

MS IN GEOLOGY

Total units required for MS: 30

Program Description

The graduate program in Geology offers coursework, fieldwork experience, and research that will lead to a Master of Science degree in Geology. It allows students who successfully complete the program to upgrade their educational qualifications and advance to doctoral programs or professional positions that require an in-depth knowledge of hydrogeology, environmental geology, and geologic hazards. The University's location in the state capital provides direct access to many local, federal, and state agencies through internship and fieldwork opportunities.

Each student should plan a program according to his/her background, interests and objectives, in consultation with a faculty advisor. Students are required to consult with an advisor prior to admission to the program or initiation of graduate study. For information on how to select an advisor, students should contact the Geology Department Office. Graduate students who want to engage in teaching as professionals can apply for an appointment as a Graduate Teaching Associate. Graduate Teaching Associates have the opportunity to teach one to three lower division laboratory courses per semester and are paid at a rate commensurate with their teaching load.

All work toward the degree must be completed within a seven-year period. The general University requirements for graduate degrees are explained in the "Graduate Studies" section of this Catalog or visit the Geology Department's website (<http://www.csus.edu/geology>).

Admission Requirements

Admission as a classified graduate student in Geology requires:

- a degree in Geology, or 24 units of equivalent upper-division coursework in Geology which must have been passed with a grade of "C-" or better and includes:

Code	Title	Units
GEOL 10	Physical Geology	3
GEOL 10L	Physical Geology Lab	1
GEOL 100	Mineralogy	4
GEOL 102	Igneous and Metamorphic Petrology	4
GEOL 103	Sedimentology/Stratigraphy	4
GEOL 110A	Structural Geology and Tectonics	4
GEOL 111A	Field Geology	2
GEOL 111B	Field Techniques	2
Total Units		24

These core undergraduate courses cannot be used as graduate electives by students who do not hold a degree in Geology or equivalent;

- a minimum 2.75 GPA in all Geology, Chemistry, Math and Physics courses, and a minimum 3.0 GPA in upper division Geology courses;
- three letters of recommendation from persons familiar with your academic record and professional capabilities, sent directly to the Department;
- a brief statement of interest, faculty sponsorship, area of specialty and long-term goals;

- two semesters of inorganic Chemistry with a lab (CHEM 1A and CHEM 1B);
- two semesters of Physics with a lab (PHYS 11A and PHYS 11B or PHYS 5A and PHYS 5B); and
- two semesters of Math (MATH 30 and MATH 31).

Students who have deficiencies in Admission Requirements that can be removed by specified additional preparation may be admitted with conditionally classified graduate status. Any deficiencies will be noted on a written response to the admission application. You must be admitted to the degree program before graduate level courses will count toward the degree.

Admission Procedures

All prospective classified graduate students, including Sacramento State graduates, must file the following with the Office of Graduate Studies:

- an online application for admission;
- an application for admission to the Geology Graduate Program; and
- two sets of official transcripts from all colleges and universities attended, *other than Sacramento State*.

For more admissions information and application deadlines please visit the Office of Graduate Studies website (<http://www.csus.edu/gradstudies>).

Applications are accepted as long as space for new students exists. A decision regarding admission will be mailed to the applicant upon receipt of all items listed above.

Minimum Units and Grade Requirement for the Degree

Units for the MS: 30

Minimum Cumulative GPA: 3.0

- Students must maintain an overall GPA of 3.0 or better in the Program. This means that students who earn a "C" grade in a course can count it towards advancement to candidacy (and count it towards graduation) as long as the overall cumulative GPA remains a 3.0 or better. No more than 6 units of "C" grade will be accepted for graduate credit.


Advancement to Candidacy

Each student must file an application for Advancement to Candidacy, indicating a proposed program of graduate study. This procedure should begin as soon as the classified graduate student has:

- removed any deficiencies in admission requirements;
- completed at least 12 units in the graduate program with a minimum 3.0 GPA, including at least two courses at the 200-level; Students must maintain an overall GPA of 3.0 or better in the Program. This means that students who earn a "C" grade in a course can count it towards advancement to candidacy (and count it towards graduation) as long as the overall cumulative GPA remains a 3.0 or better. No more than 6 units of "C" grade will be accepted for graduate credit.
- obtained the graduate committee's acceptance of the thesis proposal; and
- taken the Writing Placement for Graduate Students (WPG) or taken a Graduate Writing Intensive (GWI) course in their discipline within the first two semesters of coursework at California State University, Sacramento or secured approval for a WPG waiver.

Advancement to Candidacy forms are available on the Office of Graduate Studies website. The student must fill out the form after planning a degree program in consultation with his/her faculty advisor. After approval by the Geology Department Graduate Committee, the completed form is returned to the Office of Graduate Studies for approval.

Program Requirements

Code	Title	Units
Required Core Courses (9 Units)		9
GEOL 200	Graduate Research Methods Seminar 	3
GEOL 275	Quantitative and Numerical Research Methods	3
GEOL 290	Regional Geology of the Western US	3
Graduate electives (15-21 Units)		
Select 15-21 units of the following: ¹		15
		-
		21
GEOL 202	Aqueous Geochemistry	
GEOL 204	Contaminant Hydrogeology	
GEOL 208	Groundwater Modeling	
GEOL 212	Geologic Remote Imaging	
GEOL 213	Advanced Structural Geology and Tectonics	
GEOL 218	Applied Geophysics	
GEOL 220	Surficial Processes	
GEOL 227	Advanced Hydrogeology	
GEOL 230	Seminar In Geology	
GEOL 240	Special Topics	
GEOL 293	Engineering Geology	
GEOL 299	Special Problems in Geology	
Culminating Requirements (0-6 Units)		
Select one of the following plans:		0 -
		6
Plan A		
GEOL 500	Master's Thesis	
Plan B		
GEOL 596	Comprehensive Examination	
Total Units		30-36

¹ Courses taken to meet the graduate core requirement will not count as elective courses. Elective courses (including GEOL 299) will be selected with prior approval of the student's faculty advisor in the area of interest. In addition to 200-level courses, these may also include up to 6 units of approved technical electives (but not the required courses) from the undergraduate curriculum. Not more than 3 units of GEOL 299 may be taken without prior approval of the Graduate Coordinator.