

Mathematical Sciences, MS

The Master of Science degree is conferred under Plan I (thesis) or Plan II (non-thesis). Students should explore with their faculty advisor which plan is better for their particular objectives. For the M.S. degree, a Program of Study must include a minor area in the College of Engineering or the College of Science. All minors must be outside of the department and must include at least six semester hours of approved graduate coursework. Master's programs that include a thesis (Plan I) require at least 18 semester hours of graduate coursework in mathematics and at least 24 semester hours of total graduate coursework, and programs without a thesis (Plan II) require at least 33 semester hours of graduate coursework and at least 24 semester hours of these should be in mathematics. At least 50 percent of the coursework semester hours must be completed in courses numbered 609 or above. MA 538 or MA 539 and MA 544 should be included in every Program of Study.

Students should plan a Program of Study for the master's degree with the help of a faculty advisor prior to the completion of 12 semester hours of coursework. Courses taken without an approved Program of Study may not apply toward a degree. Various areas of mathematics may be stressed in the program of study depending on the student's needs. For example, the coursework for a non-thesis Program of Study concentrating in probability and statistics might be:

Code	Title	Semester Hours
MA 538 or MA 539	METRIC SPACES W/APPLICA MULTIDIMENSIONAL ANALYSIS	3
MA 544	LINEAR ALGEBRA	3
MA 585	PROBABILITY	3
MA 653	REAL ANALYSIS I	3
MA 656	COMPLEX ANALYSIS I	3
MA 685	STOCHASTIC PROC/APPLI I	3
ST 687	THEORY OF STATISTICS I	3
MA 686	STOCHASTIC PROC/APPLI II	3
ST 787	THEORY OF STATISTICS II	3
Total Semester Hours		27

In addition, three approved graduate courses, including at least one numbered 609 or above.

The coursework for a non-thesis program of study concentrating in numerical analysis might be:

Code	Title	Semester Hours
MA 515	INTRO NUMERICAL ANALYSIS	3
MA 526	PARTIAL DIFF EQUA I	3
MA 538	METRIC SPACES W/APPLICA	3
MA 544	LINEAR ALGEBRA	3
MA 614	NUM METHODS/LINEAR ALGEBRA	3
MA 615	NUM METHODS PARTIAL DIFF EQ	3
MA 626	PARTIAL DIFF EQUA II	3
MA 715	NUM METHODS PART DIFF EQ II	3
Total Semester Hours		24

In addition, three approved graduate courses, including at least two courses numbered 609 or above.

Other possible concentration areas include differential equations and discrete mathematics.

Master's Degree Final Examination

A final comprehensive examination is required of all candidates for a master's degree. The candidate will be examined on the coursework and thesis in Plan I and on the coursework in Plan II. In the Mathematical Sciences Department this examination is oral, except that Plan II students who have passed a joint program examination for the Ph.D. degree in applied mathematics may use that examination as their master's degree final examination.