

CMSC 250-Discrete Structures, Spring 2011

Syllabus: CONTENT

1 Description

We will study fundamental mathematical concepts that are relevant to computer science. In particular we will cover propositional and predicate logic, proof techniques, mathematical induction, elementary number theory, relations, functions, combinatorics, probability, and graph theory (time permitting).

1. Propositional logic, circuits, and predicate logic approx. 3 weeks
2. Elementary number theory, approx. 2 weeks
3. Summations, recurrences, and mathematical induction, approx. $2\frac{1}{2}$ weeks
4. Sets, Venn diagrams, Cartesian products, powersets, approx. 1 week
5. Combinatorics and Probability, approx. 2 week
6. Functions and the pigeonhole principle, approx. 2 weeks
7. Relations, reflexivity, symmetry, and transitivity, approx. 1 week
8. Graph theory, approx. 1 week