

# GEOSCIENCES, MS

The Department of Geosciences offers the Master of Science (MS) degree program, which trains students for professional practice and/or continued graduate study. With the MS program of study, you will develop into a professional that is not just a technical worker, but a leader that can manage and carry out complex projects that include development, analysis, interpretation, and communication of results. The typical course of study takes two years to complete.

The Geosciences MS program provides our students with a strong scientific background and intensive research experience, culminating in a formal thesis. The MS degree requires both coursework and research. These help the student build observation, critical thinking, quantification, and presentation skills. Our goal is for students to gain deep knowledge in a subfield of geosciences and a broad understanding of the overall discipline. We strive to prepare students for scientific careers in academia, government, or industry.

## Admission Requirements

### Application Deadlines

Application deadlines vary by program, please review the application deadline chart (<http://uwm.edu/graduateschool/program-deadlines/>) for specific programs. Other important dates and deadlines can be found by using the One Stop calendars (<https://uwm.edu/onestop/dates-and-deadlines/>).

### Admission

An applicant must meet Graduate School requirements (<http://uwm.edu/graduateschool/admission/>) plus the following departmental requirements to be considered for admission to the program:

1. Hold a bachelor's degree in one of the natural sciences, engineering, or mathematics.
2. Have an appropriate background in aspects of the geosciences relevant to the intended field of study.
3. Provide the names of at least three (3) people who can submit letters of recommendation speaking to your research skills and ability to succeed in a research-based MS program.
4. Provide a reason statement.

Applicants may be admitted with specific program-defined course deficiencies provided that the deficiencies amount to no more than two courses.

The student is expected to satisfy deficiency requirements within three enrolled semesters. No course credits earned in making up deficiencies may be counted as program credits required for the degree. A geology student who lacks field training must acquire the training not later than the summer following initial enrollment.

## Credits and Courses

Minimum degree requirement is 30 graduate credits, at least 24 of which must be earned in formal course credits and up to 6 of which may be earned through an acceptable thesis.

Code	Title	Credits
Formal Course Credits		24
GEO SCI 990 *		6
<b>Total Credits</b>		<b>30</b>

\* Only 6 credits of GEO SCI 990 may be counted toward the 30-credit requirement, though a student may enroll in the course more than twice and may take more than 6 credits.

## Additional Requirements

All students in their second or later year are required to present a public progress report annually to the Department.

### Major Professor as Advisor

The student must have a major professor to advise and supervise the student's studies as specified in Graduate School regulations. The student is assigned a preliminary advisor at the time of initial enrollment based on the student's expressed research interests.

### Proposal for Thesis

Prior to the formal undertaking of thesis research, the student must prepare a written proposal for the thesis problem including an estimate of costs to be incurred. Copies of the proposal are to be distributed to the faculty advisor and the Department reading file. One copy is to be placed in the student's permanent Department file. An abstract of the proposal is to be distributed to each Department faculty member for comment and critique.

### Thesis

The student must write an acceptable thesis embodying the results of original research completed under the direction of the advisor. The thesis must be approved by the student's examining committee, consisting of the research advisor plus two other PhD-holding scientists, one of which may be outside of UWM.

### Comprehensive Examination

The student must pass a final oral examination in defense of the thesis. At the discretion of the examining committee, this examination may include topics in addition to the thesis. The first part of this examination will be a public presentation of the thesis. Immediately after the presentation, the thesis must be orally defended before the entire examining committee in a closed session.

### Time Limit

The student must complete all degree requirements within five years of initial enrollment.

## Geosciences MS Learning Outcomes

Students graduating from the Geosciences MS program will be able to:

- attain rigorous knowledge of earth materials, geological processes, and the selected discipline that is related to thesis research.
- exhibit a mastery of quantitative (e.g., mathematical and statistical) skills to perform independent research.
- communicate effectively through writing and presentations to both professional audiences and the general public.
- apply critical thinking to solve geological problems.
- practice ethical and professional conduct.