SYLLABUS FOR MATH 3336
DISCRETE MATHEMATICS
FALL, 2003

Course Policies (pdf) **Print, read, and return acknowledgement**

Chapter I. The Foundations: Logic And Proof, Sets, And Functions

1.1 Logic
1.2 Propositional Equivalences
1.3 Predicates and Quantifiers
1.4 Nested Quantifiers
1.5 Methods of Proof
1.6 Sets
1.7 Set Operations
1.8 Functions

Chapter 3. Mathematical Reasoning, Induction And Recursion.

3.1 Proof Strategy
3.2 Sequences and Summations
3.3 Mathematical Induction
3.4 Recursive Definitions and Structural Induction

Exam #1, Friday , September 29

Chapter 2: The Fundamentals: Algorithms, The Integers, And Matrices

2.1 Algorithms
2.4 The Integers and Division
2.5 Integers and Algorithms
2.6 Applications of Number Theory

Chapter 4: Counting

4.1 The Basics of Counting
4.3 Permutations and Combinations

Chapter 6: Advanced Counting Techniques

6.1 Recurrence Relations
6.2 Solving Recurrence Relations

Exam #2, Friday, October 31

Chapter 7: Relations

7.1 Relations and Their Properties
7.3 Representing Relations
7.4 Closures of Relations
7.5 Equivalence Relations
7.6 Partial Orderings

Chapter 8: Graphs

8.1 Introduction to Graphs
8.2 Graph Terminology
8.3 Representing Graphs and Graph Isomorphism
8.4 Connectivity
8.3 Euler and Hamilton Paths

Exam #3, Wednesday, December 3