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Course Objectives:

1. To develop proficiency in finite mathematics, a student should be able to:
 - a. set up and solve linear programming problems graphically
 - b. set up and solve standard and nonstandard linear programming problems using the Simplex Method
 - c. calculate future values, present values, interest rates, effective rates, interest amounts, numbers of years, and numbers of compounding periods using simple and compound interest formulas
 - d. calculate interest rates, interest amounts, principal amounts, payments, present values, and future values of ordinary annuities, and sinking funds
 - e. find the payment amount for an amortized loan, the portion of a loan payment that is interest & the portion that is principal; the remaining balance, the sum of all payments, & the total amount of interest paid
 - f. perform set operations; draw, interpret, and apply Venn diagrams
 - g. use basic counting techniques including the multiplication principle, permutations, and combinations to count and to find probabilities
 - h. compute conditional probabilities, probabilities of independent events, and binomial probabilities; calculate odds and expected values; and apply Bayes' Theorem
 - i. organize data; create frequency & probability distributions and histograms; and compute measures of central tendency and variation
 - j. find the percentage of area under a normal curve; z-scores; & probabilities using the standard normal curve
2. To develop problem solving skills

Course Description: A survey and applications course in mathematics designed for business, life science, and social science students. Topics include, but are not limited to, linear programming, financial mathematics, sets, probability, counting principles, measures of central tendency, measures of variation, and the normal distribution.

Required Textbook: *Finite Mathematics with Applications In the Management, Natural and Social Sciences*; Lial, Hungerford, Holcomb Jr and Mullins, Pearson, 12th Ed.

Prerequisites: College Algebra (MATH 1203) with a C or better, or appropriate placement scores. A good understanding of the concepts of College Algebra is expected.

Grading for Course: The numerical grade comes from the following sources:

- + *Unit Exams:* There will be four unit exams each worth 100 points (total: 400 points)
- + *Homework:* All homework scores (except the Review sections) will count towards your Homework grade and be scaled out of 50 points.
- + *Quizzes:* Periodical quizzes will be graded and scaled to 100 points.
- + *Final Exam:* The *final exam* is worth 200 points and will be comprehensive. Percentage score will be this numerical grade out of 750 points.

Homework/Quizzes Policy: You are expected to work all homework problems assigned on *myLab* Math (MLM). Since this class is a three-credit class, this may require you to work up to six hours each week on homework and general overview of topics covered (spread this time out throughout the week). This is considered the norm for a college level course. It is recommended that you write up your homework in a notebook for reference later (even though the HW is on *myMathLab*), as you prepare for the exams and the Final. Quizzes will be assigned and will be given using *myMathLab*. There might be quizzes given during class time.

Participation Policy: Participation is expected and lack of participation will invariably prove detrimental to your grade and your learning experience. Regardless of the reason for not being able to access *myMathLab*, you will be responsible for any missed assignments, material and announcements. Do NOT wait until the last minute to complete assignments or quizzes. Class attendance *is* required.

Exam Policy: All exams will be during scheduled class time. Notes will *not* be allowed on exams. Only approved calculators are permitted on the Exams. Also, calculators on cell phone or other devices are not permitted. The use of cell phones during testing time is prohibited. Once the exam has started, no student may leave for *any* reason, unless the student turns in the exam for grading. Show all work on sketch paper for each problem and turn in after the exam is turned in. This will allow me to give partial credit on each exam.

Makeup Policy: There will be no make ups on exams, quizzes or homework assignments. I will replace your lowest exam score (or missed exam) with your final exam percent score. Also, some quizzes might be dropped before the semester grade is calculated.

Methods of Instruction: Instruction will take place through lectures, readings and assigned problems.

Course Schedule: Below is a week-by-week breakdown of course coverage. Schedule is subject to change and email notice will be given.

Week	Dates	Coverage
1	Jan 15 & 17	<i>King Day</i> <i>Course Intro</i> 7.1 Graphing Linear Inequalities in Two Variables
2	Jan 22 & 24	7.2 Linear Programming: The Graphical Method 7.3 Applications of Linear Programming
3	Jan 29 & 31	7.4 The Simplex Method: Maximization 7.5 Maximization Applications
4	Feb 5 & 7	7.7 The Simplex Method: Nonstandard Problems <i>Exam #1 (Chapter 7)</i>
5	Feb 12 & 14	5.1 Simple Interest and Discounts 5.2 Compound Interest 5.3 Annuities, Future Value and Sinking Funds
6	Feb 19 & 21	5.4 Annuities, Present Value and Amortization 8.1 Sets 8.2 Applications of Venn Diagrams and Contingency Tables
7	Feb 26 & 28	8.3 Introduction to Probability 8.4 Basic Concepts of Probability
8	Mar 4 & 6	<i>Exam #2 (Chapter 5, Sections 8.1 – 8.4)</i> 8.5 Conditional Probability and Independent Events
9	Mar 11 & 13	8.6 Bayes' Formula
	Mar 17 - 24	<i>Spring Break</i>
10	Mar 25 & 27	9.1 Probability Distributions and Expected Value 9.2 The Multiplication Principle, Permutations and Combinations
11	Apr 1 & 3	9.2 The Multiplication Principle, Permutations and Combinations 9.3 Applications of Counting
12	Apr 8 & 10	<i>Exam #3 (Sections 8.5, 8.6, 9.1, 9.2 & 9.3)</i> 9.4 Binomial Probability
13	Apr 15 & 17	10.1 Frequency Distributions 10.2 Measures of Center 10.3 Measures of Variation and Boxplots
14	Apr 22 & 24	10.4 Normal Distributions
15	Apr 29 & May 1	<i>Exam #4 (Section 9.4 & Chapter 10)</i> <i>Review for Final Exam</i>
	May 6 - 8 Finals Week	Final Exam will be given on Monday, May 6, 12:30 – 2:30