

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.

Curriculum Overview

SLU's M.A. in mathematics requires 30 credits of coursework. The graduate-level courses are centered around four yearlong sequences in algebra, analysis, differential geometry and topology. Two of these sequences must be completed for the M.A.

Fieldwork and Research Opportunities

Courses at the advanced graduate level allow students to proceed beyond the standard graduate curriculum into areas of research 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 the Ph.D. or for 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 and fee
- Transcript(s)
- Three letters of recommendation
- Résumé
- Professional goal statement

Requirements for International Students

All admission policies and requirements for domestic students apply to international students along with the following:

- Demonstrate English Language Proficiency
- Proof of financial support must include:
 - A letter of financial support from the person(s) or sponsoring agency funding the 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 study at the University
- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include the courses taken and/or lectures attended, practical laboratory work, the maximum and minimum grades attainable, the grades earned or the results of all end-of-term examinations, and any honors or degrees received. WES and ECE transcripts are accepted.

Assistantship and Application Deadlines

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 for 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.

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.

For more information, visit <http://www.slu.edu/financial-aid> (<http://www.slu.edu/financial-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 ability to apply methods of direct and indirect proof to solve problems at the master's level.
3. Graduates will be able to demonstrate 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

Code	Title	Credits
Required Courses		
Select two of the following sequences:		12
<i>Algebra Sequence</i>		
MATH 5110	Algebra I	
MATH 5120	Algebra II	
<i>Analysis Sequence</i>		
MATH 5210	Real Analysis	
Select one of the following:		
MATH 5220	Complex Analysis	
MATH 5230	Functional Analysis	
MATH 5240	Harmonic Analysis	
<i>Topology Sequence</i>		
MATH 5310	General Topology I	
MATH 5320	General Topology II	
Elective Courses		
Six additional MATH or STAT courses at the 5000-level or above.		18
Total Credits		30

Non-Course Requirements

In addition to the 10 courses in mathematics or statistics, master's students must take a comprehensive oral exam in the final semester of their program. This 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 graduate studies coordinator in consultation with the student. In each part, the student gives a 10-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.

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.

Continuation Standards

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

Roadmap

Roadmaps are recommended semester-by-semester plans of study for programs and assume full-time enrollment unless otherwise noted.

Courses and milestones designated as critical (marked with !) must be completed in the semester listed to ensure a timely graduation. Transfer credit may change the roadmap.

This roadmap should not be used in the place of regular academic advising appointments. All students are encouraged to meet with their advisor/mentor each semester. Requirements, course availability and sequencing are subject to change.

Course	Title	Credits
Year One		
Fall		
Participation in first-year mentoring program		
MATH 5110	Algebra I	3
MATH 5310	General Topology I	3
MATH 5021	Introduction to Analysis	3
Credits		9
Spring		
MATH 5120	Algebra II	3
MATH 5320	General Topology II	3
MATH 5022	Metric Spaces	3
Credits		9
Year Two		
Fall		
MATH 5210	Real Analysis	3
MATH 5990	Thesis Research	3
Credits		6
Spring		
MATH 5220	Complex Analysis	3
MATH 5990	Thesis Research	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 on studying pure mathematics. Below are the details on the specific program

requirements. They can be met in a variety of ways, see the coursebook for options.

Coursework for the Master's Degree

The master's degree requires 10 courses in mathematics and statistics at the 4000-level or higher. At least seven of the courses must be at the 5000-level or higher. All master's students must complete at least two 5000-level sequences chosen from algebra, analysis and topology. The department typically offers yearlong sequences in algebra, analysis, complex variables and probability and statistics at the 4000-level; algebra, analysis, and topology at the 5000-level; and differential geometry at the 6000-level. The department also routinely offers elective courses determined by student and faculty interest. Full-time students typically take three courses a semester and complete the degree in two years.

The first-year master's student usually takes two or three year-long sequences. If a student has not had courses in algebra or analysis at the undergraduate level, then the student usually takes the 4000-level algebra and analysis sequences. This prepares the master's students to take the 5000-level sequences in algebra, analysis and topology their second year. For students who have had substantial coursework in algebra or analysis at the undergraduate level, some of the 5000-level sequences could be completed in the first year.

Additional Requirements of a Master's Student

In addition to the 10 courses in mathematics and statistics, master's students must take a comprehensive oral exam in the final semester of their program. This 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 Director of Graduate Studies in consultation with the student.

In each part, the student gives a 10-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 30 minutes. 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.

A master's student must obtain at least a 3.0 GPA overall. If after the first year the GPA is lower than a 3.0 the teaching assistantship cannot be renewed for the second year. Furthermore a "B" (or better) must be obtained in each course comprising the two required 5000-level sequences. (A master's student who plans to pursue a Ph.D. in mathematics should maintain a GPA above a 3.0 and should include some "A's.")

Contact Us

For more information about our program, please contact:

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