

# Math 0400 Discrete Mathematical Structures

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## Textbook

*Finite Mathematics for the Managerial, Life, and Social Sciences, Eleventh Edition, Soo T. Tan*

## Course Prerequisite

Minimum Math placement score of 61 or Math 0031 with a minimum grade of C

## Objective

This course is designed to introduce students from various disciplines to the applied world of mathematics within a discrete context

## Topics

- Straight lines and linear functions
- System of Linear Equations and Matrices including matrix multiplication and the Inverse of a square matrix
- Introduction to logic including truth tables and arguments
- Compound interest including effective rate and present value
- Arithmetic and geometric progressions
- Sets, The Multiplication Principle, and Permutations and Combinations
- Probability including experiments, sample spaces, and events; The Rules of Probability, Conditional Probability and Independent Events and Bayes' Theorem
- Probability Distributions and Statistics including Distributions of Random Variables, Expected Value, Variance and Standard Deviation, The Binomial Distribution, The Normal Distribution and Applications
- Markov Chains and the Theory of Games (as time permits)

## Calculator Policy

A scientific calculator is highly recommended.

## Grading Policy

Exam 1 25%

Exam 2 25%

Homework 20%

Final Exam 30%

## Disability Resource Services

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the Office of Disability Resources and Services, 140 William Pitt Union (412) 624-7890 as early as possible in the term.

## Academic Integrity

Cheating/plagiarism will not be tolerated. Students suspected of violating the University of Pittsburgh Policy on Academic Integrity will incur a minimum sanction of a zero score for the quiz, exam or paper in question. Additional sanctions may be imposed, depending on the severity of the infraction.

