MATHEMATICS, B.S. TO MATHEMATICS, M.A. ACCELERATED PROGRAM

The mathematics studies accelerated bachelor's/master's program at Saint Louis University offers outstanding mathematics studies majors the opportunity to begin an M.A. program in their senior year.

Students complete the M.A. with a full-time fifth year of graduate study at SLU after their successful completion of both the first-year requirements and their undergraduate degree and major.

For additional information, see the catalog entries for the following programs:

Mathematics, B.S. (https://catalog.slu.edu/colleges-schools/arts-sciences/mathematics-statistics/mathematics-bs/)

Mathematics, M.A. (https://catalog.slu.edu/colleges-schools/arts-sciences/mathematics-statistics/mathematics-ma/)

Requirements

Students wishing to apply to this ABM program should already have completed all 2000-level coursework required in mathematics for the BS in mathematics, have completed at least 75 hours at the time of application, and have completed MATH 3120 Introduction to Linear Algebra (3 cr). They must have a cumulative GPA of 3.00 or higher in their mathematics coursework and their overall SLU transcript, and they must have received a B or higher in both MATH 2660 and MATH 3120. To apply, students must submit a personal statement and arrange for two letters of recommendation from mathematics faculty members.

Continuation Standards

Students' continuation in the accelerated program will be monitored by the director of graduate studies, who will also serve as their academic advisor for the graduate portion of the program. Students will meet each semester, starting in Fall of Year 4, with the graduate advisor to discuss progress.

Continuation in the ABM program requires the following cumulative GPA requirements:

- 3.0 GPA on the overall SLU transcript
- 3.00 GPA in all MATH and STAT courses
- 3.00 GPA in all courses counting towards the mathematics MA

If a student falls below the GPA requirement in any one area, they are on probation and need to bring the GPA back above 3.00 in the next semester or they will not be allowed to continue in the program.

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		
MATH 1510	Calculus I	4
CORE 1500	Cura Personalis 1: Self in Community	1
University Core and/or General Electives		8
	Credits	**13**
Spring		
MATH 1520	Calculus II	4
Programming Course [1]		3-4
University Core and/or General Electives		9
	Credits	**16-17**
Year Two		
Fall		
MATH 2530	Calculus III	4
MATH 2660	Principles of Mathematics	3
University Core and/or General Electives		9
	Credits	**16**
Spring		
MATH 3120	Introduction to Linear Algebra	3
STAT 3850	Foundation of Statistics	3
University Core and/or General Electives		9
	Credits	**15**
Year Three		
Fall		
MATH 4110	Introduction to Abstract Algebra	3
Mathematics or Statistics Elective [2]		3
University Core and/or General Electives		9
	Credits	**15**
Spring		
Pure Mathematics Elective [3]		3
Mathematics or Statistics Elective [2]		3
University Core and/or General Electives		9
	Credits	**15**
Year Four		
Fall		
MATH 5011	Introduction to Abstract Algebra	3
MATH 5021	Introduction to Analysis	3
University Core and/or General Electives		6
	Credits	**12**
Spring		
MATH 5012 or MATH 5015	Linear Algebra or Number Theory	3
MATH 5022 or MATH 5023	Metric Spaces or Multivariable Analysis	3
Core: Social Science		3

University Core and/or General Electives		6
	Credits	**15**
Year Five		
Fall		
MATH 5110	Algebraic Structures I	3
MATH 5210	Measure Theory	3
MATH 5310	Point Set Topology	3
	Credits	**9**
Spring		
MATH 6100	Algebraic Structures II	3
MATH 5220 or MATH 6230 or MATH 5240	Complex Analysis or Functional Analysis or Harmonic Analysis	3
MATH 5320	General Topology II	3
	Credits	**9**
	Total Credits	**135-136**

1 See note below about the programming requirement.
2 See note below about mathematics and statistics electives.
3 See note below about the pure mathematics sequence requirement.
4 See note below about mathematics and statistics sequences.
5 See note below about allied electives.

Program Notes

Programming Requirement

CSCI 1060 Introduction to Computer Science: Scientific Programming (3 cr) or CSCI 1300 Introduction to Object-Oriented Programming (4 cr) (with attention paid to prerequisites).

Mathematics and Statistics Elective

Any 3000- or 4000-level MATH or STAT course numbered higher than MATH 3120 Introduction to Linear Algebra (3 cr).

Pure Mathematics Sequence

Students can satisfy the pure mathematics sequence requirement by completing either the algebra sequence or real analysis sequence, as defined below.

Mathematics and Statistics Sequences

Students must complete a second sequence in addition to the pure mathematics sequence, chosen from the following list.

1. **Algebra Sequence**: MATH 4110 Introduction to Abstract Algebra (3 cr) and either MATH 4120 Linear Algebra (3 cr) or MATH 4150 Number Theory (3 cr).
2. **Complex Analysis Sequence**: MATH 4310 Introduction to Complex Variables (3 cr) and either MATH 4320 Complex Variables II (3 cr) or MATH 4360 Geometric Topology (3 cr).
3. **Differential Equations Sequence**: MATH 3550 Differential Equations (3 cr) and either MATH 4550 Nonlinear Dynamics and Chaos (3 cr) or MATH 4570 Partial Differential Equations (3 cr).
4. **Real Analysis Sequence**: MATH 4210 Introduction to Analysis (3 cr) and one of either MATH 4220 Metric Spaces (3 cr) or MATH 4230 Multivariable Analysis (3 cr).
5. **Statistics Sequence**: STAT 3850 Foundation of Statistics (3 cr) and one of: MATH 4800 Probability Theory (3 cr), STAT 4840 Time Series (3 cr), or STAT 4870 Applied Regression (3 cr).

Allied Elective

A course in another discipline that has a strong mathematical or computational component. Appropriate courses are available in computer science, economics, physics and other science and engineering disciplines. This course cannot be used to satisfy any of the other requirements for a B.S. degree. See the course catalog for a list and description of acceptable courses.

Contact Us

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