MWF 10:00-10:50 (220-01)
MWF 11:00-11:50 (220-02)
AJLC 102

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Office hours: Tu 1:30-2:30, W 2:00-4:30, Th 11:00-12:00, Th 1:30-2:00, and by appointment.

Required text: J.W. Grossman, *Discrete Mathematics*, We will cover nearly every section of chapters 1-7. Toward the end of the semester, we will study Graph Theory (chapters 8-10), but we won't use the text.

Required supplement: T. Gowers, *Mathematics: A Very Short Introduction*.

Homework: Homework will be collected on Fridays. No late homework will be accepted without a valid excuse (an illness, an emergency, etc.). I encourage you to discuss the assignments with your fellow *classmates* (i.e., students enrolled in Math 220), but I insist that you write and submit your own solutions. If you have trouble on an assignment, please come and see me. I'd be glad to help.

Exams: We'll have an in-class exam, a take-home exam, and a two-hour, comprehensive, in-class final. The in-class exam will be closed-book. It will be held on October 5. The take-home exam and the final will be open-text, open-notes. The take-home will be distributed on November 16 and collected on November 21. The final will be held on December 19 at 2 pm (for section 220-01) and on December 17 at 9 am (for section 220-02).

Grading: The homework assignments will be worth a total of 100 points. The exams will be worth 100 points each.

Help: Please feel free to ask me questions about the course (or anything else). If you find my office hours inconvenient, you are welcome to schedule an appointment (or just drop by).

Rough Outline:

Date	**Subject matter**	**Readings**
Week 1	Propositions	1.1
Week 2	Propositions, Logical Quantifiers	1.1, 1.2
	Logical Quantifiers, Proofs	1.2, 1.3
Week 3	Proofs	1.3
	Sets, Sets with Structure	2.1, 2.2
Week 4	Operations on Sets	2.3
	Functions	3.1
Week 5	Functions in the Abstract	3.2
	$\Rightarrow$ IN-CLASS EXAM $\Leftarrow$	
Week 6	Algorithms	4.1
	Efficiency of Algorithms	4.3
Week 7	Recursive Definitions	5.1
	Recursive Algorithms	5.2
	$\Longrightarrow$ FALL BREAK $\Longleftarrow$	

Date	**Subject matter**	**Readings**
Week 8	Proof by Mathematical Induction	5.3
	More Induction	
Week 9	Fundamental Principles of Counting	6.1
	Permutations and Combinations	6.2
Week 10	Problems Involving Repetitions	6.3
	Applications of Combinatorics	
Week 11	Modeling with Recurrence Relations	7.2
	Solving Recurrence Relations	7.3
	⇒ TAKE-HOME EXAM DUE ⇐	
Week 12	Graphs	Handout
Week 13	More Graphs	Handout
Week 14	Even More Graphs	Handout