

**Mathematics 15A Syllabus (revised May 2017)**

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Based on *Essentials of Discrete Mathematics* (3rd edition) by David J. Hunter

Section	Lectures	Topic
0	1	Introduction
1.1	1	Formal Logic
1.2	1.5	Propositional Logic
1.3	1.5	Predicate Logic
1.4	1	Logic in Mathematics
1.5	2	Methods of Proof
2.1	1	Graphs
2.2	1	Sets
2.3	1.5	Functions
2.4	1	Relations and Equivalences
2.5	1.5	Partial Orderings
3.1	1	Recurrence Relations
3.2	1	Closed-Form Solutions and Induction
3.3	1	Recursive Definitions
3.4	2	Proof by Induction
3.5	1	Recursive Data Structures
4.1	1	Basic Counting Techniques
4.2	1	Selections and Arrangements
4.3	2	Counting with Functions
4.4	1	Discrete Probability