APPLIED MATHEMATICS & STATISTICS, AND SCIENTIFIC COMPUTATION, MASTER OF SCIENCE (M.S.)

Students must complete 30 credits of coursework in one of the three areas of concentration. All three concentrations offer both thesis and non-thesis options.

Students choose from one of the following concentrations:

APPLIED MATHEMATICS

Co	ourse	Title	Credits		
Thesis Option - 30 credits					
Numerical Analysis course (course options below; other courses 3 must be approved by director)					
	AMSC660	Scientific Computing I			
	AMSC661	Scientific Computing II			
	AMSC663	Advanced Scientific Computing I			
	AMSC664	Advanced Scientific Computing II			
	AMSC666	Numerical Analysis I			
	AMSC714	Numerical Methods For Stationary PDEs			
	AMSC715	Numerical Methods for Evolution Partial Differential Equations			
	AMSC763	Advanced Linear Numerical Analysis			
	AMSC764	Advanced Numerical Optimization			
Ac	ditional course	s with primarily math content	9		
A١	ASC799	Master's Thesis Research	6		
Application Area courses					
Applied Math or appropriate seminar					
Ac	ditional course	work	5		
No	Non-thesis Option - 30 credits				
Numerical Analysis course (course options below; other courses must be approved by director)					
	AMSC660	Scientific Computing I			
	AMSC661	Scientific Computing II			
	AMSC663	Advanced Scientific Computing I			
	AMSC664	Advanced Scientific Computing II			
	AMSC666	Numerical Analysis I			
	AMSC714	Numerical Methods For Stationary PDEs			
	AMSC715	Numerical Methods for Evolution Partial Differential Equations			
	AMSC763	Advanced Linear Numerical Analysis			
	AMSC764	Advanced Numerical Optimization			
Additional courses with primarily math content					
Application Area courses					
Applied Math or appropriate seminar					
Additional coursework					
Pass the Qualifying Exam requirement					
	Mathematics Written Qualifying Exam				
	Application Area Qualifying Exam				

Math coursework sequence qualifying exam Submit a Scholarly Paper

Applied Statistics

Thesis option requires 25 credits of coursework including 18 credits of statistics core courses, six credits in an application area, and one credit of seminar. Students are also required to complete six credits of AMSC799.

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Non-thesis option requires 33 credits of coursework including 18 credits of statistics core courses, six credits in an application area, six credits of electives, two credits of seminar, and one credit of AMSC762. Students are also required to pass three qualifying exams, and submit a scholarly paper.

Scientific Computation

Course	Title	Credits		
Thesis option - 30 credits				
Scientific computing core courses 6				
CMSC616	Foundations of Parallel Computing (Formerly CMSC818X)	3		
Core science courses				
Scientific computing application courses				
Elective courses		6		
AMSC799	Master's Thesis Research	6		
Non-thesis Optior	n - 30 credits			
Scientific computing core courses				
CMSC616	Foundations of Parallel Computing (Formerly CMSC818X)	3		
6 credits from the following courses:				
AMSC714	Numerical Methods For Stationary PDEs			
AMSC715	Numerical Methods for Evolution Partial Differential Equations			
AMSC808	Advanced Topics in Applied Mathematics (AMSC808N Numerical Methods for Data Scien and Machine Learning)	ce		
AMSC763	Advanced Linear Numerical Analysis			
AMSC764	Advanced Numerical Optimization			
Core science courses				
Scientific computing application courses				
Elective courses				
Students must als	so submit a scholarly paper.			