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**Text:** James A. Anderson

*Discrete Mathematics with  
Combinatorics*, Second Edition

**Office Hours:** 8-12 MWF, 11-12:00 TR

1. Jan 11	Introductions	
2. Jan 13	Truth Tables, Logic, and Proofs	Chapter 1
3. Jan 18		
4. Jan 20	Sets, Boolean Algebra, and Relations	Chapter 2
5. Jan 25		
6. Jan 27		
7. Feb 1	Logic and Proofs	Chapter 3
8. Feb 3		
9. Feb 8	Review	
10. Feb 10	Exam #1	
11. Feb 15	Functions and Matrices	Chapter 4
12. Feb 17		
13. Feb 22		
14. Feb 24	Algorithms, Recursion, and Number Systems	Chapter 5
15. Mar 1		
16. Mar 3		
17. Mar 8	Graphs, Directed Graphs, and Trees	Chapter 6
18. Mar 10		
19. Mar 22		
20. Mar 24	Counting and Probability	Chapter 8
21. Mar 29	Review	
22. Mar 31	Exam #2	
23. Apr 5		
24. Apr 7		
25. Apr 12	Graphs and Trees Revisited	Chapters 14 & 15
26. Apr 19		
27. Apr 21		
28. Apr 26		
29. Apr 28	Review	
Final Exam:	Saturday May 7 <sup>th</sup> , 4:30-6:30 PM	

### **Course Objectives**

By the time you have finished with this course, you should be familiar many of the basic mathematical structures used in computer science. You should know how to prove a simple theorem, and be able to solve a number of different mathematical problems. More specifically:

1. You will be able to use truth tables and Boolean algebra to examine propositions, and equivalent statements.
2. You will understand basic set theory and how it applies to the mathematics of computing.
3. You be able to demonstrate basic concepts of proofs.
4. You will understand the binary, octal, decimal, and hexadecimal number systems as they apply to computing.
6. You know how graphs, directed graphs, and trees are used in computing.
7. You will understand the basic principles of counting and probability.

### **Grading**

Final Exam: 35%

Homework: 15%

Other Exams: 50% -- Equally divided among all exams.

### **Other Information**

Exam grades will be curved, if necessary – but it probably won't be necessary.

University attendance policy will be enforced.

You are expected to attend every class. If you are unable to attend a particular class, you are still responsible for the material covered in the class. You must make arrangements to obtain this material from another student. Lectures will not be repeated.

Do not leave early.

Do not come late.

I have an open door policy with respect to students. I'm in my office most of the time. I am willing to meet with you any time I am in my office. Feel free to come to me with any matter that is troubling you, even if it has nothing to do with the class.