

Mathematics 124. Finite Mathematics

- **Course Website:** <http://www.math.uiuc.edu/math124/>
- **Text:** “Methods of Finite Mathematics” by Brown & Sherbert bound with Course Activity Packet, available at the TIS bookstore.
- **Course Description:**

This is an introduction to set theory, probability, linear systems, and matrices. It is a blended format, meaning that online videos take the place of the traditional in-class lectures. Group activities are done in class.
- **Prerequisite:** MATH 112 or equivalent.
- **Course Outline:**
 - (1) Set Theory and Counting (Chapter 5)
 - (2) Probability (Chapters 6, 7)
 - (3) Linear Systems (Chapters 1, 2)
 - (4) Matrices (Chapters 2, 3)
 - (5) Finance (Chapter 9)
- **Tentative Topic Schedule by Week**
 - (1) The Basics of Sets; Counting Elements of Sets ; Venn Diagrams; Empirical Probability
 - (2) Basics of Probability; Conditional Probability
 - (3) Bayes Theorem; Permutations and Combinations
 - (4) Binomial Probability; Random Variables; Odds
 - (5) Exam 1 Review
 - (6) Binomial Distributions; Normal Distributions
 - (7) Linear Models; Creating Linear Systems
 - (8) Solving Linear Systems; Systems without a Unique Solution
 - (9) Exam 2 Review
 - (10) Matrices; Matrix Multiplication
 - (11) Matrix Inverses and Linear Systems; Leontief Input-Output Models
 - (12) Linear Programming
 - (13) Exam 3 Review
 - (14) Basics of Finance; Annuities
 - (15) Final Exam Review