

# APPLIED MATHEMATICS, MASTER OF SCIENCE (MS)

The Master of Science in Applied Mathematics is designed to meet a growing demand for graduates with advanced analytical skills. The degree is suitable for graduates seeking employment in the private sector, as community college math instructors or those pursuing doctoral studies in Applied Mathematics, Statistics, Operations Research and related fields.

## Required Courses 60

MATH 600 THESIS (students may choose 5–15 credits)  
or MATH 601 RESEARCH REPORT

## Electives

Students may choose 45–55 credits from the following

Electives may include up to 15 credits of additional courses from outside the Mathematics Department subject to approval of a departmental advisor. Up to 10 credits of the electives may be at the 400 level.

MATH 530 APPLIED MATHEMATICS

MATH 531 APPLIED GROUP THEORY

MATH 534 METHODS OF DISCRETE MATHEMATICS

MATH 535 CRYPTOGRAPHY

MATH 544 NUMERICAL LINEAR ALGEBRA

MATH 545 METHODS OF COMPUTATIONAL MODELING

MATH 547 NON-LINEAR DYNAMICS

MATH 548 SPECTRAL THEORY

MATH 550 MATHEMATICAL BIOLOGY

MATH 561 CONTINUOUS OPTIMIZATION

MATH 573 TOPICS IN APPLIED MATHEMATICS

MATH 581 APPLIED COMPLEX ANALYSIS

MATH 585 APPLIED LINEAR STATISTICAL MODELING

MATH 586 ADVANCED TOPICS IN STATISTICS

MATH 696 APPLIED MATHEMATICS INTERNSHIP

Total Credits 60

Students will:

- be able to use current mathematical ideas to analyze a variety of applications from science, technology, engineering, financial business, industry or government;
- be able to use current mathematical ideas to create a model of a variety of applications from science, technology, engineering, financial business, industry or government;
- be able to effectively communicate applied mathematical concepts to a wide range of audiences;
- have the ability to work effectively with groups of people on applied mathematics problems.