

FINITE MATHEMATICS FOR BUSINESS
67-204 Summer 2013

Instructor: Dr. Hosien Moghadam **Office:** Swart 105
Phone: 424-0069
Time: 9:00 – 12:45 TR **Room:** Swart 14
Office Hours: 1:50 – 2:50 TR **Others by appointment**

Text: Finite Mathematics for Business, by Benzaid, Gunawardena, Muthuvel, and Winters

Calculator: TI-83 or TI-84 Graphics Calculator is required.

Prerequisites: Math 103 or Math 104 with a grade C or above or placement.

Course Description:

This course is designed to acquaint business students with mathematical techniques which are useful in business and management. Topics include Basic Algebra, Functions, Mathematics of Finance, Systems of Linear Equations, Linear Programming, Probability and Data Description.

General Goals and Objective for the Course:

Identify the basic graphs and properties of polynomial, rational, exponential, and logarithmic functions. Apply the knowledge of functions to business applications such as simple, compound or continuous compound interest, ordinary annuities, finding the maximum or minimum for quantities which are quadratic functions.

Use geometric method to solve linear programming problems. Interpret information as an objective function with constraints, set up the linear programming problem, solve the problem and interpret the result in the context of the problem.

Use basic counting techniques and calculate probabilities, including conditional probabilities. Apply the mathematical knowledge of probability to business problems and interpret the results.

Represent data with graphical and numerical summaries. Calculate probabilities for binomial and normal distributions. Apply the statistical skills to problems in various business settings and interpret the results.

Description of Specific Content:

The course will cover the following topics.

Basic Algebra: polynomials, operations on rational expressions, exponents and radicals, Linear and quadratic equations.

Functions: Linear, quadratic, rational, exponential and logarithmic functions
Transformation of functions and graphing.

Mathematics of Finance: Simple and compound interests, future value and present value of annuities, sinking funds, and amortization.

Linear Programming: Systems of linear inequalities in two variables, geometric approach to solving linear programming problems in two variables.

Probability and Statistics: Operations on sets, counting techniques including permutations and combination, basic properties of probability, conditional probability, Bayes formula, random variables and expected values. Graphical description and numerical summaries of data. Binomial distribution and normal distribution.

Exam: There will be 3 one-hour exams, which will account for 90% of your final grade. Dates of exams will be announced a week in advance. There will be an optional final exam for those who miss an exam or want to improve their score. The score of the final will be replaced for the lowest score of one of the previous exams if it happens to be more. **No make-up exams except for the case of documented illness or emergency and, I should be notified before the exam.**

Quizzes: There will be some quizzes worth 10% of the final grade. No make up quiz.

Grading: Based on the total points of 3 exams, quizzes, class participation, and attendance. The following scale will be used for your final grade.

$A[92,100], A^-[90,91]$

$B^+[86,89], B[81,85], B^-[79,80]$

$C^+[76,78], C[69,75]$

$D^+[66 - 68], D[58 - 65]$

Please remember that you should attend class, study the text materials and do the assigned problems in order to learn and follow the lecture. Your grade in this course is based on 3 exams, quizzes, class participation, and your attendance. Do not get behind in your work. You can take advantage of a free tutorial program offered by the Math Department. It is best to bring your work with you when seeking help from me.