

MATH 125C : Finite Mathematics

Topics include matrices, linear programming, counting techniques, sets, probability, statistics, mathematics of finance, Markov chains, and game theory. Applications will be emphasized. A graphing calculator will be required.

Credits 4

Lab/Practicum/Clinical Hours 0

Lecture Hours 4

Prerequisite Courses

MATH 124C

Learning Outcomes

- Use matrix operations to solve applications involving systems of equations, including input-output systems and message encoding.
- Formulate and solve a linear programming problem using graphing or the simplex method.
- Solve problems in finance (simple and compound interest and annuities; amortization tables).
- Perform operations on sets and use Venn diagrams to solve application problems.
- Apply concepts of probability, including conditional probability and Bayes' Theorem.
- Perform calculations involving counting principles and apply to probability problems.
- Solve applications involving the binomial probability distribution.
- Calculate measures of central tendency and variation for a data set or frequency distribution.
- Solve applications involving the normal distribution.
- Use regular or absorbing Markov chains to solve long-term probability problems.
- Calculate payoff and evaluate strategies for applications involving strictly determined or mixed strategy games.