NYU | STERN
Undergraduate College

Advanced Mathematical Methods
Joint CAS-Stern Minor

The purpose of the Advanced Mathematical Methods Minor is to provide students with mathematical tools to handle complex business problems. Most advanced mathematics courses offered in mathematics departments require as prerequisites a complete coverage of calculus up to and including calculus of several variables, as well as linear algebra. In today's business world, the most quantitatively demanding projects require not only this level of mathematics, but also a thorough grounding in probability and statistics. This joint minor between CAS and Stern serves these needs by requiring courses in mathematics and numerical methods offered within the Mathematics Department at CAS and courses in probability theory and statistical analysis offered within the Statistics and Actuarial Science Department of the Stern School of Business.

Course requirements for Advanced Mathematical Methods (4 courses)

☐ MATH-UA 140: Linear Algebra

☐ STAT-UB 14: Introduction to the Theory of Probability (Students should either have completed or be concurrently registered for STAT-UB 103 or ECON-UA 18)

☐ Either MATH-UA 252: Numerical Analysis or MATH-GA 2010: Numerical Methods I

☐ One course from the advanced course list below**:**

  ☐ MATH-UA 262: Ordinary Differential Equations

  ☐ MATH-UA 263: Partial Differential Equations

  ☐ STAT-UB 15: Statistical Inference and Regression Analysis

  ☐ STAT-UB 21: Introduction to Stochastic Processes

  ☐ MATH-UA 325: Analysis I

Notes

o MATH-UA 123, Calculus III, is not required for the minor, but is a prerequisite for many of the courses required for minor completion.

o All students must take at least one Stern course in order to meet minor requirements. If a student has completed the CAS version of Probability, STAT-UB 14 should not be taken. Instead, please select STAT-UB15, Statistical Inference and Regression Analysis or STAT-UB 21, Introduction to Stochastic Processes.

o Students who have the equivalent of MATH-UA 123, Calculus III and/or MATH-UA 140, Linear Algebra should substitute a more advanced course from the list above.