Guidelines for Earning an M.S. Degree in Geology at San José State University

Requirements

Requirements for completing the Master of Science program in Geology at SJSU (also listed in SJSU’s online catalog at http://info.sjsu.edu/home/catalog.html; download the PDF):

1. Bachelor's Degree Equivalent.
   All candidates must complete the equivalent of the SJSU B.S. degree in geology, with a strong background in science and/or mathematics. A degree in geology from another institution may be equivalent, but some schools have quite different programs. A list of courses required at SJSU is attached at the back; substitutions of courses from other universities must be approved by the graduate advisor, but all students will be expected to have completed an intensive field course before award of the degree. Any courses taken to satisfy this requirement are in addition to courses taken for the Master's degree program.

2. Seminar.
   All students are required to enroll once in the Seminar, Geology 285. Topics and instructors change each semester. The Seminar can be taken at any time and can be repeated once for credit; the second time it counts as an "elective."

3. Graduate Courses.
   Twelve units of a student's program must be selected from graduate courses in geology: Geology 213, 214, 220, 222, 231, 234, 237, 238, 242, and 255. Students emphasizing marine geology may substitute appropriate 200-level Marine Science courses offered at Moss Landing Marine Laboratories, subject to specific approval of the geology graduate advisor. However, at least one of the Geology courses listed here must be taken; furthermore, 12 units of the total 30-unit graduate program must be in SJSU Geology courses.

4. Electives.
   Twelve units of a student's program are "electives." These can include graduate or upper-division undergraduate courses in the Geology Department or any other department. Up to 2 units (total) of Geology 298 (Research, independent study), and/or Geology 184 (Directed Reading) can be used for elective credit. Up to 6 units may be transferred from another institution, provided they were taken in the Graduate Division there and not counted for the undergraduate degree. Electives should be supportive of a student's field of interest; courses in geology, another science, mathematics or engineering would be likely choices. Courses designed for General Education are not allowed. The faculty member supervising a student's thesis research and the graduate advisor must approve the selection of the electives.

5. Geology 299.
   Four units of Geology 299, Master's Thesis, are required to complete the 30-unit graduate program. The norm is to take these units in two semesters (2 units per semester).
6. Competency in Written English.
   All graduate students are required to demonstrate their competency in written English as a
   requirement for graduation. This requirement may be satisfied in one of several ways; the
   simplest would be by completing Geology 213, 231, 234, or 238.

7. Oral Examination.
   The oral examination is a qualifying exam to be taken during the beginning phases of thesis
   research. It is scheduled by arrangement with a student's thesis supervisor.

   A master's thesis is required of all candidates. Assistance with the thesis and final approval are
   obtained from a thesis committee of at least 3 and generally only 3 persons. The chairperson, or
   thesis supervisor, and at least one other member of the committee must be regular faculty
   members (adjunct faculty are not counted as “regular” faculty) in the Geology Department.
   Qualified individuals not members of the faculty may serve on thesis committees, but more
   than half of the committee members must be members of the SJSU Geology faculty.

   Graduate students are required to make an oral presentation of their thesis research prior to
   graduation. The presentation is to be made at the regular speaker series sponsored by the
   Geology Club and will last 15 minutes, followed by 5-7 minutes for questions. The
   presentation should not be made before completion of the first draft of the thesis. Scheduling of
   the presentation shall be made with the approval of the student's thesis advisor, and should be
   such that the thesis committee can be in attendance.

In addition to the program requirements listed above, the University requires all students to meet
specific academic standards. A graduate student must maintain a cumulative grade-point average
of 3.0 (B) in all units attempted subsequent to admission. If a student's grade point average falls
below 3.0, the student may be placed on probation or disqualified from further enrollment. Once
on probation, a student must make progress toward returning to clear status by earning better
than a 3.0 grade-point average each semester. Reinstatement following disqualification requires that
the student complete 6–9 units of approved 100-level undergraduate courses; these courses may or
may not count toward the M.S. program.

Recommended Procedure

So, how is it actually done? The typical candidate starts by enrolling in courses. It is important to
become acquainted with as many as possible of the students, faculty members, and activities in the
department. Students are the most important source of information on matters of survival in the
system. Most of the specific procedures involved in obtaining a degree are worked out in
coordination with the thesis supervisor, and it is important to become acquainted early on with a
faculty member who will serve as a supervisor.

As one might imagine, there are forms that need to be submitted at various times. These
and other formal steps are here summarized in roughly the order in which they are encountered by
a typical student.
1. Registration.
Registration for classes at San Jose State University is done by the internet through “MySJSU.” All students should keep in contact with the Graduate Advisor concerning requirements, etc.

2. Thesis Supervisor.
On the basis of the student's interests at the time of application, a thesis advisor will be assigned to the student. It is expected that the student will consult with his/her assigned advisor at least once a semester. In the event the student selects a thesis topic that better fits the expertise of another faculty member, the advisor can be changed if all parties are in agreement. It is recommended that students begin planning a thesis project as early as possible; it is not desirable to complete all course work before beginning thesis research.

3. Thesis Committee.
The other members of the thesis committee are selected by agreement between the student and the thesis supervisor. It is recommended that the student take at least one course from each of the faculty whom he/she expects to be on his/her thesis committee.

In the early stages of thesis research, each student is required to pass an oral examination. The oral exam must be preceded by a thesis proposal approved by the thesis advisor. This proposal should be made available to the other Committee members at least one week in advance of the exam. There is no proscribed format or length, but most proposals are 5-15 pages and include figure(s). The following is generally included in all proposals:
   1) Introduction to the problem; 2) Background information; 3) Hypotheses to be tested/goals of project; 4) Methods/how problems will be solved; 5) Timeline for research; 6) References.

The exam typically centers on the thesis topic and questions generally are related to the chosen type of thesis. The Geology Department expects that the student will know the complete context of the thesis project, the content of the most relevant references, and the potential value of the thesis project to the geologic discipline. The student should consult with all of the Thesis Committee members prior to the examination concerning preparation for it.

Following the exam, the thesis committee will exercise one of the following options:
(a) Pass
(b) Qualified Pass: subject to remedial reading, additional course work, or other specified work
(c) Fail: repeat the exam during the following semester
(d) Fail

A form verifying that the oral exam was passed is signed by the thesis advisor and sent to the graduate advisor.

5. Geology 299 and Other Independent Study Courses
Master’s Thesis (Geology 299), Directed Reading (Geology 184), and Research/Independent Study (Geology 298) involve independent work and an individual relationship between a student and a faculty member. A student must receive a permission code from the faculty
mentor in order to enroll for these units. All graduate students are required to enroll in a total of 4 units of Geology 299. Geology 299 can be taken concurrently with other courses and is generally taken over two semesters (see above).

6. Approved Program.
A proposed graduate degree program, listing the 30-unit program of courses, must be filed with the Office of Graduate Studies and Research as part of the “Petition for Advancement to Graduate Candidacy.” This can be filed at any time after the oral exam has been passed and deficiencies have been removed; it may be filed before all of the courses have been completed but must be done at least 8–9 months prior to graduation. After passing the oral exam, a student should see the graduate advisor to have the proposed program prepared and submitted. Upon approval by the Office of Graduate Studies, this becomes an "approved program," and the student is advanced to candidacy for the Master's degree.

No course included in the program may be older than 7 years at the time a student receives the Master's degree. New courses must be added to the program to replace those that become outdated, or "revalidated" by a special procedure, involving a written examination. No more than one-third (10 units) of the program may be revalidated.

7. Oral Presentation.
See p. 2, item 9.

8. Application for Award of Master's Degree.
Early in the semester (check Graduate Studies website [http://www.sjsu.edu/gradstudies] for exact date) during which a student plans to complete his/her thesis, the student must file an Application for Award of Master's Degree, available from the Office of Graduate Studies. If the thesis is not completed that semester, the student must re-file the application. The student is currently charged $10.00 by Graduate Studies if it is necessary to re-file.

The thesis should be prepared in close consultation with the thesis supervisor and thesis committee. Specific information about format guidelines, deadlines, and other matters can be obtained from the websites of Graduate Studies and the Geology Department. Other specific questions should be directed to the thesis supervisor or graduate advisor.

The signatures of all members of the thesis committee must be secured before submitting the thesis to the Office of Graduate Studies and Research (GS&R) for approval. GS&R will only review a thesis once each semester. A paper and digital version of the complete thesis and signature page are sent to GS&R. As of Spring 2010, the final version of the thesis approved by GS&R will be submitted electronically through an online ETD administrator.

Paper copies of the final thesis will no longer be accepted. Full-text versions of the thesis may be available through the external publisher, ProQuest, as well as through the MLK Library's online institutional repository, depending on the publishing and license options the student selects. Students may order bound, paper copies of their thesis through the ETD administrator.

A pdf of the thesis and a paper copy in a 3-ring binder must be submitted to the Geology Department when the final electronic version is given to GS&R.

It is important that students and faculty check:
http://www.sjsu.edu/gradstudies/thesis/deadlines/ each semester for the latest instructions and guidelines, as failure to submit the thesis as instructed is likely to result in a delay in graduation.

When the course work has been completed and the thesis has been signed by the thesis committee and accepted by the Office of Graduate Studies, the University will award a Master's degree at the next commencement.

Congratulations!

*It is Department of Geology policy not to allow extensions past the University deadline.
### B.S. GEOLOGY - SAN JOSE STATE UNIVERSITY

**REQUIRED GEOLOGY COURSES (30 semester units)**

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<th>Course Code</th>
<th>Course Title</th>
<th>Units</th>
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<tbody>
<tr>
<td>3</td>
<td>Planet Earth</td>
<td>3</td>
</tr>
<tr>
<td>4L</td>
<td>Planet Earth: The Lab</td>
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</tr>
<tr>
<td>7</td>
<td>Earth, Time, and Life</td>
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<td>28</td>
<td>Geology Outdoors</td>
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<td>100W</td>
<td>Writing Workshop</td>
<td>3</td>
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<tr>
<td>120</td>
<td>Fundamentals of Mineralogy</td>
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<tr>
<td>122</td>
<td>Mineralogy &amp; Petrology I</td>
<td>4</td>
</tr>
<tr>
<td>124</td>
<td>Sedimentology &amp; Stratigraphy</td>
<td>3</td>
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<tr>
<td>125</td>
<td>Structural Geology</td>
<td>4</td>
</tr>
<tr>
<td>129</td>
<td>Field Geology</td>
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**GEOLOGY ELECTIVES (22 semester units)**

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<td>127</td>
<td>Tectonics</td>
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<td>Field Geology</td>
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<td>130</td>
<td>Marine Geology</td>
<td>3</td>
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<td>132</td>
<td>Mineralogy &amp; Petrology II</td>
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<td>134</td>
<td>Geomorphology</td>
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<td>135</td>
<td>Geochemistry</td>
<td>4</td>
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<td>136</td>
<td>Map &amp; Aerial Photo</td>
<td>3</td>
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<td>137</td>
<td>Intro to GPS/GIS</td>
<td>3</td>
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<td>138</td>
<td>Hydrogeology</td>
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<td>140</td>
<td>Engineering Geology</td>
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<td>147</td>
<td>Applied Geophysics</td>
<td>3</td>
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<td>174</td>
<td>Hazardous Materials</td>
<td>3</td>
</tr>
<tr>
<td>MS 141</td>
<td>Geological Oceanography</td>
<td>4</td>
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**REQUIRED SUPPORTING COURSES**

- Calculus – 2 semesters
- Chemistry – 2 semesters
- Physics – 2 semesters

*Names of courses will differ between universities.

**Students have to take 22 units of electives in Geology. Geology courses at other universities covering different material may also count toward this number.