

APPM 3170 and ECEN 2703 Discrete Applied Mathematics, Fall 2017

(Written homework problems will be posted on D2L: learn.colorado.edu.)

Week	Date	Section	Topic	Homework	HW Due
1	Mon, Aug 28 Wed, Aug 30 Fri, Sep 1	1.1, 1.2 1.2, 1.3	Introduction Propositional Logic Propositional Equivalences	HW 1	Sep 6
2	Mon, Sep 4 Wed, Sep 6 Fri, Sep 8	Holiday 1.4 1.5	Predicates and Quantifiers Nested Quantifiers	HW 2	Sep 13
3	Mon, Sep 11 Wed, Sep 13 Fri, Sep 15	1.6 12.1 1.7	Rules of Inference Boolean Functions Introduction to Proofs	HW 3	Sep 20
4	Mon, Sep 18 Wed, Sep 20 Fri, Sep 22	1.8 2.1, 2.2 2.3	Proof Methods and Strategy Sets, Set Operations Functions	HW 4	Sep 27
5	Mon, Sep 25 Wed, Sep 27 Fri, Sep 29	9.1, 9.3 3.1 3.2	Relations and Their Properties Algorithms Growth of Functions	HW 5	Oct 4
6	Mon, Oct 2 Wed, Oct 4 Fri, Oct 6	3.3 Exam 1 4.1	Complexity of Algorithms 5:00-6:30 pm, sections 1.1 to 3.2, 9.1, 9.3, 12.1 Divisibility and Modular Arithmetic	HW 6	Oct 11
7	Mon, Oct 9 Wed, Oct 11 Fri, Oct 13	4.2 4.3 4.3	Integer Representations and Algorithms Primes and Greatest Common Divisors Primes and Greatest Common Divisors	HW 7	Oct 18
8	Mon, Oct 16 Wed, Oct 18 Fri, Oct 20	4.4 4.6 5.1	Solving Congruences Cryptography Mathematical Induction	HW 8	Oct 25
9	Mon, Oct 23 Wed, Oct 25 Fri, Oct 27	5.2 5.4 6.1	Strong Induction and Well-Ordering Recursive Algorithms Basics of Counting	HW 9	Nov 1
10	Mon, Oct 30 Wed, Nov 1 Fri, Nov 3	6.2 6.3 6.4	Pigeonhole Principle Permutations and Combinations Binomial Coefficients and Identities	HW 10	Nov 8
11	Mon, Nov 6 Wed, Nov 8 Fri, Nov 10	6.5 Exam 2 8.1	Generalized Permutations and Combinations 5:00-6:30 pm, sections 3.3 to 6.4 Applications of Recurrence Relations	HW 11	Nov 15
12	Mon, Nov 13 Wed, Nov 15 Fri, Nov 17	8.2 8.2, 8.4 8.4	Solving Linear Recurrence Relations Generating Functions Generating Functions	HW 12	Nov 29
	Nov 20-24		Fall Break: No Classes		
13	Mon, Nov 27 Wed, Nov 29 Fri, Dec 1	8.4, 8.5 10.1, 10.2 10.2	Inclusion-Exclusion Graphs and Graph Models, Terminology Special Types of Graphs	HW 13	Dec 6
14	Mon, Dec 4 Wed, Dec 6 Fri, Dec 8	10.3 10.4 10.5	Representing Graphs and Graph Isomorphism Connectivity Euler and Hamilton Paths	HW 14	Dec 13
15	Mon, Dec 11 Wed, Dec 13	11.1, 11.4 2.5	Trees, Spanning Trees Cardinality of Sets		
Final Exam (comprehensive) on Saturday, December 16, 4:30 to 6:00 pm					