submitting the required form) before you will be permitted to enroll in thesis/dissertation credit hours.

You may start taking thesis or dissertation credits in the semester in which you defend your thesis or dissertation proposal. You are not permitted to enroll in thesis/dissertation credit hours for more than two semesters without having defended your proposal. You must file a *Permission to Elect* form (signed by your advisor) when you start taking thesis/dissertation credits.

24. I've started taking thesis/dissertation credits. Do I have to keep taking them?

Yes, the Graduate College calls this "continuous enrollment." Once you begin taking thesis or dissertation credits, you must continuously enroll in at least 1 thesis/dissertation credit up to and including the semester of your graduation. You do not need to enroll in summer credits unless you plan to graduate during one of the summer sessions.

Please plan your schedule carefully! MS students may count no more than 6 hours in their programs, and PhD students may count no more than 15 hours.

25. When can I schedule my thesis/dissertation defense?

All program requirements (including coursework, presentation and/or publications, and seminar attendance) must be met before you are permitted to schedule your defense. After your committee chairperson and members have approved of the written thesis or dissertation you may schedule your defense by submitting a signed copy of the *Presentation Scheduling Approval Form* to the main office. The form should be submitted at least two weeks prior to the defense date. Doctoral students must also schedule their defense with the Graduate College using the [Dissertation Defense Scheduling](#) form. Please check the Graduate College website for deadlines.

26. How long will my thesis/dissertation defense take?

Doctoral candidates should schedule a 2.5 hour block to accommodate the 50 minute presentation, 30-40 minutes of open questioning, and 1-1.5 hours of closed-door examination. Masters candidates should schedule a 2 hour block to accommodate the 30-45 minute presentation, 30-40 minutes of open questioning, and up to 1 hour of closed-door examination. Defenses may only be scheduled during the Fall, Spring, and Summer I semesters.

27. How do I advance to doctoral candidacy?

A doctoral student advances to candidacy once all of the following conditions have been met: (1) you have earned a "BA" average across three core courses, (2) you have completed 3 credits of GEOS 6340 with your advisor with a grade of "B" or higher, (3) you have completed 1 credit of GEOS 5010 with a grade of "B" or higher, (4) you have earned 18 hours of Geosciences coursework, exclusive of cores and independent study courses, (5) you have completed two research tools, and (6) you have passed both the written and oral dissertation proposal defense. Once these conditions have been met, you may file the [Admission to Doctoral Candidacy](#) form with the main office.

**THESIS &
DISSERTATIONS
DEADLINES**

IMPORTANT FORMS

Advising Forms

Accelerated MA Program Timetable		
ACTION NEEDED	TIMELINE	FORM NEEDED
Investigate program	Undergraduate junior year	None – meet with Graduate Advisor to discuss program options
Enroll in program	Senior year (minimum 88 credits, 30 credits at WMU, and 20 credits in Geosciences)	Apply for admission to the Accelerated MA Earth Science degree program through wmich.edu/apply
Plan program of study	Senior year (when accepted to the program)	<i>Accelerated Graduate Degree Programs Course Approval</i> form *Located on Graduate College website: wmich.edu/grad/forms
Enroll in courses	All semesters until program requirements are met	None Use <i>Authorization for Independent Study</i> form if taking independent study credits
Complete BS degree	Within 1 year (2 semesters) of acceptance into the MA program	None – schedule appointment with undergraduate College advisor
Complete Permanent Program form and Application for Graduation Audit	Deadlines: Dec. 1 (for spring grads) Feb. 1 (for summer I grads) Feb. 1 (for summer II grads) Aug. 1 (for fall grads)	<i>Graduate Student Permanent Program Master's Level</i> form *Located on Graduate College website: wmich.edu/grad/forms AND <i>Application for Graduation Audit: Graduate Degree</i> form *Located on Registrar's website: wmich.edu/registrar/students/forms
Complete MA degree	Within 2 years (4 semesters) of acceptance in the MA program	None

MA Program Timetable		
ACTION NEEDED	TIMELINE	FORM NEEDED
Enroll in courses	All semesters until program requirements are met	None Use <i>Authorization for Independent Study</i> form if taking independent study credits
Complete Permanent Program form and Application for Graduation Audit	Deadlines: Dec. 1 (for spring grads) Feb. 1 (for summer I grads) Feb. 1 (for summer II grads) Aug. 1 (for fall grads)	<i>Graduate Student Permanent Program Master's Level</i> form *Located on Graduate College website: wmich.edu/grad/forms AND <i>Application for Graduation Audit: Graduate Degree</i> form *Located on Registrar's website: wmich.edu/registrar/students/forms

Graduate Certificate in Hydrogeology		
ACTION NEEDED	TIMELINE	FORM NEEDED
Enroll in courses	All semesters until program requirements are met	None
Complete Permanent Program form and Application for Graduation Audit	Deadlines: Dec. 1 (for spring grads) Feb. 1 (for summer I grads) Feb. 1 (for summer II grads) Aug. 1 (for fall grads)	<i>Graduate Certificate Program Outline</i> form *Located on Graduate College website: wmich.edu/grad/forms AND <i>Application for Graduation Audit: Graduate Certificate</i> form *Located on Registrar's website: wmich.edu/registrar/students/forms

Accelerated MA Earth Sciences Student Review:

Date of Review:

Student Information

Name:

Program of Study:

BS Program of Study:

Semester Enrolled into Program:

Semester Earning BS degree:

Admission Conditions:

Current GPA:

Summary Review Rating:

Continuation: _____

Continuation with Reservation: _____

Dismissal: _____

Comments:

	1 st Semester:	2 nd Semester:	3 rd Semester:	4 th Semester:	5 th Semester:	6 th Semester:	7 th Semester:	8 th Semester:
Graduate Credit Hours (Need 35 Total)								
6000 & 7000 Level Credit Hours (Need 18 Total)								
Graduate Credit Hours in GEOS (Need 18 Total)								
GEOS 7100 Credits (up to 4 allowed)								
GEOS 7120 Credits (up to 3 allowed)								
Permanent Program Form (1 semester prior to graduation)								

Undergraduate courses approved for inclusion in MA program:

Comments:

Accelerated MA Program Requirements:

1. Complete 35 total graduate credits.
2. Complete 18 hours of 6000- and 7000- level credits.
3. Complete 18 hours of Geosciences credits.
4. No more than 4 hours of non-coursework credits are permitted in the program.
5. Complete BS degree requirements within 1 year (2 academic semesters) of enrolling in the Accelerated MA program.
6. Complete all program requirements within 2 years (4 academic semesters) of enrolling in the Accelerated MA program.
7. Attendance at weekly seminar is strongly encouraged.
8. File *Graduate Student Permanent Program: Master's Level* and *Application for Graduation Audit: Graduate Degree* at least one semester prior to graduation.

MA Earth Sciences Student Review:

Date of Review:

Student Information

Name:

Program of Study:

Date Enrolled into Program:

Admission Conditions:

Current GPA:

Summary Review Rating:

Continuation: _____

Continuation with Reservation: _____

Dismissal: _____

Comments:

	1 st Semester:	2 nd Semester:	3 rd Semester:	4 th Semester:	5 th Semester:	6 th Semester:	7 th Semester:	8 th Semester:
Graduate Credit Hours (Need 35 Total)								
6000 & 7000 Level Credit Hours (Need 18 Total)								
Graduate Credit Hours in GEOS (Need 18 Total)								
GEOS 7100 Credits (up to 4 allowed)								
GEOS 7120 Credits (up to 3 allowed)								
Permanent Program Form (within 1 semester of grad)								

Comments:

MA Program Requirements:

1. Complete 35 total graduate credits.
2. Complete 18 hours of 6000- and 7000- level credits.
3. Complete 18 hours of Geosciences credits.
4. No more than 4 hours of non-coursework credits are permitted in the program.
5. Attendance at weekly seminar is strongly encouraged.
6. File *Graduate Student Permanent Program: Master's Level* and *Application for Graduation Audit: Graduate Degree* at least one semester prior to graduation.

MS Geosciences Student Review:

Date of Review:

Student Information

Name:

Program of Study:

Date Enrolled into Program:

Admission Conditions:

Current GPA:

Summary Review Rating:

Continuation: _____

Continuation with Reservation: _____

Dismissal: _____

Comments:

	1 st Semester:	2 nd Semester:	3 rd Semester:	4 th Semester:	5 th Semester:	6 th Semester:	7 th Semester:	8 th Semester:
GEOS grad credits, exclusive of 6340, 7100, 7120, 7000, 7350 (18 req)								
GEOS 7000 credits (6 req)								
Permanent Program Form (1 semester prior to graduation)								
Defend Thesis								
Submit Thesis								

Comments:

MS Program Requirements:

1. Choose a graduate advisor and file *Declaration of Advisor* form by the end of the first semester.
2. Choose a MS committee and file *Notification of Appointment to a Thesis, Dissertation, or Specialist Project Committee* form by the end of the second semester. Committee must be comprised of the primary advisor, one other GEOS faculty, and a third member who may be external to the department. Advisor must be GEOS faculty.
3. Complete three credits of GEOS 6340 with primary advisor by the end of the second semester.
4. Schedule oral thesis proposal defense during the third semester of study using the *Geosciences Department Presentation Scheduling Approval Form*.
5. Complete a written/oral thesis proposal defense by the end of the third semester & file *Doctoral Dissertation, Thesis, or Specialist Project Proposal Approval* form.
6. Core Course requirement: Complete 2 of the following with an average grade of BA by the end of the fourth semester.
 - ___ Introduction to Geochemistry (GEOS 5550)
 - ___ Introduction to Geophysics (GEOS 5600)
 - ___ Principles of Hydrogeology (GEOS 5120)
 - ___ Sed/Strat (GEOS 6110, 6450, 6460, 6550, 6560, or 6650)
7. Attend seminar.
8. Submit a first-authored publication OR present a paper at an approved external venue.

Publication/Presentation Information:
9. Complete 30 hours of graduate credits.
10. Complete 15 hours of graduate credits at 6000 or 7000 level.
11. Complete 21 hours of graduate coursework in GEOS.
12. Complete 18 hours of graduate coursework in GEOS, exclusive of GEOS 6340, 7100, 7120, 7000 or 7350.

13. Complete 6 hours of GEOS 7000.
14. File *Graduate Student Permanent Program: Master's Level* and *Application for Graduation Audit: Graduate Degree* at least one semester prior to graduation.
15. Schedule oral thesis defense using the *Geosciences Department Presentation Scheduling Approval Form*.
16. Successfully defend thesis and obtain signatures on the *Dissertation, Specialist Project and Thesis Approval* form.
17. Submit signed thesis to graduate college with the *Master's Thesis/Specialist Project Check-In Form*.

PhD Geosciences Student Review:

Date of Review:

Student Information

Name:

Program of Study:

Date Enrolled into Program:

Admission Conditions:

Current GPA:

Summary Review Rating:

Continuation: _____

Continuation with Reservation: _____

Dismissal: _____

Comments:

	1 st Sem:	2 nd Sem:	3 rd Sem:	4 th Sem:	5 th Sem:	6 th Sem:	7 th Sem:	8 th Sem:	9 th Sem:	10 th Sem:
Total Grad Credits (60 req)										
Total 6000/7000 Credits (30 req)										
GEOS grad credits, exclusive of cores and 6340, 7100, 7120, 7000, 7350 (18 req)										
GEOS 5010 (1 credit)										
GEOS 7300 credits (15 req)										
Advance to Candidacy										
Permanent Program Form (1 semester prior to graduation)										
Defend Dissertation										
Submit Dissertation										

Comments:

PhD Program Requirements

1. Declare primary advisor & file *Declaration of Advisor* form within two semesters of starting the program.
2. Complete 3 credits of GEOS 6340 with primary advisor by the end of the second semester.
3. Choose a doctoral committee comprised of the primary advisor, at least one other GEOS faculty, and at least one approved member from outside the department by the end of the third semester of study & file *Notification of Appointment to a Thesis, Dissertation, or Specialist Project Committee* form. Primary advisor must be a GEOS faculty member.
4. Schedule oral dissertation proposal defense during the fourth semester of study using the *Geosciences Department Presentation Scheduling Approval Form*.
5. Complete written and oral dissertation proposal by the end of the fourth semester of study & file *Doctoral Dissertation, Thesis, or Specialist Project Proposal Approval* form.
6. Complete 3 of 4 core courses with an average of BA by the end of the fourth semester of study.
 - ___ Introduction to Geochemistry (GEOS 5550)
 - ___ Introduction to Geophysics (GEOS 5600)
 - ___ Principles of Hydrogeology (GEOS 5120)
 - ___ Sed/Strat (GEOS 6110, 6450, 6460, 6550, 6560, or 6650)
7. Attend weekly departmental seminars.
8. Have one first-authored paper accepted for publication prior to graduation.

Publication information:
9. Complete a presentation (poster or talk) at an approved external venue prior to graduation.

Presentation information:

10. Give an annual research presentation (poster or talk) at an approved venue internal or external to WMU.
11. Demonstrate proficiency in two research tools. Tool areas include: working knowledge of statistics (B in class or demonstrated ability); competency in computer science (B in class or programming application in research); proficiency in area related to research (math, bios, chem., geog, remote sensing, physics or engineering) via grade of B in grad course; mastering design, repair, or development of instrumentation as part of course or research; other approved skills via B in course; reading competency in foreign language if related to research.

Tool one:

Tool two:

12. File *Admission to Doctoral Candidacy* form when the following are completed: (1) “BA” average across three core courses, (2) 3 credits of GEOS 6340 with a grade of “B” or higher, (3) 1 credit of GEOS 5010 with a grade of “B” or higher, (4) 18 hours of Geosciences coursework, (5) two research tools, and (6) written and oral dissertation proposal defense are passed.
13. Complete 60 graduate credit hours.
14. Complete 30 graduate credit hours at 6000- or 7000- level.
15. Complete 18 graduate credit hours of GEOS coursework, exclusive of three cores, GEOS 6340, 7100, 7120, 7300, or 7350.
16. Complete 1 credit of GEOS 5010.
17. Complete 15 hours of doctoral dissertation (GEOS 7300).
18. File *Doctoral Program of Study* and *Application for Graduation Audit: Graduate Degree* at least one semester prior to graduation.
19. Schedule oral dissertation defense using the *Geosciences Department Presentation Scheduling Approval Form* and the *Dissertation Defense Scheduling Form (Graduate College)*.
20. Successfully defend dissertation and obtain signatures on the *Dissertation, Specialist Project and Thesis Approval* form.
21. Submit dissertation to graduate college with the *Dissertation Check-In Form*.

Graduate Certificate Program in Applied Hydrogeology

Date of Review:

Student Information

Name:

Program of Study:

Date Enrolled into Program:

Admission Conditions:

Current GPA:

Summary Review Rating:

Continuation: _____

Continuation with Reservation: _____

Dismissal: _____

Comments:

	1 st Semester:	2 nd Semester:	3 rd Semester:	4 th Semester:	5 th Semester:	6 th Semester:	7 th Semester:	8 th Semester:
Hydrogeology field course credits (Need 6 Total)								
Approved elective course credits (Need 9 Total)								
Program Outline Form (1 semester prior to graduation)								

Comments:

Graduate Hydrogeology Certificate Program Requirements:

1. Complete all of the hydrogeology field course modules (6 credits):
 - ___ Hazardous Waste Operation and Emergency Response (GEOS 5230)
 - ___ Remediation Design and Implementation (GEOS 5240)
 - ___ Surface Geophysics (GEOS 5250)
 - ___ Principles and Practices of Aquifer Testing (GEOS 5260)
 - ___ Principles of Well Drilling and Installation (GEOS 5270)
 - ___ Principles/Practices of Groundwater Sampling/Monitoring (GEOS 5280)
2. Complete 3 of the following courses (9 elective credits):
 - ___ Surface Water Hydrology (GEOS 5090)
 - ___ Stable Isotope Geochemistry (GEOS 6170)
 - ___ Hazardous Waste Remediation (GEOS 5450)
 - ___ Contaminant Hydrology (GEOS 6150)
 - ___ Glacial Geology (GEOS 5360)
 - ___ Introduction to Soils (GEOS 5060)
3. File *Graduate Certificate Program Outline and Application for Graduate Audit: Graduate Certificate* at least one semester prior to graduation.

Thesis & Dissertation Forms

DEPARTMENT OF GEOSCIENCES

Declaration of Advisor Sheet

Student Name _____

Advisor _____

Expected general thesis/emphasis area/topic:

Signatures:

Student _____

Date _____

Advisor _____

Date _____

Graduation Forms



**DEPARTMENT OF GEOSCIENCES
DOCTORAL PROGRAM OF STUDY IN GEOSCIENCES**

Name:	WIN:
Address:	
Phone:	E-mail Address:

Required Courses

COURSE NO.	COURSE NAME	HRS	GRADE	SEM/YR	INSTITUTION

Master/Transfer Courses

COURSE NO.	COURSE NAME	HRS	GRADE	SEM/YR	INSTITUTION

Research

COURSE NO.	COURSE NAME	HRS	GRADE	SEM/YR	INSTITUTION

Electives

COURSE NO.	COURSE NAME	HRS	GRADE	SEM/YR	INSTITUTION

Dissertation Hours

COURSE NO.	COURSE NAME	HRS	GRADE	SEM/YR	INSTITUTION

TOTAL CREDIT HOURS:

Student name: WIN

Identify Research Tools:
List Exams Scheduled/Passed
Other Requirements (foreign language, DGE's, prelims, etc.

Required Signatures

Student Signature _____ Date _____

Program Advisor _____ Date _____

Department Chair _____ Date _____

For office use only

Graduate College Dean _____ Date _____

Original copy to Auditing, copies to student, advisors and department

Other Forms

Please return to the Geosciences Graduate Advisor.

**Graduate Exit Survey
WMU Department of Geosciences**

Semester of Graduation:

1. Which Geosciences graduate program (MA, MS, or PhD) did you complete?

2. What are your professional goals and objectives after graduation from WMU?

3. Do you feel that your graduate program has provided you with the background and skills that you need to achieve these goals and objectives? Why or why not?

4. What course(s) did you find most useful in your graduate program? Why?

5. What course(s) did you find least useful in your graduate program? Why?

6. Please assess the department's performance in development of the following skills.
 - a. Did the Geosciences Department help you develop or refine skills in the gathering and analysis of field data (how/why?)

 - b. Did the Geosciences Department help you develop or refine skills in analysis and interpretation of geologic data (how/why?)

 - c. Did the Geosciences Department help you develop or refine skills in critical thinking and scientific reasoning (how/why?)

 - d. Did the Geosciences Department help you develop or refine skills in communication of geologic information through written and oral reports and presentations (how/why?)

7. What are the most important changes that the department should make in the graduate program that you completed?

8. Other? E.g. Any incidences of un-professional conduct? Anything great?

TEACHING ASSISTANTSHIPS

Teaching Assistantships

Teaching assistantships (TAs) are awarded by the Department of Geosciences in order to financially support graduate students and provide professional development in the form of teaching and research assistance. The TA consists of a tuition waiver and accompanying salary. TAs in the Department of Geosciences are highly-competitive and awarded once per year. The specific terms of our TAs vary each year depending on university and department budgets and needs. For more detailed information regarding tax implications, privileges and benefits available to graduate appointees, please consult WMU's [Graduate Student Appointee Information](#).

The term for TAs in the Department of Geosciences is one academic year (fall semester and the following spring semester). New to the university graduate students who are offered a TA are guaranteed appointments for two academic years (master's) or four academic years (doctoral) from the date of enrollment in the program, pending satisfactory performance in teaching and satisfactory progress in their program of study. TAs beyond these time periods are neither promised nor guaranteed. While appointed, the student must enroll in at least six graduate credit hours (5000-level or above) per semester.

ELIGIBILITY

To be eligible for a TA in the Department of Geosciences, a student must first be formally accepted to either the M.S. or Ph.D. programs for the term(s) that the award is given.

CRITERIA FOR INITIAL AWARD

- **Program of study:** Teaching assistantships are preferentially awarded to students enrolled in the Ph.D. and M.S. programs. M.A. students are not eligible.
- **Grade point average:** Teaching assistantships are preferentially awarded to graduate students with a GPA of 3.25 or above.
- **Prior teaching experience:** Teaching assistantships are preferentially awarded to students with prior experience teaching, especially positions in upper-level undergraduate courses.

CRITERIA FOR CONTINUATION OF AWARD

Satisfactory progress in the program of study: TA's must receive a "satisfactory" evaluation in their audit letter for each semester of study that they hold the position. If a TA receives a "mostly satisfactory" or "unsatisfactory" audit, he or she will have one semester to attend to any outstanding items noted in the audit letter. Receiving a less than "satisfactory" evaluation in the audit letter for two consecutive semesters will be grounds for revoking the TA. The graduate adviser, [Dr. Heather Petcovic](#), is responsible

for auditing the progress of all students at the end of each semester. Both the student and his/her adviser will receive a copy of the audit letter.

Satisfactory performance in teaching. TAs must...

- Adhere to all University policies, regulations, directives, guidelines and student codes.
- Attend and participate in all course-related meetings, as required by the supervising course instructor and/or head TA.
- Attend and assist with class sessions (beyond the assigned lab sections), as required by the supervising course instructor and/or head TA.
- Communicate any absences to the supervising course instructor and/or head TA. If a class must be missed, the TA will arrange a substitute and complete the "[Absence from Class](#)" form.
- Start and end all class sessions on time.
- Interact with students in a positive, ethical, attentive and professional manner.
- Grade student work consistently and fairly and return all work in a timely fashion.
- Post office hours and be available to help students at the stated office hours.
- Conduct end-of-semester WMU-ICES course evaluations; performance will be noted and taken into consideration in future awards.

The graduate adviser will be responsible for communicating with faculty, instructors and head TAs each semester to find out if these performance criteria have been met. TAs will receive a letter evaluating teaching performance on the grounds stated above. TAs must receive a "satisfactory" or better [teaching evaluation letter](#) for each semester of study for which the student is a TA. They will have one semester to attend to any outstanding items as noted in the teaching evaluation letter. Receiving a less than "satisfactory" rating in the teaching evaluation letter for two consecutive semesters will be grounds for revoking the TA.

APPLY FOR A TEACHING ASSISTANTSHIP

While the Department of Geosciences has rolling admissions for all of its graduate programs, students who wish to be considered for a teaching assistantship must be formally accepted by the February 15 deadline. See below for more information about the application process.

- **Prospective students:** Prospective graduate students applying to the M.S. and Ph.D. programs must fulfill the following two requirements no later than February 15 in order to be considered for a teaching assistantship: 1) Applicants must be formally accepted into their program, and 2) Applicants must submit the [application form](#) to [Kathy Wright](#). All prospective students who wish to be considered for a teaching assistantship are required to have their application complete at least 4-6 weeks ahead of the February 15 deadline in order to give the Graduate Admissions Committee sufficient time to evaluate each candidate's qualifications and reach a decision. Completing your application means that all required documents (GRE scores, transcripts, recommendations, etc.) have not

just been ordered but have been received, processed and uploaded to your electronic application; this process can take several weeks. As such, prospective graduate students should begin the application process at least 2-3 months ahead of the February 15 deadline in order to ensure consideration. Students who do not complete their application in the specified time-frame will not be considered and must wait until the following year to apply again.

*Prospective M.A. students are not eligible for teaching assistantships.

- **Current students:** Current graduate students in the M.S. and Ph.D. programs may apply for a [teaching assistantship](#) by completing the application form and submitting it to [Kathy Wright](#) no later than February 15.

*M.A. students are not eligible for teaching assistantships.

**Department of Geosciences
TA Evaluation Form**

TA name: _____

Your name: _____

Course: _____

Semester: _____

Date: _____

Overall rating (circle): Outstanding Satisfactory Need Improvement Poor

Performance Criteria	Rating (Circle)	Comments
Adheres to all University policies, regulations, directives, guidelines, and student codes.	Outstanding Satisfactory Needs improvement Poor	
Attends and participates in all course-related meetings as required by the supervising course instructor and/or head TA.	Outstanding Satisfactory Needs improvement Poor	
Attends and assists with class sessions (beyond the assigned lab sections), as required by the supervising course instructor and/or head TA.	Outstanding Satisfactory Needs improvement Poor	
Communicates any absences to the supervising course instructor and/or head TA, and arranges for a substitute should a class session need to be missed.	Outstanding Satisfactory Needs improvement Poor	
Starts and ends all class sessions on time.	Outstanding Satisfactory Needs improvement Poor	
During class sessions, interacts with students in a positive, ethical, attentive, and professional manner.	Outstanding Satisfactory Needs improvement Poor	
Grades student work consistently and fairly, and returns all work in a timely fashion.	Outstanding Satisfactory Needs improvement Poor	
Posts office hours and is available to help students at the stated office hours.	Outstanding Satisfactory Needs improvement Poor	

If a specific criteria does not apply to this course or TA assignment, please write NA in the comment box.

Western Michigan University Teaching Assistants Union

For more information and to join, go to www.tauaft.org

POLICIES

Definitions of Academic Honesty Violations

If a student is uncertain about an issue of academic honesty, he/she should consult the faculty member to resolve questions in any situation prior to the submission of the academic exercise. Violations of academic honesty include but are not limited to the following.

CHEATING

Definition: Cheating is intentionally using or attempting to use unauthorized materials, information, notes, study aids or other devices or materials in any academic exercise.

Clarification

1. Students completing any examination are prohibited from looking at another student's examination and from using external aids (for example, books, notes, calculators, conversation with other) unless specifically allowed in advance by the faculty member.
2. Students may not have others conduct research or prepare work for them without advance authorization from the faculty member. This includes, but is not limited to the services of commercial term paper companies.

FABRICATION, FALSIFICATION AND FORGERY

Definition: Fabrication is the intentional invention and unauthorized alteration of any information or citation in an academic exercise. Falsification is a matter of altering information while fabrication is a matter of inventing or counterfeiting information for use in any academic exercise or University record. Forgery is defined as the act to imitate or counterfeit documents, signatures, and the like.

Clarification

1. "Invented" information shall not be used in any laboratory experiment, report of results or academic exercise. It would be improper, for example, to analyze one sample in an experiment and then "invent" data based on that single experiment for several more required analyses.
2. Students shall acknowledge the actual source from which cited information was obtained. For example, a student shall not take a quotation from a book review and then indicate that the quotation was obtained from the book itself.
3. Falsification of University records includes altering or forging any University document and/or record, including identification material issued or used by the University.

MULTIPLE SUBMISSION

Definition: Multiple submission is the submission of substantial portions of the same work (including oral reports) for credit more than once without authorization from instructors of all classes for which the student submits the work.

Clarification

Examples of multiple submission include submitting the same paper for credit in more than one course without all faculty members' permission; making revisions in a credit paper or report (including oral presentations) and submitting it again as if it were new work.

PLAGIARISM

Definition: Plagiarism is the use of someone else's language, ideas, or other material without making the source(s) evident in situations where there is a legitimate expectation of original work. Plagiarism does not occur when efforts to promptly identify sources by making source use apparent to the audience of the submitted material are obvious. Plagiarism may not necessarily include mistakes in citation style.

A legitimate expectation of original work exists for numerous circumstances, including (but not limited to): scholarly writing, technical presentations and papers, conference presentations and papers, online discussion postings, grant proposals, patents, book and other manuscripts, theses and dissertations, class assignments, artistic works, computer code, algorithms, and other creative works.

This definition applies to the entire WMU community, which includes all faculty; students; staff; visiting faculty, scholars, administrators; and any other person governed by academic research and other policies of the University.

COMPLICITY

Definition: Complicity is intentionally or knowingly helping or attempting to help another to commit an act of academic dishonesty.

Clarification

Examples of complicity include knowingly allowing another to copy from one's paper during an examination or test; distributing test questions or substantive information about the materials to be tested before the scheduled exercise; collaborating on academic work knowing that the collaboration will not be reported; taking an examination or test for another student, or signing another's name on an academic exercise.

Collaboration and sharing information are characteristics of academic communities. These become violations when they involve dishonesty. Faculty members should make clear to

students expectations about collaboration and information sharing. Students should seek clarification when in doubt.

ACADEMIC COMPUTER MISUSE

Definition: Academic computer misuse is the use of software to perform work which the instructor has told the student to do without the assistance of software.

More information can be found at WMU's Student Conduct Page: wmich.edu/conduct

Department of Geosciences

Internship Policy

Internship Graduate Credit (GEOS 7120)

Students occasionally have opportunities to gain direct, practical work experience through internships. The Department of Geosciences supports internship opportunities and offers credit for these experiences. Students may enroll in 2-12 credits of GEOS 7120 while participating in an internship.

To earn a grade in GEOS 7120, the following must be completed:

1. The student should contact a faculty member to supervise the internship and serve as the instructor of record for GEOS 7120. This faculty supervisor will assign a grade for the course.
2. The student will obtain the form to enroll in GEOS 7120 from the main office and is responsible for obtaining all appropriate signatures.
3. The faculty supervisor must have had direct communication with the supervisor in the company or organization that offers the internship in order to confirm internship activities.
4. The student must submit a report to his/her faculty supervisor at the end of the internship period, summarizing the activities and detailing what he/she has learned.
5. The faculty supervisor will contact the company supervisor to confirm the report and obtain input on the student's performance before assigning a grade.

Department of Geosciences
Thesis and Dissertation Policies (Approved 4/6/16)

This document summarizes what is required for successful completion of the Geosciences MS thesis and PhD dissertation requirements in terms of both student and faculty responsibilities. Exceptions to any policy item can only be granted by a majority vote of the Geosciences faculty.

1. Definition of Advancement to Candidacy (PhD Program)

A doctoral student advances to candidacy once all of the following conditions have been met: (1) the student achieves a "BA" average across three core courses, (2) the student completes 3 credits of GEOS 6340 with a grade of "B" or higher, (3) the student completes 1 credit of GEOS 5010 with a grade of "B" or higher, (4) the student successfully completes 18 hours of Geosciences coursework, exclusive of cores and independent study courses, (5) the student successfully completes at two research tools, and (6) the student passes both the written and oral dissertation proposal defense.

2. Thesis and Dissertation Committees

2a. Committee Formation and Membership

A thesis or dissertation committee may be formed at any time, but no later than the end of the student's third semester of enrollment in both the MS and PhD programs. A committee is considered set once the [Committee Appointment Form](#) has been signed and filed with the Geosciences Department and the Graduate College. Changes to committee membership may be made by filing a new copy of this form with the department and the Graduate College.

A committee consists of the thesis or dissertation chairperson, plus a minimum of two additional members. All members must be full or associate members of the graduate faculty at WMU. The chairperson must be a tenured or tenure-track member of the Geosciences department faculty who is also a full member of the graduate faculty at WMU.

For MS committees, at least one member (in addition to the chairperson) must be from within the Geosciences department. The third member may be from outside of the department, college, or WMU. Any outside member will participate fully in the thesis process.

For PhD committees, at least one of the committee members *must* be from outside of the Geosciences department. This person may be from a related discipline, from outside the College of Arts and Sciences, or from outside of WMU. The outside member will participate fully in the dissertation process.

Both students and faculty are expected to adhere to the full policy on thesis and dissertation committees, as set forth by the WMU Graduate Catalog.

2b. Committee Responsibilities

The committee is charged with the supervision and evaluation of work toward the thesis or dissertation. This task includes but may not be limited to the following: (1) advise the student on selection and/or development of a research topic; (2) review and approve the written proposal for the thesis or dissertation; (3) evaluate and approve the oral portion of the thesis or dissertation proposal, including the public defense and closed-door examination; (4) provide consultation regarding progress on the thesis or dissertation research; (5) evaluate the final written thesis or dissertation; and (6) evaluate the oral portion of the thesis or dissertation, including the public defense and closed-door examination.

In addition, the chairperson of the committee assumes the following additional responsibilities: (1) advise the student regarding selection of other thesis or dissertation committee members; (2)

routinely monitor and provide constructive feedback on student progress toward the thesis or dissertation; (3) call committee meetings and provide committee members with regular updates on the student's progress; (4) evaluate the readiness of both the written and oral thesis or dissertation proposal for committee review and action; (5) evaluate the readiness of the final written and oral thesis or dissertation for committee review and action; (6) administer the proposal and final defense oral examinations; and (7) inform the student of the need to adhere to the *Guidelines for the Preparation of Theses, Specialist Projects, and Dissertations*.

The committee chairperson and all members must be present for an oral proposal examination or defense to proceed. Any committee member from outside of WMU is strongly encouraged to attend the student's oral proposal examination and final oral defense in person. When this is not possible, the outside committee member may attend virtually, or the outside member may send questions in advance to the committee chairperson to ask on his or her behalf during the defense. In an emergency situation, a proposal examination or defense may proceed with one member missing, as long as the chairperson is present.

3. Proposal and Proposal Defense

The thesis or dissertation proposal is a research proposal that should at minimum contain the following elements: abstract; problem statement; specific goals, questions, or hypothesis to be addressed by the research; literature review; methods; and work completed to date. The exact structure of the document is at the discretion of the committee. A proposal has two parts: the written document and an oral defense and examination.

Once approved by the thesis or dissertation chairperson, the written proposal should be submitted to the student's committee for review. The proposal should be submitted for committee review a minimum of two weeks before the intended date of the oral defense. The student will continue to work on the proposal until the committee is satisfied with the written document. Once the student's committee has received the written proposal, the student may schedule his/her proposal defense by submitting the signed presentation scheduling form to the Geosciences main office (see next page). Students should schedule the presentation with the Geosciences office at least two weeks prior to the presentation date. A 2 hour block should be scheduled to accommodate the 20 minute public presentation and 20-30 minutes of public questioning, plus up to 1 hour for the closed-door oral examination. Proposal defenses may only be scheduled during the Fall, Spring, and Summer I semesters.

At the conclusion of the proposal defense presentation, students and faculty in attendance will have an opportunity to question the student about the intended research. Following the open questioning period, the student will remain with his/her committee for a closed-door oral examination. The committee chairperson will guide the examination, allowing each committee member the chance to further question the student about his/her research and general understanding of the research area. At the end of the oral examination, the committee will excuse the student and render a pass/no pass decision. At this point, students may be asked to revise the written thesis or dissertation proposal to take into account any questions or concerns raised in the oral defense. Once the proposal has been approved by the committee, the student is able to complete his or her research. If a student does not pass the oral or written proposal defense, he or she may make one additional attempt as outlined in the MS and PhD program descriptions in the WMU Graduate Catalog.

4. Final Thesis or Dissertation Defense

The final thesis or dissertation describes the full extent of the student's research and is expected to include at minimum the following elements: abstract; problem statement; specific goals, questions, or hypothesis addressed by the research; literature review; methods; results; discussion and implications; and conclusions. The exact format of the written thesis or dissertation is at the discretion

of the student's committee. Like the proposal, the final thesis or dissertation has two parts: the written document and an oral defense and examination.

It is the shared responsibility of the student and the committee chair to keep all committee members informed of research progress as the student works on his/her thesis or dissertation. This regular communication will ensure that the committee has shared expectations of the project and can give the student consistent and timely feedback. Students should expect to be set multiple revisions to the written document until the committee is fully satisfied.

All program requirements (e.g., coursework, presentation and publication requirements, and seminar attendance) must be met before the oral defense may be scheduled. The final thesis or dissertation should be submitted for committee review a minimum of two weeks before the intended date of the oral defense. Once the student's committee has received the written document, the student may schedule his/her thesis or dissertation defense by submitting the signed presentation scheduling form to the Geosciences main office at least two weeks prior to the presentation date. **NOTE** that doctoral students must also schedule the final defense with the Graduate College a minimum of two weeks prior to the defense date. At this point (two weeks prior to the defense), a printed copy of the thesis or dissertation should be submitted to the Geosciences main office for general faculty review. Doctoral candidates should schedule a 2.5 hour block to accommodate the 50 minute presentation, 30-40 minutes of open questioning, and 1-1.5 hours of closed-door examination. Masters candidates should schedule a 2 hour block to accommodate the 30-45 minute presentation, 30-40 minutes of open questioning, and up to 1 hour of closed-door examination. Defenses may only be scheduled during the Fall, Spring, and Summer I semesters.

At the conclusion of the public defense presentation, students and faculty in attendance will have an opportunity to question the student about the intended research. Following the open questioning period, the student will remain with his/her committee for a closed-door oral examination. The committee chairperson will guide the examination, allowing each committee member the chance to further question the student about his/her research and general understanding of the research area. At the end of the oral examination, the committee will excuse the student and render a pass/no pass decision. At this point, students may be asked to revise the written thesis or dissertation to take into account any questions or concerns raised in the oral defense. If changes to the written document are required, it is the committee chairperson's responsibility to ensure that these are completed prior to submitting the written document to the Graduate College. Once the written thesis or dissertation is approved by the committee, it may be submitted to the Graduate College. If a student does not pass the oral portion of the defense, he or she may make one additional attempt in a closed-door session with the thesis or dissertation committee.

Geosciences Department Presentation Scheduling Approval Form

Student's Name: _____

Presentation type:

____ Thesis Proposal Defense

____ Thesis Defense

____ Dissertation Proposal Defense

____ Dissertation Defense

Proposed presentation date: _____

Time: _____

Approval Signatures:

Signatures of the committee chairperson and members indicate that the written thesis proposal, dissertation proposal, final thesis, or final dissertation has been received and that the student is ready to schedule the oral presentation.

Committee Chairperson: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

[ONLY FOR THESIS/DISSERTATION DEFENSES]: Signature of the Graduate Advisor indicates that the student has met all program requirements and may proceed with the thesis or dissertation defense.

Graduate Advisor: _____ Date: _____

*****To Be Completed by Geosciences Office*****

Received by: _____ Date Received: _____

Presentation Date/Time: _____ Date of Email to Faculty: _____

**Geosciences Department Presentation Scheduling Approval Form
(to be circulated at the time that the presentation is scheduled)**

Student's Name:

Presentation Title:

Abstract (250 words, maximum):

Geosciences Department Presentation Scheduling Approval Form

Student's Name: _____

Presentation type:

____ Thesis Proposal Defense

____ Thesis Defense

____ Dissertation Proposal Defense

____ Dissertation Defense

Proposed presentation date: _____

Time: _____

Approval Signatures:

Signatures of the committee chairperson and members indicate that the written thesis proposal, dissertation proposal, final thesis, or final dissertation has been received and that the student is ready to schedule the oral presentation.

Committee Chairperson: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

Committee Member: _____ Date: _____

[ONLY FOR THESIS/DISSERTATION DEFENSES]: Signature of the Graduate Advisor indicates that the student has met all program requirements and may proceed with the thesis or dissertation defense.

Graduate Advisor: _____ Date: _____

*****To Be Completed by Geosciences Office*****

Received by: _____ Date Received: _____

Presentation Date/Time: _____ Date of Email to Faculty: _____

**Geosciences Department Presentation Scheduling Approval Form
(to be circulated at the time that the presentation is scheduled)**

Student's Name:

Presentation Title:

Abstract (250 words, maximum):

Graduate Readmission Policy

Graduate students who have been academically dismissed from the Department of Geosciences or other WMU departments may apply for readmission. Geosciences has rolling admissions for all graduate programs; thus, students may apply for admission at any time. However, students seeking readmission should submit the online application at least six weeks ahead of enrollment deadlines. Once all the required components of the application have been received/processed by WMU and attached to the online application, the student file will be considered complete and forwarded to the Graduate Admissions Committee for review. The review process takes three weeks. Once the committee has reached a decision, the student will be notified immediately. If accepted, the student will then need to make an appointment with the departmental Graduate Adviser to complete readmission paperwork. Once the university processes this paperwork and the academic status has been changed, the student will then need to make another appointment with the Graduate Adviser to enroll in courses. All of this must take place ahead of enrollment deadlines.

The department has adopted the following policies and procedures:

1. Students seeking readmission will only be considered for the MA-Earth Sciences degree program or the certificate program in applied hydrogeology.
2. Applications for readmission will only be accepted through the online system. Only complete applications will be considered. To apply, visit <http://www.wmich.edu/apply/graduate/readmission>
3. Applications received less than three weeks before the final day of the open enrollment (add/drop) period will only be considered for enrollment starting in the following academic semester or summer session.
4. Students applying for readmission will be held to the same admission requirements as new graduate applicants. For program-specific admission requirements please see:

Applied Hydrogeology (Certificate): <https://wmich.edu/geology/academics/certificate>

MA-Earth Sciences: <http://www.wmich.edu/geology/academics/graduate/earth-science>

5. Students may re-submit materials from their original graduate study application, such as undergraduate transcripts, resume or CV, and letters of support. However, students must submit a new written statement pertaining to graduate study in the selected program, and a supplemental program application form. For a complete list of program-specific application requirements, please see:

Applied Hydrogeology (Certificate): <https://wmich.edu/grad/admissions/single.php?id=174>

MA-Earth Sciences: <http://www.wmich.edu/grad/admissions/single.php?id=110>

6. All readmitted students will be subject to the condition of maintaining a GPA of 3.0 or higher in the first academic semester of study following readmission. Other admission conditions, such as coursework deficiencies, will be determined by the departmental Graduate Admissions Committee (GAC).
7. Students may only be admitted or readmitted to geosciences graduate degree programs by a majority vote of the departmental GAC. The vote will be tallied by the GAC chairperson and reported to the graduate advisor. If the GAC votes to readmit a student, the graduate advisor may approve the readmission.

GRANTS & FELLOWSHIPS

Graduate Student Research Grant

GRADUATE STUDENT RESEARCH GRANTS (2017-2018)

1. Purpose: The Graduate Student Research Grants (GSRG) are established to support graduate students engaged in independent scholarly research, scientific inquiry, inventive technology, and artistic/creative activity. WMU graduate students may receive a maximum of two Research Grants, or two Travel Grants, or one of each grant type at each degree level: Ph.D./master's/specialist.

Note: The typing of theses, dissertations, and project paper, as well as the purchase of computers or supplies and equipment commonly provided by departments or by other existing grants or funds do not qualify as a legitimate budget expense under a GSRG.

Award Amount: Grants range up to \$1,000

Graduate Student Association (GSA) Supplement: Additional \$600 for international research

2. Eligibility - WMU graduate students MUST be:

- A. Admitted to a graduate degree program
- B. In good academic standing (3.0 GPA)
- C. Enrolled full time in the semester that the application is made (One credit hour only if at dissertation/thesis hours)
- D. The individual responsible for the research described in the project, but for the purposes of research compliance, listed as the student investigator

WMU graduate students MUST provide:

E. Documentation of approval on University letterhead for any project involving regulatory oversight: human subjects; animals; biohazards; DNA. (Applications will not be considered without this documentation.)

3. Guidelines for the Application Process -Applicants MUST:

- A. Use the interactive applications posted on line and fill all required fields (handwritten applications are not accepted)
- B. Use the Checklist to ensure that applications are complete
- C. Submit their applications before or by the posted deadline that appears on the application; late applications will not proceed to review
- D. Submit the application to the following address: graduate-center@wmich.edu
- E. Secure a Letter of Support from a faculty member who will send the document separately to this address: graduate-center@wmich.edu
- F. Submit the application as ONE, SINGLE document in PDF format ONLY

4. Recommendations: It is recommended that grant applicants attend a seminar on grant preparation prior to each grant cycle. Please check the Graduate College [Events](#) page for detailed information or contact Dr. Marianne Di Pierro for assistance: (269) 387-8249 or marianne.dipierro@wmich.edu

Next application cycle deadlines and other information:

- Wednesday, September 27, 2017, 5 p.m. (EST)
- Tuesday, January 30, 2018, 5 p.m. (EST)
- Wednesday, April 11, 2018, 5 p.m. (EST)
- Notification of status will be sent within six weeks of application deadline.
- Questions or Concerns: Contact Dr. Marianne Di Pierro, Program Manager Graduate Research and Retention, at marianne.dipierro@wmich.edu or via phone: (269) 387-8249

[2017 – 2018 Graduate Student Research Grant Application](#)

[Graduate Student Research and Travel Grant \(GSRTG\) E-Folder Handouts](#)

For Updated Information on WMU Graduate College Grants and Fellowships:
<https://wmich.edu/grad/fellowships-grants>

Graduate Student Travel Grant

GRADUATE STUDENT TRAVEL GRANTS (2017-2018)

Purpose: The Graduate Student Travel Grants (GSTG) are established to support graduate students engaged in independent scholarly research, scientific inquiry, inventive technology, and artistic/creative activity. The grants support graduate student travel to meetings or events sponsored by professional organizations for the purpose of reporting the results of their research, exhibiting or performing creative works or otherwise disseminating results of their scholarly activity. These grants do not cover conference attendance for other purposes (e.g. as a non-presenting attendee or workshop participant.)

WMU graduate students may receive a maximum of two Research Grants, or two Travel Grants, or one of each grant type at each degree level: Ph.D./master's/specialist.

Note: The typing of theses, dissertations, and project paper, as well as the purchase of computers or supplies and equipment commonly provided by departments or by other existing grants or funds do not qualify as legitimate budget expenses under a GSTG.

Award Amount: Grants range up to \$700 (\$900 for travel to Alaska and Hawaii)

Graduate Student Association (GSA) Supplement: Additional \$600 for international travel

Eligibility - WMU graduate students MUST be:

- A. Admitted to a graduate degree program
- B. In good academic standing (3.0 GPA)
- C. Enrolled full time in the semester that the application is made (One credit hour only if at dissertation/thesis hours)
- D. The invited presenter via a letter/email of invitation from the conference/exhibit officials.
- E. The sole or principal investigator of the research project (PI) but for the purposes of research compliance, listed as student investigator, author or performer of the artistic/creative activity and the individual invited or selected to make the presentation

WMU graduate students MUST provide:

F. Documentation of approval on University letterhead for any project involving regulatory oversight: human subjects; animals; biohazards; DNA. (Applications will not be considered without this documentation.)

Guidelines for the Application Process -Applicants MUST:

1. Use the interactive applications posted on line and fill all required fields (handwritten applications are not accepted.)
2. Use the Checklist to ensure that applications are complete

3. Submit their applications before or by the posted deadline that appears on the application; late applications will not proceed to review.
4. Submit the application to the following address: graduate-center@wmich.edu
5. Secure a Letter of Support from a faculty member who will send the document separately to this address: graduate-center@wmich.edu
6. Submit the application as ONE, SINGLE document in PDF format ONLY

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- Wednesday, September 27, 2017, 5 p.m. (EST)
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- Questions or Concerns? Contact Dr. Marianne Di Pierro, Program Manager Graduate Research and Retention, at marianne.dipierro@wmich.edu or via phone: (269) 387-8249

[2017 – 2018 Graduate Student Travel Grant Application](#)

[Graduate Student Research and Travel Grant \(GSRTG\) E-Folder Handouts](#)

For Updated Information on WMU Graduate College Grants and Fellowships:
<https://wmich.edu/grad/fellowships-grants>

Other Grants – Apply through Graduate College:

1. Gwen Frostic Doctoral Fellowship
2. Thurgood Marshall Fellowship
3. Martin Luther King, César Chavez and Rosa Parks Future Faculty Fellowship
4. WMU GEP Fellowship
5. Graduate College Dissertation Completion Fellowship

Application materials and eligibility criteria can be found here: <https://wmich.edu/grad/fellowships-grants>

OTHER RESOURCES

WMU Department of Geosciences poster printing guidelines

As a learner centered, discovery driven and globally engaged research unit, the Department of Geosciences at WMU understands the importance of learning to present knowledge and research both locally and at regional, national and international conferences and symposiums by traditionally offering poster printing services to our students at little or no cost. The guidelines to have your poster printed by geosciences staff are outlined below:

- Plan to get your poster prepared and printed at least one week before you leave for a meeting. We have large format printers but problems do arise. Check out the poster printing guidelines specific to each conference in advance of creating your poster. The department will provide to our students a maximum of **one** free poster printed for each conference or presentation a student attends. It is suggested that the student and their advisor or colleague review in great detail and with multiple sets of eyes, each poster with the aid of a projector and whiteboard at least two weeks in advance of the presentation. Geosciences staff is not responsible for mistakes contained in poster prints. Proofing is the sole responsibility of the requestor. Geosciences staff can provide proofreading assistance upon request if their schedule allows for it. If Geosciences staff does provide assistance with proofreading the requestor should make an additional final check personally. Print requests must be made and posters finalized at least three days in advance. Poster requests received less than three days in advance of due date are printed for a fee of \$25. Posters charged to a grant or lab account will be assessed the full amount indicated below. Pricing for additional posters or for extraneous requests are also listed below:

Large Format Printing Pricing and Sizing						
Posters Standard Sizes	Paper Only	Gloss paper	Matte paper	Lamination	Add for Mounting	
					Foamcore	Display board
22" x 28"	\$36	\$46	\$52	\$69	\$18	\$36
24" x 36"	\$45	\$59	\$65	\$84	\$20	\$40
30" x 40"	\$58	\$75	\$84	\$105	\$26	\$58
36" x 48"	\$79	\$102	\$114	\$138	\$45	\$93
36"x72"	\$95	\$95	\$116	\$144	\$149	\$217
36"x96"	\$126	\$126	\$149	\$186	\$192	\$282
42"x72"	\$126	\$126	\$174	\$261	\$261	\$337
42"x84"	\$168	\$168	\$232	\$348	\$348	\$428
42"x96"	\$178	\$178	\$242	\$358	\$358	\$438

- Print requests must be submitted via email or in person. Posters may be attached to email requests or on an usb thumb drive. Allow 1-2 business days for printing. Print requests must be submitted before 2 p.m. Monday-Friday to be eligible for same-day printing if the current queue allows for it; otherwise the request will be printed as soon as it reaches the top of the queue. Posters submitted after 2 p.m. on Friday will not be processed until the following Monday. If a poster is submitted after 2 p.m. prior to a holiday or closure it will be processed on the next business day.
- Requests will be fulfilled on a first-come, first-serve basis. Please plan accordingly. Geosciences staff will only be able to provide information on the current queue status at the time of questioning; they are not fortune tellers.

Tips for successfully preparing a poster:

- Use MS PowerPoint, Publisher or similar software to create your poster. Final posters can be submitted in .ppt(x), .pdf, .jpg or .png formats, other file formats will not be accepted for printing by geosciences staff. The **largest possible printable area is 42" by 96"**. One can utilize custom page sizing to make your poster ½ the final size. ((e.g.) page size set at 21" x 42" and ultimately prints at 200%) For fonts use a minimum of 18pt, **24 pt. is preferred**. (Choose either 9 or 12 pt., if one prints at 200%) Write the text in MS Word or notepad and paste it into PowerPoint. It can be somewhat tricky working with a huge page size.
- Use a **plain white or light-colored background**. Drawn boxes around text can be useful. The college provides approved university logos and PowerPoint templates for departments to create publications at their convenience. A variety of options are offered for departments to use here: <http://wmich.edu/arts-sciences/about/communications>
- For design guidelines and other help, check out these websites:
 - o <http://www.geosociety.org/meetings/2007/speakerPosters.htm>
 - o <http://www.agu.org/meetings/fm10/guidelines/presenter-guidelines-poster.php>
 - o <http://www.swarthmore.edu/NatSci/cpurrin1/posteradvice.htm>
 - o <http://www.cns.cornell.edu/documents/ScientificPosters.pdf>

WMU Geosciences Poster Order Form:

<https://wmich.edu/geology/poster-order>