

**Curriculum map**  
Department of Mathematics

**Learning outcomes (LOs):** Having completed a major in mathematics, a student will be able to:

1. Demonstrate proficiency with the calculational techniques and applications of calculus, including the ability to show that limits and derivatives do or do not exist.
2. Demonstrate a familiarity with the breadth of mathematics, including linear algebra and basic analysis.
3. Read and write mathematical proofs, producing arguments that are logically and syntactically correct.
4. Demonstrate an in-depth understanding of some area of mathematics.
5. (For students on the secondary teaching track only) Pass the licensure examination in mathematics

**Key:** I = introduces outcome; D = develops outcome; A = assesses mastery of outcome

Course(s)	Title/description	LO 1	LO 2	LO 3	LO 4	LO 5	LO 6
	<i>Foundations</i>						
MA231	Elements of Discrete Mathematics I		I	I		D	
MA232	Elements of Discrete Mathematics II		D	D		D	
MA233	Elements of Discrete Mathematics III		D	D		D	
MA251	Calculus I	I				D	
MA252	Calculus II	I				D	
MA253	Calculus III	I				D	
MA261	Calculus with Theory I	I		I			
MA262	Calculus with Theory II	I		DA			
MA263	Calculus with Theory III	I		DA			
MA341	Elementary Linear Algebra I		I				
MA342	Elementary Linear Algebra II		D				
MA307	Introduction to Proof			I			
	<i>Skill development</i>						
MA256	Introduction to Differential Equations	DA	D				
MA281	Several-Variable Calculus I	DA	D				
MA282	Several-Variable Calculus II	DA	D				
MA315	Elementary Analysis	DA	D	DA			
MA343	Statistical Methods and Models					D	

MA346	Number Theory		D	D		D	
	<i>Core upper-division sequences</i>						
MA391	Fundamentals of Abstract Algebra I		D	DA	I	D	
MA392	Fundamentals of Abstract Algebra II		D	DA	DA	D	
MA393	Fundamentals of Abstract Algebra III		D	DA	DA	D	
MA394	Geometries from an Advanced Viewpoint I		D	DA	DA	D	
MA395	Geometries from an Advanced Viewpoint II		D	DA	DA	D	
MA444	Introduction to Abstract Algebra I		D	DA	I		
MA445	Introduction to Abstract Algebra II		D	DA	DA		
MA446	Introduction to Abstract Algebra III		D	DA	DA		
MA413	Introduction to Analysis I	DA	D	DA	I		
MA414	Introduction to Analysis II	DA	D	DA	DA		
MA415	Introduction to Analysis III	DA	D	DA	DA		
MA431	Introduction to Topology I		D	DA	I		
MA432	Introduction to Topology II		D	DA	DA		
MA433	Introduction to Differential Geometry	D	D	DA	I		
MA461	Introduction to Mathematical Methods of Statistics I		D	DA	I		
MA462	Introduction to Mathematical Methods of Statistics II		D	DA	DA		
	<i>Electives for Specialization</i>						
MA411	Functions of a Complex Variable I	DA	D	DA	I		
MA412	Functions of a Complex Variable II	DA	D	DA	DA		
MA420	Ordinary Differential Equations	DA	D	DA	I		
MA421	Partial Differential Equations: Fourier Analysis I	DA	D	DA	I		
MA422	Partial Differential Equations: Fourier Analysis II	DA	D	DA	DA		
MA441	Linear Algebra		D	DA	DA		
MA456	Networks and Combinatorics		D	D	I	D	
MA457	Discrete Dynamical Systems	D	D		I		
MA458	Introduction to Mathematical Cryptography		D		I		
MA463	Mathematical Methods of Regression Analysis and Analysis of Variance		D	DA	DA		
MA467	Stochastic Processes		D	DA	DA		

