
01006718 DISCRETE MATHEMATICS

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I. TEXT AND COURSE MATERIALS

- **Textbook:**

Discrete Mathematics and its applications 6th or 7th or 8th edition by Kenneth H. Rosen, McGrawHill.

II. COURSE DESCRIPTION

Basic set theory, theory and techniques of counting, properties of integers, mathematical induction, recursive definitions, recurrent equations, sequences and summations, relations, graphs, and trees

III. COURSE OUTLINE

This schedule is tentative and could be changed depending on actual progress during the semester. Changes will be announced in the class. Students are responsible for updating their syllabus.

Week	Dates	Topics
1	Nov 26, 2024	<ul style="list-style-type: none">• Overview of Discrete Mathematics• Introduction to Set Theory
2	Dec 3, 2024	<ul style="list-style-type: none">• Mathematical Proof
3	Dec 10, 2024	<ul style="list-style-type: none">• No class
4	Dec 17, 2024	<ul style="list-style-type: none">• Mathematical Proof
5	Dec 24, 2024	<ul style="list-style-type: none">• Mathematical Induction
6	Dec 31, 2024	<ul style="list-style-type: none">• No class
7	Jan 7, 2025	<ul style="list-style-type: none">• Graphs and Trees
8	Jan 14, 2025	<ul style="list-style-type: none">• Relations
9	Jan 28, 2025	<ul style="list-style-type: none">• Functions
10	Feb 4, 2025	<ul style="list-style-type: none">• Number Theory
11	Feb 11, 2025	<ul style="list-style-type: none">• Counting techniques
12	Feb 18, 2025	<ul style="list-style-type: none">• Recurrence relations
13	Feb 25, 2025	<ul style="list-style-type: none">• Recurrence relations
14	Mar 4, 2025	<ul style="list-style-type: none">• Recursive Definitions and Structural Induction
15	Mar 11, 2025	<ul style="list-style-type: none">• Recursive Definitions and Structural Induction