

M.S. in Mathematical and Computational Finance

Degree Requirements

The Master of Science in Mathematical and Computational Finance requires 33 credits: 27 credits in core courses, 3 credits in an approved elective, and 3 credits in a project course.

| Semester I | | Term Credits |
|-----------------------|---|---------------------|
| FIN 641 | Derivatives Markets | 3 |
| MATH 605 | Stochastic Calculus | 3 |
| MATH 611 | Numerical Methods for Computation | 3 |
| MATH 646 | Time Series Analysis | 3 |
| Term Credits | | 12 |
| Semester II | | |
| MATH 604 | Mathematical Finance | 3 |
| MATH 606 | Term Structure Models | 3 |
| MATH 608 | Partial Differential Equations for Finance | 3 |
| CS 666 or MATH 666 | Simulation for Finance or Simulation for Finance | 3 |
| Term Credits | | 12 |
| Semester III | | |
| MATH 607 | Credit Risk Models | 3 |
| Approved Elective | | 3 |
| MATH 609 | Projects in Mathematical and Computational Finance | 3 |
| Term Credits | | 9 |
| Total Credits | | 33 |

For students having already successfully completed the equivalent of a course required for the program, more advanced courses can be substituted with departmental approval.

Electives

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|----------|--|---|
| EM 602 | Management Science | 3 |
| FIN 624 | Corporate Finance II | 3 |
| FIN 626 | Financial Investment Institutions | 3 |
| FIN 650 | Investment Analysis and Portfolio Theory | 3 |
| MATH 644 | Regression Analysis Methods | 3 |
| MATH 647 | Time Series Analysis II | 3 |
| MATH 662 | Probability Distributions | 3 |
| MATH 665 | Statistical Inference | 3 |
| MATH 691 | Stochastic Processes with Applications | 3 |
| MATH 699 | Design and Analysis of Experiments | 3 |
| MATH 712 | Numerical Methods II | 3 |

Electives must be selected with the approval of the Program Director/Advisor.