GEOSCIENCE, PH.D.

Students in Saint Louis University's Ph.D. in geoscience programs 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

- Concentrations are offered in geophysics and environmental geosciences.
- The University's geoscience facilities include a network of seismograph stations surrounding the New Madrid fault zone.
- Excellent computing facilities including:
  - An environmental geochemistry lab with instrumentation to analyze the chemistries of waters, soils and sediments
  - A remote-sensing lab
  - A digital-image analysis lab

Curriculum Overview

SLU's Doctor of Philosophy in Geosciences requires a minimum of 48 credits--36 credits of coursework and exactly 12 credits of dissertation research. Students with a prior master's degree completed elsewhere may apply for advanced standing, up to a maximum of 24 credits.

Fieldwork and Research Opportunities

Active research areas in geophysics include earthquake seismology and tectonics.

Active environmental geoscience research at SLU includes land-use effects on water quality, contaminant transport hydrogeochemistry, surface water-groundwater interactions, river/reservoir sustainability, wetland biogeochemistry, fluvial geomorphology, and coastal geomorphology and processes.

Careers

SLU's geoscience Ph.D. program prepares students for careers in academic research, teaching, government or industrial research environments.

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 include an undergraduate degree in a STEM discipline with at least one semester each of calculus, physics, biology, chemistry, and geoscience; 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.

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 Jan. 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
Concentration Elective Courses		**32**
Select 32 credits of the following concentrations:		
Geophysics (p. 2)		
Environmental Geosciences (p. 2)		
Dissertation Research		**12**
EAS 6990	Dissertation Research (taken over multiple semesters)	
Total Credits		**48**

Continuation Standards

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

Geophysics Concentration

Code	Title	Credits
Concentration Elective Courses		**32**
Select 32 credits of coursework with the Geophysics Graduate Elective attribute.		
Total Credits		**32**

Environmental Geosciences Concentration

Code	Title	Credits
Concentration Elective Courses		**32**
Select 32 credits of coursework with the Environmental Geoscience Graduate Elective attribute.		
Total Credits		**32**

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		
EAS 5900	Geoscience Journal Club	0
Concentration Electives		6
	Credits	**6**
Spring		
EAS 5500	Scientific Communication	3
EAS 5900	Geoscience Journal Club	0
Concentration Elective		3
	Credits	**6**
Summer		
EAS 6990	Dissertation Research	3
	Credits	**3**
Year Two		
Fall		
EAS 5900	Geoscience Journal Club	1
Concentration Elective		5
	Credits	**6**
Spring		
EAS 5900	Geoscience Journal Club	0
Concentration Electives		6
	Credits	**6**
Summer		
EAS 6990	Dissertation Research	3
	Credits	**3**
Year Three		
Fall		
EAS 5900	Geoscience Journal Club	0
Concentration Electives		6
	Credits	**6**
Spring		
EAS 5900	Geoscience Journal Club	0
Concentration Electives		6
	Credits	**6**
Summer		
EAS 6990	Dissertation Research	3
	Credits	**3**
Year Four		
Fall		
EAS 5900	Geoscience Journal Club	0
EAS 6990	Dissertation Research	3
	Credits	**3**
Spring		
EAS 5900	Geoscience Journal Club	0

EAS 6990	Dissertation Research	0
	Credits	**0**
	Total Credits	**48**

Contact Us

For additional 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.