

MATH 74 SYLLABUS – SECTION 1, FALL 2008

Instructor: Charley Crissman

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Office Hours: Tuesday 11:30-1:00, Friday 12:30-2:00.

Lectures: MWF 3-4 in 71 Evans.

Textbook: *An Introduction to Mathematical Reasoning* by Peter J. Eccles.

Description: The goal of this course is to learn to write clear and correct mathematical proofs. In the process of learning to prove things, we'll even learn a bit of math: some basic set theory and some elementary number theory. We'll learn how to prove things directly, by contradiction, and by induction, and we'll practice like crazy at all of these.

Homework: Due each Monday at the start of class. Acceptable formats are: (1) Handwritten, or (2) Typed using LaTeX; **NO** equation editor, please! No late assignments will be accepted; if you have a conflict and will be unable to submit your assignment on Monday, you should make arrangements to submit it *earlier*.

The homework is an extremely important part of this class. You cannot succeed in this class without seriously attempting every homework assignment. You are both welcome and encouraged to collaborate with your peers on homework assignments, provided that: (1) You write up your own solutions; you should do this without looking at your notes. You may be surprised by just how hard this is, but learning to write your own mathematics is a lot of what this class is about. (2) You attempt each problem on your own first.

Reading: There will be reading assignments before each class. I will post reading assignments on the web page and will also announce them in class.

You are expected to do the reading and to take it seriously. Reading mathematics is not like reading a novel; the techniques you need to develop are very different and take time to learn. I recommend

actively participating in your reading; work out your own examples, try to find alternate proofs, and generally have fun with it.

Quizzes: While the emphasis of this class is on proofs, you can't prove anything if you don't know *definitions*, *examples*, and *precise theorem statements*. That's why there will be quizzes every Friday for the first 5-10 minutes of class to test your knowledge of these three things. Definitions from class *and from the reading* are fair game. **No** make-ups.

Midterms: There will be two in-class midterms. The dates will be Wednesday, September 24th and Wednesday, November 12th. **No** make-ups.

Final: The final will be cumulative, and will take place on Tuesday, December 16th, from 12:30 to 3:30. You *must* take the final exam at this time; **NO** exceptions can or will be made.

Grading: Homework 30%, Quizzes 15%, Midterms 30%, Final 25%. Grades will be curved using a white-board and possibly darts.