MATHEMATICS, M.A.

The Department of Mathematics and Statistics at Saint Louis University offers graduate programs of advanced study and research leading to Master of Arts and Doctor of Philosophy degrees in mathematics. Due to the low student-faculty ratio, graduate students receive extensive individualized instruction. We encourage all graduate students seeking an assistantship to apply for a fall semester start as there is only occasionally financial assistance available for a spring semester start.

Curriculum Overview

SLU's M.A. in mathematics requires 30 credits of coursework. All master's students must complete at least two courses in two of the subject areas from algebra, analysis, statistics, and topology. At least two of these four required courses must be from MATH 5110 Algebraic Structures I, MATH 5210 Measure Theory MATH 5310 Point Set Topology , and STAT 5850 Statistical Inference. The department offers the four core courses on a rotating basis as well as a variety of electives and advanced topics each year.

Fieldwork and Research Opportunities

Courses at the advanced graduate level allow students to proceed beyond the standard graduate curriculum into research areas represented by the faculty. To graduate, students must either write and defend a master's thesis or pass an oral exam covering three areas of graduate-level mathematics.

Careers

Saint Louis University's M.A. in mathematics prepares students for further study toward a Ph.D. or a career in teaching or industry.

Admission Requirements

Applicants should have a bachelor's degree in mathematics or have taken the equivalent coursework.

Application Requirements

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

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

Assistantship and Application Deadlines

We encourage all graduate students seeking an assistantship to apply for a fall semester start. There is only occasionally financial assistance available for a spring semester start, therefore students who want to be considered for an assistantship must submit their application by Jan. 1.

U.S. students who want to be considered for the fall semester should apply by July 1 and for the spring semester by Nov. 1. International students should apply for the fall semester by May 1 and the spring semester by Oct. 1.

Review Process

All applications are reviewed by committee with about a six-week wait for decision notification to applicants. All applicants have until April 15 to decide to accept.

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 demonstrate the ability to learn high-level mathematical concepts and techniques.
2. Graduates will be able to demonstrate the ability to apply methods of direct and indirect proof to solve problems at the master's level.
3. Graduates will be able to demonstrate the ability to effectively communicate mathematics in both a written and oral setting.
4. Graduates will be able to demonstrate master's-level depth of understanding of mathematics at the foundation of contemporary applications.

Requirements

Students must earn a grade of B or better in their Required Courses.

Code	Title	Credits
Required Courses		**12**
Students should select a total of 4 courses from 2 of the following core areas below. Two of these courses must be from among MATH 5110, MATH 5210, MATH 5310 and STAT 5850 and the other two courses must be from the same subject areas as the chosen core courses.		
Algebra		
MATH 5110	Algebraic Structures I	
MATH 5100-5199 or MATH 6100-6199		
Analysis		
MATH 5210	Measure Theory	
MATH 5200-5299 or MATH 6200-6299		
Topology		
MATH 5310	Point Set Topology	
MATH 5300-5399 or MATH 6300-6399		
Statistics		
STAT 5850	Statistical Inference	
STAT 5000-level courses and above		
Elective Courses		**18**
Students should select six additional MATH or STAT courses. This can include 6 credits of MATH 5990 for those students conducting a thesis.		
Total Credits		**30**

Coursework for the Master's Degree

Full time students typically take three courses each semester and complete the degree in two years. If a student has not had courses in algebra, analysis, or statistics at the undergraduate level, then the student usually takes (Introduction to Abstract Algebra (MATH 5011)), Introduction to Analysis (MATH 5021), or introductory statistics courses first.

Non-Course Requirements

Master's students must take a comprehensive oral exam in the final semester of their program or complete a thesis.

Non-Thesis: Oral Exams

The comprehensive oral exam is administered by three faculty members. The exam consists of three parts, one for each of three assessment areas. Assessment areas are chosen by the Graduation Program Coordinator in consultation with the student. In each part, the student gives a ten minute talk on a mathematical topic in that area. Each talk will be followed by a question and answer period. The duration of each of the three parts is about thirty minutes.

MA Thesis

Master's students have the option of writing a master's thesis. In that case, two of the courses in the second year would be devoted to research for the thesis, and the master's oral exam is replaced by an oral defense of the thesis.

The student must prepare a written thesis and oral defense that presents the results of an independent mathematical project that the student has carried out, with the guidance of a faculty member. The student must also complete 6 credits hours of MATH 5990 Thesis Research.

Continuation Standards

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

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		
Participation in first-year mentoring program		
MATH 5130	Computational Algebra	3
MATH 5021	Introduction to Analysis	3
MATH 5310	Point Set Topology	3
	Credits	**9**
Spring		
MATH 5022	Metric Spaces	3
MATH 5110	Algebraic Structures I	3
MATH 6310	Algebraic Topology	3
	Credits	**9**
Year Two		
Fall		
MATH 5350	Differential Topology	3
MATH 5990	Thesis Research	3
	Credits	**6**
Spring		
MATH 5990	Thesis Research	3
MATH 5140	Algebraic Combinatorics	3
	Credits	**6**
	Total Credits	**30**

Program Notes

The above roadmap is intended for a student with a reasonably strong undergraduate mathematics degree who intends to study pure mathematics. See the requirements for more details.

Contact Us

For more information about our program, please contact mathstat@slu.edu or call 314-977-2444.