

Mathematics 42- Discrete Mathematics
Fall 2007

Instructor: Professor R. Alperin

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Office hours: 12:45-1:30 MW, 2:45-4:00 M or by appointment

Text: *Discrete Mathematics and Its Applications* by K. Rosen, McGraw-Hill, latest edition

The main goal of this class is to introduce students to techniques of mathematical proof and basic mathematical concepts used in upper division courses in mathematics and computer science.

Your final grade is based on a 350 point total on tests. You must keep a neatly prepared looseleaf notebook of homework and be prepared to make presentations in class.

•Chapter 1 Logic and Proofs: §1: 2,7,13,24,28; §2: 8,13,21,29,58; §3: 2,8,9,15,36; §4: 4,7,9,26,28; §5: 1,4,7,14,19.

•Chapter 2 Sets, Functions, Sequences: §1: 1,5,8,21,28; §2: 2,3,14,25,30; §3: 3,4,12,15,30; §4: 4,5,10,19,20.

•Chapter 11 Boolean Functions: §1: TBA; §2: TBA.

•MIDTERM 1: 100 points

•Chapter 3 Integers: §4: 1,10,14,16,19; §5: 3,6,9,20,26; §6: 2,3,9,20,24.

•Chapter 4 Induction: §1: 4, 7, 14, 19, 22, 3, 8, 15, 16, 23, 27, 28, 31, 38, 40, 42, 47; §2: TBA.

•Chapter 1 Logic and Proofs §6: 16, 22; §7: 3, 13, 15, 18, 21ace, 23.

•Chapter 5 Counting: §1: 3, 22, 30, 35, 44; §2: 4, 6, 9, 10, 15; §3: 1-6 all; 7-41 odd. Note – no ties in 9; ties allowed in 41.

••MIDTERM 2: 100 points

•Chapter 8: Relations §1: 1-7 odd; 25-35 odd, 47; §5: 1-15 odd; 15, 25,2, 35, 37, 41, 43, 47; §6: TBA.

•Chapter 6 Discrete Probability: §1: 3ac, 5aceg, 10, 12, 14, 23, 25, 27, 28, 35; §2: 3aceg, 6, 7, 8, 9, 11, 12, 13.

•••COMPREHENSIVE FINAL: 150 points