**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 courses 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 OFFERINGS FOR ADVANCED MATHEMATICAL METHODS (15 CREDITS MINIMUM)**

**REQUIRED:**

☐ V63.0123, CALCULUS III (4 CREDITS)

☐ V63.0140, LINEAR ALGEBRA (4 CREDITS)

☐ C22.0014, INTRODUCTION TO THE THEORY OF PROBABILITY (3 CREDITS)
NOTE*:* STUDENTS IN THE ABOVE COURSE SHOULD EITHER HAVE COMPLETED OR BE CONCURRENTLY REGISTERED FOR C22.0103 STATISTICS OR V31.0018 STATISTICS.

☐ V63.0252, NUMERICAL ANALYSIS (4 CREDITS)

**EXCEPTIONS:**

**STUDENTS WHO HAVE A MORE ADVANCED MATHEMATICS BACKGROUND AND HAVE THE EQUIVALENT OF EITHER V63.0123: CALCULUS III AND/OR V63.0140: LINEAR ALGEBRA CAN SUBSTITUTE A MORE ADVANCED COURSE OR COURSES FROM THE FOLLOWING LIST:**

☐ V63.0262, ORDINARY DIFFERENTIAL EQUATIONS (4 CREDITS)

☐ V63.0263, PARTIAL DIFFERENTIAL EQUATIONS (4 CREDITS)

☐ C22.0015, STATISTICAL INFERENCE AND REGRESSION ANALYSIS (3 CREDITS)