Math 2710 -- Introduction to Mathematical Thinking

Instructor: Linda Brown Westrick
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Office hours: Mondays 10:15-11, Wednesdays 11-12, and by appointment

Textbook

Chartrand, Polimeni and Zhang, *Mathematical proofs*. I have the third edition, but any edition is ok for the class. Problems will be given in full, not just numbers.
Hammack, *Book of proof*. (free).

Evaluations

Written homework assignments will be posted here each Friday, and due the following Friday. You are encouraged to work together on homeworks, but you must indicate who you collaborated with, and your write up must be completely your own. Copying someone else's solution is academic misconduct and will be dealt with as such.

Each Monday we will have a short quiz reviewing the previous week's material.

There are two in-class midterms, Friday February 24 and Friday April 7, as well as a final exam (date TBD).

Grading scheme

Homework	30%
Quizzes	10%
Midterm 1	20%
Midterm 2	20%
Final	20%

There are no make-up quizzes or late homework accepted. To compensate for everyone having occasionally a sickness or emergency, the lowest homework and quiz will be dropped. If you think you may have an exceptional circumstance (affecting multiple assignments/quizzes), let me know as soon as possible, in particular before the assignment is due or the quiz is missed.

Any midterm score which is less than the final exam score will be replaced by the final exam score. The final is cumulative.

Rewrite policy

To practice improving their mathematical writing, each student may rewrite up to three homework assignments (of their choice) in order to improve their score. The new homework score for that assignment will be the average of the original score and the rewritten score. Re-writes are due the Friday following when the homework was due originally.
Rules for re-writes

Tentative Schedule and Homework

Typo bounty for homeworks. If you are the first to alert me to a typo in the homework, I will give you an extra point on the homework. Limit 2 per person per assignment. Problems are almost all copied from the textbooks.

Week	Topics	Homework
1/16-1/20	Sets (CPZ 1, H 1)	Homework 1 Due Friday, January 27.
1/23-1/27	Logic (CPZ 2, H 2) and direct proof (CPZ 3.1-3.2, H 4)	Homework 2 Due Friday, February 3.
1/30-2/3	Cases and contrapositive proof (CPZ 3.3-3.4, H 5.1), proofs in arithmetic (CPZ 4.1-2, H 5.2)	Homework 3 Due Friday, February 10; Solution to problems 10-12
2/6-2/10	Proofs in set theory (CPZ 4.3-5, H 8), counterexamples, contradiction, existence proofs (CPZ 5; H 6, 7.3-4)	Homework 4 Due Friday, February 17
2/13-2/17	Induction (CPZ 6, H 10)	Homework 5 Due Friday, March 3.
2/20-2/24	Prove or disprove (CPZ 7) and Midterm 1	
2/27-3/3	Relations (CPZ 8)	
3/6-3/10	Functions (CPZ 9)	
3/13-3/17	Spring break	
3/20-3/24	Infinity (CPZ 10)	
3/27-3/31	Intro number theory (CPZ 11)	
4/3-4/7	Review and Midterm 2	
4/10-4/14	Intro analysis (CPZ 12)	
4/17-4/21	Intro algebra (CPZ 13)	
4/24-4/28	TBD	