

Course requirements for Accelerated BS/MS 5 Year Program in Mathematics

Required Courses	9
MATH 6330: Linear Algebra	3
MATH 6331: Algebra I	3
MATH 6352: Analysis I	3

Choose one of the following concentrations:

Mathematics Concentration

Required Courses	6
MATH 6332: Algebra II	3
MATH 6353: Analysis II	3

Designated Electives 15

Chosen from the following:

MATH 6323: Group Theory	3
MATH 6329: Number Theory	3
MATH 6339: Complex Analysis	3
MATH 6359: Applied Analysis	3
MATH 6360: Ordinary Differential Equations	3
MATH 6361: Partial Differential Equations	3
MATH 6362: Fourier Analysis	3
MATH 6363: Integrable Systems	3
MATH 6364: Statistical Methods	3
MATH 6366: Micro-local Analysis	3
MATH 6367: Functional Analysis	3
MATH 6368: Operator Theory	3
MATH 6370: Topology	3
MATH 6371: Differential Geometry	3
MATH 6372: Analytic Number Theory	3
MATH 6373: Algebraic Geometry	3
MATH 6375: Numerical Analysis	3
MATH 6376: Numerical Methods for Partial Differential Equations	3
MATH 6385: Cryptology and Codes	3
MATH 6387: Mathematical Modeling	3
MATH 6388: Discrete Mathematics	3
MATH 6399: Special Topics in Mathematics	3

Choose one of the following capstone options:

Capstone Requirement:	6
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Thesis

MATH 7300: Thesis I	3
MATH 7301: Thesis II	3
OR	

Project

MATH 6391: Master's Project	3
Additional 3 hours of electives	3
OR	

Non-Thesis

Additional 6 hours of electives	3
Written and/or Oral Comprehensive Exam	

Total graduate hours for degree: 36

Mathematics Teaching Concentration

Required Courses 9

Chosen from the following:

MATH 6325: Contemporary Geometry	3
MATH 6327: Mathematical Modeling with Technology	3
MATH 6329: Number Theory	3
MATH 6365: Probability and Statistics	3

Designated Electives 12

Chosen from the following:

MATH 6305: History of Mathematics	3
MATH 6307: Collegiate Mathematics Teaching	3
MATH 6309: Integrating Technology into Mathematics	3
MATH 6310: Mathematics Teaching and Learning	3
MATH 6323: Group Theory	3
MATH 6328: Special Topics in Mathematics Teaching	3
MATH 6399: Special Topics in Mathematics	3

Choose one of the following capstone options:

Capstone Requirement 6

Thesis

MATH 7300: Thesis I

MATH 7301: Thesis II	3
OR	
<i>Project</i>	
MATH 6391: Master's Project	3
Additional 3 hours of electives	3
OR	
<i>Non-Thesis</i>	
Additional 6 hours of electives	6
Written and/or Oral Comprehensive Exam	
Total graduate hours for degree:	36

Industrial and Applied Mathematics Concentration

Required Courses	9
MATH 6360: Ordinary Differential Equations	3
MATH 6361: Partial Differential Equations	3
MATH 6375: Numerical Analysis 3	3
Designated Electives	12
Chosen from the following:	
MATH 6332: Algebra II	3
MATH 6339: Complex Analysis	3
MATH 6353: Analysis II	3
MATH 6362: Fourier Analysis	3
MATH 6363: Integrable Systems	3
MATH 6364: Statistical Methods	3
MATH 6365: Probability and Statistics	3
MATH 6366: Micro-local Analysis	3
MATH 6367: Functional Analysis	3
MATH 6368: Operator Theory	3
MATH 6369: Mathematical Methods	3
MATH 6376: Numerical Methods for Partial Differential Equations	3
MATH 6377: Mathematical Fluid Mechanics	3
MATH 6378: Inverse Problem and Image Reconstructions	3
MATH 6379: Stochastic Processes	3
MATH 6385: Cryptology and Codes	3
MATH 6387: Mathematical Modeling	3
MATH 6388: Discrete Mathematics	3
MATH 6399: Special Topics in Mathematics	3

Choose one of the following capstone options:

Capstone Requirement	6
Thesis	
MATH 7300: Thesis I	3
MATH 7301: Thesis II	3
OR	
Project	
MATH 6391: Master's Project	3
Additional 3 hours of electives	3
OR	
Non-Thesis	
Additional 6 hours of electives	6
Written and/or Oral Comprehensive Exam	
Total graduate hours for degree:	36

Statistics Concentration

Required Courses	9
MATH 6364: Statistical Methods	3
MATH 6365: Probability and Statistics	3
MATH 6375: Numerical Analysis	3
Designated Electives	12
Chosen from the following:	
MATH 6336: Advanced Sampling	3
MATH 6353: Analysis II	3
MATH 6379: Stochastic Processes	3
MATH 6380: Time Series Analysis	3
MATH 6381: Mathematical Statistics	3
MATH 6382: Statistical Computing	3
MATH 6383: Experimental Design and Categorical Data	3
MATH 6384: Biostatistics	3
MATH 6386: Applied Research Design and Analysis	3
MATH 6387: Mathematical Modeling	3
MATH 6388: Discrete Mathematics	3
MATH 6389: Stochastic Analysis	3
MATH 6399: Special Topics in Mathematics	3

Choose one of the following capstone options:

Capstone Requirement	6
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Thesis

MATH 7300: Thesis I	3
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MATH 7301: Thesis II	3
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OR

Project

MATH 6391: Master's Project	3
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Additional 3 hours of electives	3
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OR

Non-Thesis

Additional 6 hours of electives	6
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Written Comprehensive Examination	
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Total graduate hours for degree:	36
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