Summary of Core Courses

Math 1390 Finite Mathematics
Math 1390 is a 3-credit course required of all students enrolled in one of the majors of Business Administration (accounting, marketing, economics). This course has 3 major units. The first unit is a study of logic and probability. Although your background in high school might have included a study of probability, you will be directed to several business related applications that introduce you to new topics. The second unit is focused on financial mathematics problems. You will learn about simple and compound interest and how investments are established. You will expand your work into future value finance applications (investments) as well as present value problems (mortgages). The last unit is about solving systems of equations and applying this to business problems related to linear programming problems. Again, the applications are focused on business related problems.

Math 1400 Business Calculus
Math 1400 is a 3-credit course that is essentially a business related calculus course. The applications are focused on business applications throughout the course. The general sequence is to address average rate of change, limits, derivatives of linear functions, exponential functions, polynomial functions, and logarithmic functions. Students conclude the course with a study of indefinite and definite integrals. For students who previously took a calculus course (for example, an AP course in high school), this course is relatively similar in development. However, it should be noted that the business expectations generally introduce students to new applications that are further developed in subsequent business related courses.

Math 1450 Calculus 1
Math 1450 is a 4-credit, first semester rigorous calculus course. It is a required mathematics course for students enrolled in any of the engineering majors (civil, mechanical, electrical, biomedical). It is also required of most science, computer science, and mathematics majors. Several other calculus courses are required before completing the mathematics requirements of these majors. This course generally meets 3 or 4 times a week, with at least one required quiz section. The course starts with a review of several pre-calculus topics. Students with a high school background in calculus or pre-calculus will find these topics familiar. The applications developed in both the lectures and homework, however, are generally more rigorous than most high school calculus courses (including AP Calculus). It is important that students do not get behind in this course as it moves fast and covers a wide range of calculus topics. Success in this course is a critical first step for success in the next calculus course.

Math 1451 Calculus 2
Math 1451 is the second semester calculus course. It is probably the most challenging of the calculus sequence. This course is required for engineering students as well as majors in mathematics, computer science, and several of the science courses. It covers a wide range of topics, with an intense study of
techniques of integration. Applications are rigorous. As stated in the description of 1450, it is important that students do not get behind. Support seminars focus on sorting out the topics and techniques of an advanced study of calculus.

**Math 1700 Introduction to Statistics**

Statistics is often a new course to students. Although you might have studied statistics in high school, the rigor and range of topics studied in this 3-credit course is generally beyond what most high school students have previously studied. The course addresses an introduction to descriptive statistics and then moves through the study of probability, normal distributions, sampling, z-test, t-test, the chi-square, and other statistical tests. This course moves fast and has frequent quizzes and exams.