Mathematics: Secondary Education (B.S.)

2024-2025 catalog

Student Name: _____   **ID Number:** _____

Major Requirements

Additional secondary education requirements must be met. All classes must be completed with a C- grade or better. Each course may count only once towards the major. No more than 4 credits of internship may count towards the major. Students completing a major in Mathematics are not eligible for a minor in Mathematics. At least two MAT courses numbered 300 or above must be taken at Augsburg.

Term Completed/Planned	Grade	Credit	Course #	Title
Complete both Calculus I and Calculus II				
		4	MAT145 and 145L	Calculus I (NSM)
		4	MAT146 and 146L	Calculus II (NSM)
Complete one (1) data analysis course				
		4	DST164	Introduction to Statistics (with R) (NSM) (recommended)
		4	MAT163	Introductory Statistics (*offered infrequently*)
Complete one (1) computational reasoning course				
		4	CSC165 and 165L	Introduction to Computer Programming (Python)
Complete one (1) geometric perspective course				
		4	MAT335	Exploring Geometry
Complete both advanced discrete mathematics and linear algebra				
		4	MAT302	Discrete Mathematical Structures
		4	MAT315	Linear Algebra
Complete one (1) theoretical structures course				
		4	MAT360	Dynamical Systems
		4	MAT370	Real Analysis
Complete one (1) applied projects course				
		4	DST475	Machine Learning
		4	DST490	Data Visualization for Social Justice (KC)
		4	MAT455	Numerical Mathematics and Computation
		4	MAT465	Modeling and Differential Equations in Biological and Natural Sciences
		4	MAT485	Visualizing Mathematics with 3D Printing
Complete one (1) advanced mathematics elective numbered 350 or above				
		4	MAT380	Abstract Algebra
Complete one (1) advanced elective, chosen from:				
		4	MAT325	History of Mathematics
Complete one (1) additional supporting course				
		3	ESE330	5-12 Methods: Mathematics
Pass MAT491 in your final semester				
		0	MAT491	Mathematics Colloquium

Abbreviation Key: ML = Modern Language; SC = Signature Curriculum; EM = Engaging Minneapolis; AE = Augsburg Experience; KC = Senior Keystone Course; NSM = Natural Science & Mathematics - no lab; NSM-L = Natural Science & Mathematics-with lab; SBS = Social & Behavioral Science; FA = Fine Arts; HUM = Humanities