MS in Geology

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https://geology.missouri.edu/grad/graduate-program

The master’s degree program includes a thesis and a non-thesis option, both of which require 30 credit hours beyond the bachelor’s degree. The thesis option is accomplished by taking 18 to 21 graduate course credits and preparing a written thesis involving 9-12 credits of research or problems credits. Students have until the middle of their second semester in residence at the university to choose a supervisor and a thesis topic. The non-thesis track requires 27 hours of graduate course credits plus 3 hours of research credit leading to completion of a smaller-scope research project.

Degree Requirements

- A minimum of 30 hours beyond the bachelor’s degree.
- At least 15 hours of 8000- or 9000-level work.
  - For the Thesis Option, no more than 40% of those hours can be thesis research, problems in geological sciences, or similar courses.
  - For the Non-thesis Option, no more than 10% (3 credit hours) can be research, problems in geological sciences, or similar courses.
- Students must maintain a GPA of 3.00 for all competitive classroom work at MU. If GPA falls below 3.00, student must raise GPA to 3.00 or higher by end of next semester or be dropped from Master’s program.
- The student must choose a supervisor by the middle of his second semester in residence, and make a brief written report to the faculty outlining the proposed thesis research.
- The Master's Final Exam is a defense of the thesis. The student should invite all faculty members to attend their defense. An oral presentation of the thesis results must be given at a departmental seminar (either fall or winter semester) as a part of the defense. After an open question-answer session, the student and the exam committee may conclude the defense in a closed question-answer session.
- The Non-thesis option also includes a public presentation of the project.

Note on scheduling defenses: Faculty members are not required to read theses or conduct final examinations during the summer field season.

Sample Plan of Study

The following plan of study is meant to serve as an example, only. An individual student’s plan of study will be developed in coordination with their graduate supervisor and reflect the emphasis of their study. The study may also enroll in additional courses that do not appear on the Plan of Study submitted to the Office of Graduate Studies.

Thesis/Non-Thesis Requirements

Thesis: No more than 12 hours (of the 30) can be Geology 7085, 7990, 8085, & 8090 (problems, readings, thesis research, etc.).

• Fall semester (year 1)
  - GEOL 7650 Plate Tectonics (3 hours)
  - GEOL 7100 Groundwater Hydrology (3 hours)
  - GEOL 7180 Solar System Science (3 hours)

• Spring semester (year 1)
  - GEOL 8750 Silicate Glasses, Liquids and Magmas (3 hours)
  - GEOL 8200 Advanced Structural Geology (3 hours)
  - GEOL 8090 Research in Geological Sciences-Masters Thesis (3 hours)

• Fall semester (year 2)
  - GEOL 8100 Continental Tectonics (3 hours)
  - GEOL 8090 Research in Geological Sciences-Masters Thesis (3 hours)

• Spring semester (year 2)
  - Research in Geological Sciences-Masters Thesis (GEOL 8090) (6 hours)

Non-Thesis Option: No more than 3 hours (of the 30) can be Geology 7085, 7990, 8085, & 8090 (problems, readings, thesis research, etc.).

• Fall semester (year 1)
  - GEOL 7100 Groundwater Hydrology (3 hours)
  - GEOL 7180 Solar System Science (3 hours)
  - GEOL 7650 Plate Tectonics (3 hours)

• Spring semester (year 1)
  - GEOL 7120 Engineering Geology (3 hours)
  - GEOL 8240 Hydrogeologic Processes (3 hours)
  - GEOL 8450 Tectonics and Sedimentation (3 hours)

• Fall semester (year 2)
  - GEOL 7200 Economic Geology with Laboratory (4 hours)
  - GEOL 8100 Continental Tectonics (3 hours)
  - GEOL 8240 Hydrogeologic Processes (3 hours)

• Spring semester (year 2)
  - GEOL 8050 Research in Geological Sciences-Masters Non-Thesis - non-Thesis (3 hours)

Admissions

Fall deadline: none set, but January 31st for guaranteed consideration for departmental financial aid for the following Fall-Spring academic year.

Additional admission requirements and criteria:

- Equivalent of MU Bachelor of Science degree in geology or another science field is normally required prior to receiving an advanced degree. Science-course deficiencies must be made up before beginning thesis work.
- International students for whom English is a foreign language must submit a minimum TOEFL score 550 (paper-based) or 80 (Internet-based) or minimum IELTS of 6.5 (average) to be considered for admission.
- Admission is based upon examination of transcripts, required GRE scores (Verbal and Quantitative), and letters of recommendation. Serious consideration for admission requires a 3.00 GPA on the last 60 hours of undergraduate work, GRE scores above the 50th percentile on the Verbal and Quantitative Tests, and strong letters of recommendation.
- GRE scores (required by the department).
- 3 letters of recommendation.
• Personal statement describing the applicants interests, background, motivation, and goals for graduate study at MU.

**Note on GRE Scores and GPA:** Our quantitative assessment of applicants uses a combination of GPA for the last 60 hours and the student's GRE verbal, quantitative and analytical writing scores. We have a formula that weights the GPA and total GRE scores equally. Applicants with a GPA less than 3.0 may be considered, but their acceptance would require very strong GRE scores or exceptional circumstances.

All materials are submitted online through the Office of Graduate Studies.

**Financial Aid from the Program**

Although some graduate students in Geological Sciences are externally supported by fellowships or sponsors, many are generally supported by Graduate Teaching Assistantships and Graduate Research Assistantships. If you are interested in assistantship support, please be sure to indicate so on your application form.