

MS MATHEMATICS, SPECIALIZATION IN APPLIED MATHEMATICS

Program Learning Objectives

1. Demonstrate a high level of overall mathematical knowledge in the traditional areas of advanced mathematics, such as algebra, analysis, topology, and discrete mathematics.
2. Apply mathematical knowledge in new settings.
3. Produce detailed, rigorous, and correct proofs.
4. Communicate effectively in oral and written forms.

Required Courses

MATH 476	Advanced Topics in Applied Mathematics	4
MATH 502	Numerical Methods in Applied Mathematics	4
MATH 505	Graduate Teaching Seminar	1
MATH 520	Applied Analysis I	4
MATH 521	Applied Analysis II	4
MATH 530	Discrete Mathematics with Applications I	4
MATH 531	Discrete Mathematics with Applications II	4
MATH 548	Transition to Graduate Mathematics ¹	4
MATH 550	Real Analysis	4
MATH 561	Graduate Algebra	4

Electives 8

Select additional units at the 400 or 500 level as approved by the Graduate Committee.

Satisfactory completion of the comprehensive examinations or thesis defense.

Total units 45

¹ Students that pass both the algebra and the real analysis qualifying exams before the fall of their first year of graduate school may choose to waive the requirement to take MATH 548. In that case, the number of electives would be 12 instead of 8.