

# GEOLOGY, MS

## Admission Requirements

In addition to the graduate application and official transcripts applicants must submit three letters of recommendation and a statement of purpose.

## Program Requirements

Complete a minimum of 30 credits of which at least 10 credits shall be at the 600 level and no more than two in research problems and six in thesis research.

In all geology M.S. degree programs except Engineering Geology, at least 22 graduate credits shall be geology courses.

A proficiency exam is taken during the student's first semester in the M.S. program. Students who demonstrate a lack of knowledge in areas related to their thesis topics may be required to take additional or remedial courses as suggested by the examining committee. Students may not begin formal thesis work until the proficiency exam has been completed. (Formal thesis work includes the thesis proposal and/or thesis research credits) Field camp can be taken for graduate credit; however, it will not count toward the 30 credits for the M.S. in the geology specialization.

## Core Requirements

Code	Title	Hours
GEOL 680	Seminar in Geology	2
GEOL 699	Master's Thesis	6
<b>Total Hours</b>		<b>8</b>

Oral presentation and defense of thesis.

## Degree Specialization

The program of each individual will be adapted to his/her career objectives.

The academic background of each incoming graduate student will be reviewed during the student's first semester by the graduate advisor, thesis advisor, and department chair to determine whether background deficiencies exist for his/her planned program of study.

## Geology

The minimal background for admission without deficiency should include a six-credit geology field camp course and equivalents to courses in mineralogy, petrology, structural geology, sedimentology/stratigraphy, and any two upper level geology courses.

Students should have completed the equivalent of a minimum of six semester courses in introductory chemistry, physics, biology, calculus or equivalents; including at least one semester of calculus, physics and chemistry. All courses should be taught for science/mathematics/engineering majors.

## Earth Science

Equivalents of the current geology courses for the University's B.A. in geology are required. Course program will be selected to provide the student with a well-rounded background in lithosphere, hydrosphere and atmosphere. Those who will be teachers must take EDCI 780 Seminar: Curricular & Instructional Studies: Earth Science, or equivalent.

## Engineering Geology

This program is for the graduate engineer and geologist who wishes to broaden expertise in the other field. The entering student who has some deficiencies in either engineering or geology may have to satisfy one or more of the following requirements while proceeding with graduate studies. A committee of engineering geology faculty will determine appropriate coursework on an individual basis.

Code	Title	Hours
GEOL 101	Introductory Physical Geology	4
GEOL 350	Structural Geology	4
MATH 221 & MATH 222 & MATH 223	Analytic Geometry-Calculus I and Analytic Geometry-Calculus II and Analytic Geometry-Calculus III	12
CIVE 201	Statics	3
CIVE 202	Introduction to Mechanics of Solids	3
CIVE 313	Soil Mechanics	3
CIVE 314	Foundation Design	3
<b>Total Hours</b>		<b>32</b>

Required courses:

- Graduate Geology Courses - 18
- Graduate Engineering Courses - 8

## Environmental Geology

Equivalents of the University's B.S. degree in natural science (biology, chemistry, geology, mathematics, or physics) or engineering, plus the equivalent of the University's minor in geology and Geology Field Camp I and II are required. As many as eight credits may be selected from engineering, biology and/or geography with the approval of a geology advisor.