Geology, M.S.

COLLEGE OF SCIENCE AND TECHNOLOGY

Learn more about the Master of Science in Geology.

About the Program

The Department of Earth and Environmental Science offers a two-year M.S. program that includes graduate courses in Geology, weekly graduate seminars, qualifying exams, and research leading to a master's thesis.

Time Limit for Degree Completion: 3 years

Campus Location: Main

Full-Time/Part-Time Status: Full-time status is expected.

Areas of Specialization: Advanced courses and research opportunities are available in:

• Environmental geology, including ecohydrology, energy and land degradation, environmental geophysics, groundwater modeling, ice sheet stability and climate change, Karst hydrology, nanomineralogy, and urban hydrology.
• Geochemistry, including nanomineralogy, paleontology-fossil provenance, planetary geology, and weathering and diagenesis.
• Sedimentary geology and paleontology, including coastal and aeolian dynamics, ichnology, paleontology-fossil provenance, paleopedology and modern soils, planetary geology and impact studies, and Precambrian geology.
• Structural geology, including geothermal energy and geomechanics.

Job Prospects: Graduates secure positions in industry, education, and government, and are accepted into doctoral programs.

Licensure: Licensure is recommended after three years of on-the-job training. The Pennsylvania Professional Geologist Licensing Examination is administered by the National Association of State Boards of Geology (ASBOG®).

Non-Matriculated Student Policy: Non-matriculated students are allowed to take up to 9 credits before applying to the program.

Financing Opportunities: Students are supported by a combination of Teaching and Research Assistantships, which typically provide a nine-month academic-year stipend and full tuition remission. Summer stipends are also available. Teaching and Research Assistants are expected to devote 20 hours per week to their duties. Teaching Assistants teach labs for non-science and geology majors. The duties for Research Assistants are determined by the primary research advisor. Both Teaching and Research Assistantships are awarded competitively. Funding after two years is not guaranteed.

Admission Requirements and Deadlines

Application Deadline:

Fall: January 15  
Spring: October 15

For full consideration, applications must be submitted by the deadline. Late applications may be considered on a case-by-case basis. Applicants should target Fall entry as Spring admission is rare.

Program admissions are limited and competitive. Applicants are expected to contact the faculty in their area of interest prior to submitting an application.

APPLY ONLINE to this graduate program.

Letters of Reference:

Number Required: 2

From Whom: Letters of recommendation should be obtained from college/university faculty members familiar with the applicant's academic competence.

Coursework Required for Admission Consideration: Applicants are required to have taken at least five courses in Geology and one year of college-level Chemistry, Calculus, and either Physics or Biology to prepare for graduate-level classes and instructing undergraduate majors.

Bachelor's Degree in Discipline/Related Discipline: A baccalaureate degree, whether a B.A. or a B.S., with a major in Geology or a related program in Science or Mathematics is required.

Statement of Goals: Identify your specific interest in Temple's M.S. program, research goals, future career goals, and academic and research achievements.
Standardized Test Scores:
GRE: Optional. Scores are typically in the 50th percentile or higher in the quantitative and verbal areas.

Applicants who earned their baccalaureate degree from an institution where the language of instruction was other than English, with the exception of those who subsequently earned a master’s degree at a U.S. institution, must report scores for a standardized test of English that meet these minimums:
- TOEFL iBT: 85
- IELTS Academic: 6.5
- Duolingo: 110
- PTE Academic: 58

Program Requirements

General Program Requirements:
Number of Credits Required Beyond the Baccalaureate: 30

Required Courses:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td></td>
<td><strong>Core Courses</strong></td>
<td>28</td>
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<tr>
<td>EES 5011</td>
<td>Remote Sensing and GIS</td>
<td></td>
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<tr>
<td>EES 5042</td>
<td>Coastal Processes</td>
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<tr>
<td>EES 5101</td>
<td>Structural Geology (Graduate)</td>
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<tr>
<td>EES 5401</td>
<td>Analytical Methods in Mineralogy</td>
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<tr>
<td>EES 5402</td>
<td>X-ray Crystallography</td>
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<tr>
<td>EES 5406</td>
<td>Nanoscale and the Environment</td>
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<tr>
<td>EES 5434</td>
<td>Eohydrology</td>
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<tr>
<td>EES 5454</td>
<td>Introduction to Geophysics</td>
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<tr>
<td>EES 5461</td>
<td>Low-Temperature Geochemistry</td>
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<tr>
<td>EES 5462</td>
<td>Advanced Low-Temperature Geochemistry</td>
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<td>EES 5502</td>
<td>Glaciology</td>
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<tr>
<td>EES 5601</td>
<td>Vertebrate Paleontology and Taphonomy</td>
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<td>EES 5625</td>
<td>Electron Optical Techniques</td>
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<td>EES 5702</td>
<td>Sedimentary Petrology</td>
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<td>EES 5725</td>
<td>Soils and Paleosols</td>
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<tr>
<td>EES 5801</td>
<td>Quantitative Structural Geo</td>
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<td>EES 5802</td>
<td>Tectonics</td>
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<td>EES 5811</td>
<td>Planetary Geology</td>
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<tr>
<td>EES 8000</td>
<td>Geology Seminar</td>
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<td>EES 8082</td>
<td>Independent Study Program</td>
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<td>EES 8200</td>
<td>Graduate Geology Seminar</td>
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<td>EES 8411</td>
<td>Advanced Hydrogeology</td>
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<td>EES 8421</td>
<td>Groundwater Modeling</td>
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<tr>
<td>EES 9993</td>
<td>Comprehensive Examination Prep</td>
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<td></td>
<td><strong>Research Course</strong></td>
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<tr>
<td>EES 9996</td>
<td>Master's Thesis Research</td>
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Total Credit Hours: 30

Culminating Events:

Comprehensive Examination:
The purpose of the comprehensive examination is to demonstrate breadth and depth of knowledge in the concepts of geological sciences. The exam has written and oral sections. It is taken when the student completes at least 20 credits.

Thesis:
The Department of Earth and Environmental Science requires an original research thesis as the culminating project to earn its master's degree. The thesis is evaluated for both scientific content and writing style by a committee of two faculty members and the thesis advisor. Students are required to defend their theses publicly to the academic community.

Contacts

Program Web Address:
https://www.temple.edu/academics/degree-programs/geology-ms-st-geol-ms

Department Information:
Dept. of Earth and Environmental Science
326 Beury Hall
1901 N. 13th Street
Philadelphia, PA 19122-6081
eesgrad@temple.edu
215-204-8227

Submission Address for Application Materials:
https://cst.temple.edu/academics/graduate-programs/apply-now

Department Contacts:
Administrative Assistant:
Shelah Cox
scox@temple.edu
215-204-8227

Admissions:
Dennis O. Terry, Jr., Ph.D.
Graduate Advisor
doterry@temple.edu
215-204-8226

Chairperson:
Nicholas Davatzes, Ph.D.
nicholas.davatzes@temple.edu
215-204-2319