

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. 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 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. International students must also meet the following additional requirements:

- Demonstrate English Language Proficiency (<https://catalog.slu.edu/academic-policies/office-admission/undergraduate/english-language-proficiency/>)
- Financial documents are required to complete an application for admission and be reviewed for admission and merit scholarships.
- Proof of financial support that 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

- Academic records, in English translation, of students who have undertaken postsecondary studies outside the United States must include:

- 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
- 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 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	\$1,310

Additional charges may apply. Other resources are listed below:

Net Price Calculator (<https://www.slu.edu/financial-aid/tuition-and-costs/calculator.php>)

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/>)

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/>)

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 core courses:		6
MATH 5110	Algebraic Structures I	
MATH 5210	Measure Theory	
MATH 5310	Point Set Topology	
STAT 5850	Statistical Inference	
Two additional courses in the same subject area as the chosen core courses		6
Elective Courses		
Six additional MATH or STAT courses, at least four at the 5000-level or above.		18
Thesis Option: Students completing a thesis take 6 credits of MATH 5990 as part of their elective courses.		
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 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

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.

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.

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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 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	
Credits		3
Total Credits		27

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 of Arts in Mathematics requires ten courses in mathematics at the 4000-level or higher. At least eight of the courses must be at the 5000-level or higher. All master's students must complete at least two 5000-level 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. 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 t (Introduction to Abstract Algebra (MATH 5011)), Introduction to Analysis (MATH 5021), or introductory statistics (STAT 5080) courses first.

Additional Requirements of a Master's Student

In addition to the ten courses in mathematics, master's students must take a comprehensive oral exam in the final semester of their program or complete a thesis.

A master's student must obtain at least a 3.00 GPA overall. If after the first year the GPA is lower than a 3.00 the teaching assistantship cannot be renewed for the second year. Furthermore a "B" (or better) must be obtained in each core course comprising the two required 5000-level courses. (A master's student who plans to pursue a Ph.D. in mathematics should maintain a GPA above a 3.00 and should include some "A's.")

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 Graduate 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

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 Thesis Research (MATH 5990).

Contact Us

For more information about our program, please contact:

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