likelihood estimation, conditional probability density functions.
Prerequisite: graduate standing or permission of department.

MAT 5510 Functional Analysis. Banach and Hilbert spaces, linear functionals, Hahn-Banach

MAT 5600 Topics in Mathematics of Finance. Possible topics may include: portfolio theory, risk management, game theory, applications to financial economics and econometrics.
Prerequisite: graduate standing or permission of department.

MAT 5402 Topics in Scientific Computing. This is an advanced graduate course on scientific computing. The aim of the course is to present some advanced techniques of scientific computing with applications to many areas of science. For example: integration of ODEs and PDEs for physics and engineering; singular value decomposition for dimension reduction and compression; Monte Carlo methods for statistics, probability, and finance; optimization for operations research.
Prerequisite: graduate standing or permission of department.

MAT 5930. Topics in Mathematical Physics (3 credits).

MAT 5931 Graduate Student Seminar (0-1 credits). Students attend seminar lectures to get exposure and knowledge in various areas of modern mathematics.
Prerequisite: graduate standing or permission of department.

MAT 5940 Internship/Practical Training (3-6 credits). The internship/practical training provides graduate students with opportunities to gain practical, career-related experience in a variety of supervised field settings. This involves participation in a project that requires applications of mathematics, numerical methods, or statistics, which is conducted outside the university in a governmental, commercial, or academic setting. Open only to graduate students with permission of the Director of Graduate Studies. Students must submit a brief written description of their work to the DGS before starting the internship and submit a written summary of their work when it is completed.

MAT 5900 Readings in Mathematics (3-6 credits). Topics to be arranged, depending on the interests and backgrounds of the students. Given only by arrangement with the instructor.
Prerequisite: graduate standing or permission of department.

MAT 8970 Thesis Research (1-9 credits). Preparation of MA or PhD Thesis under the supervision of adviser; credits will vary for masters and doctoral students.
Prerequisite: graduate standing or perm