

Math 245: Discrete Mathematics (Fall 2026)

Lecture Schedule

Below is a list of the topics we intend to cover, along with a rough schedule. Actual schedule is subject to change without notice. Last updated August 19, 2026.

Week	Topic	Chapters
8/24 – 8/28	Overview of Syllabus & Introduction to Discrete Mathematics	
	Mathematical Definitions: The Role of Definitions	1.1
	Mathematical Definitions: Evens and Odds	1.2
8/31 – 9/4	Mathematical Definitions: Some Important Definitions	1.3
	Propositional Calculus: Basic Operators	2.1
	Propositional Calculus: Truth Tables	2.2
9/7	<i>Labor Day: No Classes</i>	
9/8 – 9/11	Propositional Calculus: Additional Operators	2.3
	Semantics: Introduction to Semantic Theorems	3.1
9/14 – 9/18	Semantics: Important Semantic Theorems	3.2
	Semantics: Proving Implications	3.3
	Predicate Calculus: Inductive Reasoning	4.1
9/21 – 9/25	Predicate Calculus: Proving Quantified Propositions	4.2
	Predicate Calculus: Multiple Quantifiers	4.3
	Proofs: Proof Techniques	5.1
9/28 – 10/2	Midterm Exam 1: Monday, September 28	
	Proofs: More Proof Techniques	5.2
	Proofs: Proofs with Floors and Ceilings	5.3
10/5 – 10/9	Proof by Induction: Induction Examples	6.1
	Proof by Induction: Intermediate Induction	6.2
	Proof by Induction: Advanced Induction	6.3
10/12 – 10/16	Sequences and Recurrences: Solving Recurrences	7.1
	Sequences and Recurrences: Big-O Notation	7.2
	Set Theory I: Set Equality and Containment	8.1
10/19 – 10/23	Midterm Exam 2: Monday, October 19	
	Set Theory I: Set Operations	8.2
	Set Theory I: Set Properties	8.3
10/26 – 10/30	Set Theory II: More Set Operations and Properties	9.1
	Set Theory II: Cartesian Products	9.2
	Set Theory II: Infinite Sets	9.3
11/2 – 11/6	Relations: Examples	10.1
	Relations: Properties	10.2
	Relations: Operations	10.3
11/9 – 11/10	Catch Up Day	
11/11	<i>Veterans Day: No Classes</i>	
11/12 – 11/13	Midterm Exam 3: Friday, November 13	
11/16 – 11/20	Equivalence Relations: Examples	11.1
	Equivalence Relations: Modular Arithmetic	11.2
	Equivalence Relations: Equivalence Classes	11.3
11/23 – 11/24	Posets: Examples and Hasse Diagrams	12.1
11/25 – 11/27	<i>Thanksgiving Break: No Classes</i>	
11/30 – 12/4	Posets: Properties and Operations	12.2
	Posets: Chains and Antichains	12.3
	Functions: Totality and Definiteness	13.1
12/7 – 12/11	Functions: Basic Properties of Functions	13.2
	Functions: Function Composition	13.3
	Catch Up Day	
12/18	Midterm Exam 4: Friday, December 18 (10:30am-12:30pm)	