Mathematics Education

Curriculum for Mathematics Education (M.S.)

ADMISSIONS PROCESS

Students applying for admission must provide the following documents: college Transcripts, GRE scores, application to the graduate program, and professional resume/vita. Upon receipt of these materials, the Department of Mathematical Sciences Committee will evaluate the candidate and decide if he/she is to be admitted into the program. If the student is accepted, he/she will immediately be assigned an advisor. The advisor and candidate will collaborate to determine a schedule and plan of study. This plan will then be submitted to the Graduate Committee for approval. Once approved, the student will be allowed to begin his/her coursework.

A student may opt to begin the program provisionally, prior to applying to enter the program. In which case, the student could take no more than six graduate credits prior to being fully accepted into the program. Taking graduate courses provisionally does not guarantee future admission into the graduate program.

CURRICULUM

The masters programs in mathematical sciences are flexible enough to accommodate students with diversified background training. In consultation with the Graduate
Committee, each student develops a course of study in mathematics areas most relevant to his or her professional and career objectives. Each student must take 36 credit hours
of coursework as depicted below.

Required Mathematics Education Courses – 9 credits – All of these courses:

MTSC-503	Mathematics Teaching Methods I	3 Hours
MTSC-603	Mathematics Teaching Methods II	3 Hours
MTSC-691	History & Philosophy of Math/Math Educ.	3 Hours

Required Mathematics Content Courses – 12 Credits

These three courses:

MTSC-500	Foundations of Mathematics	3 Hours
MTSC-504	Modern Geometry	3 Hours
MTSC-511	Introduction to Abstract Algebra	3 Hours

And one of these two courses:

MTSC-513	Discrete Mathematics	3 Hours
MTSC-531	Number Theory	3 Hours

Required Computers and Technology Courses – 3 Credits

MTSC-507	Computers and Technology in Mathematics	3 Hours

Required Education Courses – 6 Credits

EDUC-604	Theories and Methods of Instruction		3 Hours
EDUC-XXX	One course from the following:		3 Hours
	EDUC-605	Curriculum Organization and Design	
	EDUC-610	Development of Instructional Materials	
	EDUC-614	Human Growth and Development	
	EDUC-607/633	Theories and Practices of Classroom Management	

RESEARCH – 6 credits – Students must complete one of the following options

Option I – Take the following two courses:

MTSC-697	Research Methods in Mathematics Education	3 Hours
MTSC-699	Thesis or Directed Project	3 Hours

Option II - Take two additional graduate courses:

MTSC-5XX/6XX – one of the following:

MTSC-521	General Topology	3 Hours
MTSC-525	Logic	3 Hours
MTSC-531	Number Theory	3 Hours
MTSC-541	Advanced Probability Theory	3 Hours

MTSC-551	Ordinary Differential Equations	3 Hours
MTSC-561	Real Analysis I	3 Hours
MTSC-562	Real Analysis II	3 Hours
MTSC-571	Complex Analysis	3 Hours
MTSC-581	Operations Research	3 Hours
MTSC-611	Topics in Pure Mathematics	3 Hours
MTSC-621	Introduction to Functional Analysis	3 Hours
MTSC-641	Combinatorics	3 Hours
MTSC-643	Statistics	3 Hours
MTSC-651	Partial Differential Equations	3 Hours
MTSC-661	Numerical Analysis	3 Hours
MTSC-663	Topics in Applied Mathematics	3 Hours

MTSC-5XX/6XX – A graduate education course as agreed upon by student, advisor, and graduate committee.

Option III – For students considering the future pursuits in a Ph.D. in Mathematics Education– 9 credits

MTSC-697	Research Methods in Mathematics Education	3 Hours
MTSC-699	Thesis or Directed Project	6 Hours

If this option is selected, the student will be required to take only 3 credits, rather than 6 credits, from the Education courses listed above.

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