GEOSCIENCE, M.S.

Students in Saint Louis University's Master of Science in Geoscience program apply physics and chemistry to study Earth processes from the surface to the core. These studies prepare SLU graduates for diverse careers in government, industry, consulting and academia.

Program Highlights

- The University's geoscience facilities include a network of seismograph stations surrounding the New Madrid fault zone; excellent computing facilities; an environmental geochemistry lab with instrumentation to analyze the chemistries of waters, soils and sediments; a remote sensing lab; and a digital-image analysis lab.
- Extensive research is conducted at the Saint Louis University Earthquake Center and the Seismic Analysis and Remote Sensing Laboratories.
- Concentrations are offered in geophysics and environmental geosciences.

Curriculum Overview

The nonthesis option requires 30 credits; the thesis option requires 24 credits, plus six thesis credits.

Three concentrations are available:

- Geophysics
- Environmental geoscience

Fieldwork and Research Opportunities

- Active research areas in geophysics at SLU include earthquake seismology and tectonics.
- Active research areas in environmental geosciences include land-use effects on water quality, contaminant transport, hydrogeochemistry, surface water-groundwater interactions, river/reservoir sustainability, wetland biogeochemistry, fluvial geomorphology, coastal geomorphology and processes.

Careers

SLU's M.S. in geoscience prepares students for careers in private industry and government agencies or further advanced studies. After graduating, alumni might pursue a career as an earthquake hazard analyst, environmental consultant or exploration geophysicist.

For those who want to continue their studies after completing the geoscience master's program, Saint Louis University also offers a Ph.D. in geoscience (https://catalog.slu.edu/colleges-schools/science-engineering/earth-environmental-geospatial-sciences/geoscience-phd/).

Admission Requirements

Successful applicants possess sufficient GPA and English proficiency scores (for international students) and research interests compatible with ongoing research in the department.

Geophysics Concentration

Prerequisites include structural geology, college physics, mechanics and mathematics through differential equations.

Environmental Geosciences Concentration

Prerequisites for the master's degree include an undergraduate degree in a STEM discipline with at least one semester each of calculus, physics, biology, chemistry, and geoscience, and a second semester of calculus or one semester of statistics.

Application Requirements

- Application form
- Three letters of recommendation
- Transcript(s)
- Professional goal statement
- Résumé

GRE scores are optional.

Requirements for International Students

All Saint Louis University admission policies and requirements for domestic students apply to international students. International students applying to SLU must also meet the following additional requirements:

- Demonstrate English language proficiency (https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/)
- Academic records must include an English translation. Unofficial copies may be accepted in some cases for initial admission review, however official copies must be received prior to enrollment. Course-by-course transcript evaluations are accepted and are required in some cases.

Students must submit financial documents to be issued an I-20 for their F-1 visa application. Proof of financial support must include:

- A letter of financial support from the person(s) or sponsoring agency funding the student's time at Saint Louis University
- A letter from the sponsor's bank verifying that the funds are available and will be so for the duration of the student's study at the University

Application and Assistantship Application Deadlines

Students typically begin the program in the fall semester. Students who want to be considered for an assistantship must submit their applications by January 2. Late applications and applications for the spring semester will be considered if positions are available.

Review Process

Faculty committee members examine qualified applicants' materials and make recommendations.

Tuition

Tuition	Cost Per Credit
Graduate Tuition	$1,450

Additional charges may apply. Other resources are listed below:

Information on Tuition and Fees (https://catalog.slu.edu/academic-policies/student-financial-services/tuition/)

Miscellaneous Fees (https://catalog.slu.edu/academic-policies/student-financial-services/fees/)

Information on Summer Tuition (https://catalog.slu.edu/academic-policies/student-financial-services/tuition-summer-current/)

Scholarships, Assistantships and Financial Aid

For priority consideration for a graduate assistantship, apply by the program admission deadlines listed. Fellowships and assistantships provide a stipend and may include health insurance and a tuition scholarship for the duration of the award.

Explore Scholarships and Financial Aid Options (https://www.slu.edu/financial-aid/types-of-aid/)

Learning Outcomes

1. Graduates will be able to assess relevant literature or scholarly contributions in the earth and atmospheric sciences.
2. Graduates will be able to apply the major practices, theories or research methodologies in the earth and atmospheric sciences.
3. Graduates will be able to apply knowledge from the earth and atmospheric sciences to address problems in broader contexts.
4. Graduates will be able to articulate arguments or explanations to both a disciplinary or professional audience and to a general audience in oral forms.
5. Graduates will be able to articulate arguments or explanations to both a disciplinary or professional audience and to a general audience in written forms.
6. Graduates will be able to evidence scholarly or professional integrity in earth and atmospheric sciences.

Requirements

Code	Title	Credits
Required Courses		
EAS 5500	Scientific Communication	3
EAS 5900	Geoscience Journal Club	1
Elective Courses		
EAS 5190	Seminar in Geoscience	2
or EAS 5390	Seminar in Seismology	
Concentration Elective Courses		
Select one of the following options:		24
Thesis Option		
Select Concentration Electives from the following:		
Geophysics (p. 2)		
Environmental Geosciences (p. 2)		
EAS 5990	Thesis Research	
Non-Thesis Option		
Select Concentration Electives from the following:		
Geophysics (p. 2)		
Environmental Geosciences (p. 2)		
Total Credits		**30**

Continuation Standards

Students must maintain a cumulative grade point average (GPA) of 3.00 in all graduate/professional courses.

Geophysics Concentration

The Master of Science (Thesis) in Geoscience with geophysics concentration requires a minimum of 24 credits plus a written thesis of six credits. The Master of Science in Geoscience (non-Thesis) with a geophysics concentration, coursework option, requires a minimum of 30 credits.

Code	Title	Credits
Concentration Elective Courses		**18**
Select 18 credits of coursework with the Geophysics Graduate Elective attribute		
Thesis or Non-Thesis Option		**6**
Select one of the following options:		
EAS 5990	Thesis Research	
Six additional credits of coursework with the Geophysics Graduate Elective attribute.		
Total Credits		**24**

Environmental Geosciences Concentration

The Master of Science (Thesis) in Geoscience with environmental geoscience concentration requires a minimum of 24 credits plus a written thesis of six credits. The Master of Science in Geoscience (non-Thesis) with an environmental geoscience concentration, coursework option, requires a minimum of 30 credits.

Code	Title	Credits
Concentration Elective Courses		**18**
Select 18 credits of coursework with the Environmental Geoscience Graduate Elective attribute.		
Thesis or Non-Thesis Option		**6**
Select one of the following options:		
EAS 5990	Thesis Research	
Six additional credits of coursework with the Environmental Geoscience Graduate Elective attribute.		
Total Credits		**24**

Roadmap

This roadmap is just one example of a semester-by-semester plan of study for this program. There are other plans students can and do take. The plan of study for each particular student is established in consultation with each student's academic advisor; *this roadmap does not replace academic advising appointments.*

Roadmap notes:

- This Roadmap assumes full-time enrollment unless otherwise noted.
- Courses/Milestones marked with an "!" are critical and must be completed in the semester listed in the Roadmap to ensure a timely graduation.
- Course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
Concentration Electives		9
EAS 5900	Geoscience Journal Club	0
	Credits	**9**

Spring		
EAS 5500	Scientific Communication	3
EAS 5900	Geoscience Journal Club	0
Concentration Electives		6
	Credits	**9**
Year Two		
Fall		
EAS 5900	Geoscience Journal Club	1
EAS 5190 or EAS 5390	Seminar in Geoscience or Seminar in Seismology	2
EAS 5990	Thesis Research (or Elective)	3
	Credits	**6**
Spring		
EAS 5900	Geoscience Journal Club	0
EAS 5990	Thesis Research (or Elective)	3
Concentration Elective		3
	Credits	**6**
	Total Credits	**30**

Contact Us

For more information about our program, please contact eegsgrad@slu.edu.

For more information about any School of Science and Engineering graduate program, email ssegrad-admissions@slu.edu.