Mathematics MS

Master of Science in Mathematics - Option I Thesis

The MS in Mathematics requires 8 courses and a thesis (6 credit hours), a total of 30 credit hours, as follows:

Thesis (6 semester hours)		
MATH 518	Thesis	3-6
Only 6 semester hours of credit for 518 per degree will be given upon satisfactory completion of the requirement.		
Required Courses (15 semester hours):		
MATH 501	Mathematical Statistics I	3
MATH 511	Real Analysis I	3
MATH 537	Theory of Numbers	3
MATH 538	Functions of Complex Variables I	3
MATH 543	Abstract Algebra I	3
Choose three math Courses (9 semester hours) from:		
MATH 502	Mathematical Statistics II	3
MATH 503	Actuarial Mathematics	3
MATH 512	Real Analysis II	3
MATH 515	Dynamical Systems	3
MATH 517	Calculus of Finite Differences	3
MATH 522	General Topology I	3
MATH 523	General Topology II	3
MATH 531	Theory of Matrices	3
MATH 532	Fourier Analysis and Wavelets	3
MATH 533	Linear and Nonlinear Optimization	3
MATH 536	Cryptography	3
MATH 539	Functions of Complex Variables II	3
MATH 544	Abstract Algebra II	3
MATH 546	Numerical Analysis and Elements of Machine Learning	3
MATH 561	Regression Analysis	3
MATH 563	Image Processing with Elements of Learning	3
MATH 569	Image Analysis and Recognition with Learning	3
MATH 580	Topics in the History of Mathematics	3
MATH 597	Special Topics (approved by the Math Department)	3
Total Hours		**30**

Master of Science in Mathematics Option II Non-Thesis

The MS in Mathematics requires 11 courses and a project (Math 595, 3 credit hours), a total of 36 credit hours, as follows:

Research Project (3 semester hours)		
MATH 595	Research Literature & Techniques (3 semester hours required)	3
Required Courses: (15 semester hours)		
MATH 501	Mathematical Statistics I	3
MATH 511	Real Analysis I	3
MATH 537	Theory of Numbers	3
MATH 538	Functions of Complex Variables I	3
MATH 543	Abstract Algebra I	3
Choose two math courses (6 semester hours) from:		
MATH 502	Mathematical Statistics II	3
MATH 503	Actuarial Mathematics	3
MATH 512	Real Analysis II	3
MATH 515	Dynamical Systems	3

MATH 517	Calculus of Finite Differences	3
MATH 522	General Topology I	3
MATH 523	General Topology II	3
MATH 531	Theory of Matrices	3
MATH 532	Fourier Analysis and Wavelets	3
MATH 533	Linear and Nonlinear Optimization	3
MATH 536	Cryptography	3
MATH 539	Functions of Complex Variables II	3
MATH 544	Abstract Algebra II	3
MATH 546	Numerical Analysis and Elements of Machine Learning	3
MATH 561	Regression Analysis	3
MATH 563	Image Processing with Elements of Learning	3
MATH 569	Image Analysis and Recognition with Learning	3
MATH 580	Topics in the History of Mathematics	3
MATH 597	Special Topics (approved by the Math Department)	3
Electives (12 semester hours)		
Any graduate Math, MTE, or courses approved by the Math Department		12
Total Hours		**36**

Master of Science in Mathematics w/Concentration in Mathematics Education Option II Non-Thesis

The MS degree in Mathematics with a concentration in mathematics education is to prepare students to teach math courses at middle/high schools and institutions of higher education at the undergraduate level. Students will take 9-15 graduate hours in Math Teacher Education (MTE) in order to learn and understand the Principles and Standards of the National Council of Teachers of Mathematics (NCTM) and high impact teaching practices.

http://catalog.tamuc.edu/grad/colleges-and-departments/science-engineering/mathematics/#programstext

Research (3 semester hours)		
MATH 595	Research Literature & Techniques (3 semester hours required)	3
Required Courses (15 semester hours)		
MATH 501	Mathematical Statistics I	3
MATH 511	Real Analysis I	3
MATH 537	Theory of Numbers	3
MATH 538	Functions of Complex Variables I	3
MATH 543	Abstract Algebra I	3
Math Education Concentration (12 semester hours) from:		
MTE 555	Research Techniques for STEM and Education (Required)	3
Choose one (3 semester hours) from: MATH 502, MATH 512, MATH 522, MATH 531, MATH 546, MATH 560, MATH 561, or MATH 580		3
Choose two (6 semester hours) from: MTE 551, MTE 552, MTE 553, MTE 554, MTE 556, or MTE 557		6
Electives (6 semester hours)		
Six hours of any MATH or MTE courses, or courses approved by the Math Department.		6
Total Hours		**36**

Note: Successful completion of the Comprehensive Exam is required of all students.