

# GEOSCIENCES, MS

The Department of Geosciences offers graduate work emphasizing applied aspects of the hydrologic, geological, and geophysical sciences. The geological sciences concentration prepares students for careers in such areas as engineering and environmental geology, hydrogeology, geophysical exploration, mining and petroleum geology.

The M.S. degree program trains students equally for professional practice and continued graduate study. The typical course of study takes two years to complete. The Ph.D. degree program, with interwoven components in lithospheric and hydrospheric science, is problem oriented rather than specialty oriented: this program is designed to produce scholars and practitioners capable of applying their training to achieve sound and pragmatic solutions to real problems in the earth sciences. Students in the doctoral program will normally spend a minimum of two years of formal coursework, not including dissertation research.

The Department has a variety of geological and geophysical field equipment including a drill rig, portable water sampling and analytical systems, and marine and land-based seismic and electrical resistivity systems. In addition, the Department maintains the following equipment directly or through its association with the UWM Center for Great Lakes Studies: x-ray diffractometer and spectrometer, atomic absorption unit, gas and ion chromatographs, liquid scintillation counter, cold region environmental chambers, operating well field, seismograph, Paleomagnetism laboratory, and recirculating flume.

Supporting facilities in the University include a computing center, scanning electron microscope, a cartographic laboratory, the Saukville Field Station 50 km north of the campus, the Center for Great Lakes Studies, and the Urban Research Center.

The Department also maintains the extensive geological collections of the Greene Geological Gallery and cooperates actively with the Milwaukee County Public Museum.

## 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:

- Undergraduate preparation consisting of one year each of: college chemistry, college physics, and calculus; one summer of field training in geology for students majoring in geology.
- Undergraduate grade point average of 3.0 (4.0 scale).
- Submission of scores on the Graduate Record Examination (<http://uwm.edu/graduateschool/admission/#gre>) (General Test).

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. The deficiencies are monitored by the Graduate School and the individual graduate program unit. 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
Total Credits		30

\* A graduate student is allowed to register for a maximum of nine 990 research credits, no more than 6 of which may be counted toward the 30-credit requirement.

## Program Requirements

All students in their second or later year are required to present a 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 temporary advisor at the time of initial enrollment and requests a faculty member to serve as the thesis advisor after selecting an area of specialization.

### 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 criticism.

### Thesis

The student must write an acceptable thesis embodying the results of original research completed under the direction of the advisor.

### Comprehensive Examination

The student must pass a comprehensive examination, either oral or written or both. In part a defense of the thesis, the examination covers the student's entire graduate program of studies. At the option of the student, the part of the examination consisting of the presentation of the results of thesis research may be open to other graduate students.

### Time Limit

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