

MATHEMATICS (MS)

Code	Title	Units
REQUIRED COURSES		
MATH 5041	Transition to Graduate Mathematics ¹	3
MATH 5053	Discrete Mathematics	3
MATH 5203	Linear Algebra and Module Theory	3
MATH 5266	Real Analysis	3
MATH 5302	Applied Complex Analysis	3
MATH 5597	Comprehensive Examination ²	0-5
or MATH 5599	Thesis	
MATH 5971	Graduate Teaching Seminar	1
Required Elective Courses		
MATH 5204	Algebra	3
MATH 5542	Topology	3
Approved Electives		
Select from the following: ^{1, 2, 3}		3-8
MATH 4052	Combinatorics II	
MATH 4201	Abstract Algebra I	
MATH 4202	Abstract Algebra II	
MATH 4264	Real Analysis I	
MATH 4265	Real Analysis II	
MATH 4342	Nonlinear Dynamical Systems	
MATH 4352	Partial Differential Equations	
MATH 4512	Non-Euclidean Geometry	
MATH 4531	Differential Geometry	
MATH 4541	Introduction to Topology	
MATH 4652	Numerical Differential Equations	
MATH 4653	Numerical Optimization	
MATH 4911	Game Theory	
MATH 4981	Advanced Topics in Mathematics	
MATH 4982	Advanced Topics in Applied Mathematics	
MATH 5371	Methods of Applied Mathematics	
MATH 5500	Individual Study	
MATH 5651	Numerical Analysis	
Total Units		30

¹ Passing both the algebra and the real analysis qualifying exams before the fall of your first year of graduate school will waive MATH 5041.

² The culminating experience must be met in one of two ways. For the Thesis route, up to 5 units of MATH 5599 may be taken. For the comprehensive exam route, MATH 5597 must be taken.

³ At least 60% of all units required in the program must be at the 5000 level.

Specializations

Applied Mathematics

Code	Title	Units
REQUIRED COURSES		
MATH 5041	Transition to Graduate Mathematics ¹	3
MATH 5053	Discrete Mathematics	3
MATH 5203	Linear Algebra and Module Theory	3
MATH 5266	Real Analysis	3
MATH 5302	Applied Complex Analysis	3

MATH 5597 or MATH 5599	Comprehensive Examination ² Thesis	0-5
MATH 5971	Graduate Teaching Seminar	1
Required Specialization Courses		
MATH 4982	Advanced Topics in Applied Mathematics	3
MATH 5371	Methods of Applied Mathematics	3
MATH 5651	Numerical Analysis	3
Approved Electives ^{1, 2, 3}		
Select from the following:		0-5
MATH 4052	Combinatorics II	
MATH 4201	Abstract Algebra I	
MATH 4202	Abstract Algebra II	
MATH 4264	Real Analysis I	
MATH 4265	Real Analysis II	
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MATH 4981	Advanced Topics in Mathematics	
MATH 4982	Advanced Topics in Applied Mathematics	
MATH 5204	Algebra	
MATH 5500	Individual Study	
MATH 5542	Topology	
Total Units		30

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