

# M.S. Mathematical Finance

## Prerequisites Evaluation Form

**Applicant Name:** \_\_\_\_\_

The prerequisites for the Mathematical Finance program are listed below. Please review each course description. If you have taken a similar course or covered the course content, please check the check box and provide the course number, course title, and the university where the course was taken. Please be as accurate as possible to the best of your knowledge.

**None.** I have not completed any of the courses below.

**Calculus I:** Elementary functions, derivatives and their applications, introduction to definite integrals. (UNC Charlotte equivalent: MATH 1241)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_

**Calculus II:** Methods for evaluating definite integrals, applications of integration, improper integrals, infinite series, Taylor series, power series, and introduction to differential equations. (UNC Charlotte equivalent: MATH 1242)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_

**Matrices and Linear Algebra:** Matrix algebra, systems of linear equations, vector spaces, linear transformations, determinants, inner products and eigenvalues. (UNC Charlotte equivalent: MATH 2164)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_

**Probability and Statistics:** A study of probability models, discrete and continuous random variables, inference about Bernoulli probability, inference about population mean, inference about population variance, the maximum likelihood principle, the minimax principle, Bayes procedures, and linear models. (UNC Charlotte equivalent: STAT 2122 other UNC Charlotte alternatives ECON 3112, STAT 3128 or MATH 3122)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_

**Principles of Microeconomics:** Pricing mechanism of a market economy, the industrial organization of the U.S. economy, problems of economic concentration, the theory of income distribution, and comparative economic systems. (UNC Charlotte equivalent: ECON 2102)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_

**Financial Management:** Principles and problems of financial aspects of managing capital structure, least cost asset management, planning and control. Computer application is included where appropriate. (UNC Charlotte equivalent: FINN 3120)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_

**Programming:** Programming concepts and mechanics taught through the use of a high-level language. Working knowledge of a suitable programming language is highly recommended. (UNC Charlotte equivalent: ITCS 2116 C Programming)

Grade \_\_\_\_\_ Institution Name: \_\_\_\_\_

Course # & Title: \_\_\_\_\_