

Assignment	Topics	Handout	Due date
Propositional logic			
1	1.1 Propositional logic 1.2 Applications of propositional logic 1.3 Propositional equivalences	12-Jan	19-Jan
2	1.4 Predicates and Quantifiers 1.5 Nested quantifiers 1.6 Rules of inference	19-Jan	26-Jan
Proofs and induction			
3	1.7 Introduction to proofs 1.8 Proof methods and Strategies 5.1 Mathematical induction 5.2 Strong induction	26-Jan	2-Feb
4	5.3 Recursive definitions 8.1 Applications to recurrence relations 8.2 Solving linear recurrence relations	2-Feb	9-Feb
Sets and functions			
5	2.1 Sets 2.2 Set Operations 6.1 The basic of counting 8.5 Inclusion-Exclusion 8.6 Application of Inclusion-Exclusion	9-Feb	16-Feb
6	2.3 Functions 2.4 Sequences and summations 3.2 The growth of functions	16-Feb	23-Feb
Elementary number theory			
7	4.1 Divisibility and modular arithmetic 4.2 Integer representations (binary, decimal, etc) 4.3 Primes and Greatest common divisors	23-Feb	8-March
8	4.4 Solving congruences 4.5-4.6 Applications of congruences	8-March	15-March
Counting, Discrete probability			
9	6.2 The pigeonhole principle 6.3 Permutations and combinations 6.4 Binomial coefficients and identities	15-March	22-March
10	7.1 An introduction to discrete probability 7.2 Probability theory 7.3 Bayes theorem 7.4 Expected value and variance	22-March	29-March
Relations and graphs			
11	9.1 Relations and their properties 9.3 Representing relations 2.6 Matrices 10.1 Graphs and graph models 10.2 Graph terminology and special types of graphs 10.3 Representing graphs and graph isomorphism	29-March	5-April
12	10.4 Connectivity 11.1 Introduction to trees 11.2 Applications to trees	5-April	12-April