# MATH 0324 Supplement: Math for Busi & So

**Instructor:**

Hatsell, Mary

**Contact Information:**

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**Catalogue Description**

The application of common algebraic functions,,including polynomial, exponential, logarithmic,,and rational, to problems in business, economics,,and the social sciences are addressed. The,applications include mathematics of finance,,including simple and compound interest and,annuities; systems of linear equations; matrices;,linear programming; and probability, including,expected value.

**Term:**

{3D6EB4B9-49EF-48EA-B896-C59FA1E3FEBA}

**Format of Term:**

{A617E925-8B84-4366-978A-55B6C925072D}

**Lab Hours Per Week:**

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**End of Course Outcomes:**

**Lower Division Academic Course Guide Manual Learning Outcomes:**
Upon successful completion of this course, the students will:

- Apply elementary functions, including linear, quadratic, polynomial, rational, logarithmic, and exponential functions to solving real-world problems.
- Solve mathematics of finance problems, including the computation of interest, annuities, and amortization of loans.
- Apply basic matrix operations, including linear programming methods, to solve application problems.
- Demonstrate fundamental probability techniques and application of those techniques, including expected value, to solve problems.

- Apply matrix skills and probability analyses to model applications to solve real-world problems.

Students must be able to factor algebraic expressions, perform operations with rational expressions, and perform operations with exponential and radical expressions. If these skills are deficient, it is recommended that the student enroll in a remedial course to gain proficiency in these skills. **This course (Math 0324) is designed to help with these deficits.**

### Required Textbook

Lial, Greenwell, and Ritchey, , 11th, Finite Mathematics and Calculus with Applications, , Pearson, 9780137376872, https://www.templecollegebookstore.com

### Learning Resources:

Math Tutoring Lab: https://www.templejc.edu/resources/tutoring/

### Evaluation System:

At the end of the semester, any student earning a B, C, or D in Business Math 1324 will receive one letter grade higher for Supplemental Math 0324.

Students earning an A in Business Math will receive an A for both courses, and students earning an F in Business Math will receive an F for both courses.

### Course Schedule/Topics

### Course Outline & Content:

### UNIT ONE

1.2 Linear Functions and Applications

10.1 Properties of Functions

10.2 Quadratic Functions

10.3 Polynomial and Rational Functions

10.4 Exponential Functions

10.5 Logarithmic Functions

10.6 Applications: Growth and Decay in Finance

5.1 Simple and Compound Interest

5.2 Future Value of an Annuity

5.3 Present Value of an Annuity: Amortization

Practice Exam/Quiz Unit 1 *(Online sections only.)*

Unit 1 Exam

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### UNIT TWO

2.3 Addition and Subtraction of Matrices

2.4 Matrix Multiplication

2.2 Solution of Linear Systems: Gauss-Jordan

3.1 Graphing Linear Inequalities

3.2 Solving Linear Programming Graphically

3.3 Applications of Linear Programming

4.1 Slack Variables and Pivots

4.2 Maximization Problems

4.3 Minimization Problems: Duality

Practice Exam/Quiz Unit 2 *(Online sections only.)*

Unit 2 Exam

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**UNIT THREE**

7.3 Introduction to Probability

7.4 Basic Concepts of Probability

7.5 Conditional Probability: Independent Events

8.1 Permutations

8.2 Combinations

8.3 Probability Applications of Counting Principles

8.4 Binomial Probability

8.5 Expected Value

Practice Exam/Quiz Unit 3 *(Online sections only.)*

Unit 3 Exam

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**Comprehensive Final Exam**

**Marketable Skills**

Marketable Skills:

- Critical Thinking
- Problem Solving
- Analytical Thinking
- Quantitative Reasoning
- Time Management
- Attention to Detail

**Class Policies**

The instructor will provide students with more detailed information on the official class syllabus.

**Additional Information**

In addition to your textbook and MML access code, you will need an internet capable device with a reliable internet connection, pencils, graph paper, and a TI-83+ or TI-84+ graphing calculator. No TI-Nspires, Casios or Hewlett-Packards please. Calculators will be cleared prior to testing.

***Please note: Testing for online sections of College Algebra will be supervised at a college testing center to be approved by the instructor.***