MATH 310 - FALL 2010

Instructor: Kate Truman
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Office: Math 1113
Office Hours: 11:30-12:00 MWF
Course Web Page: http://www.math.umd.edu/~rendke/Math310/
The webpage is the definitive source for up to date information about the class.
Classroom and Time: Math0405 MWF 12:00-12:50
Text: *Mathematical Proofs* by Chartrand, Polimeni and Zhang, 2nd edition
Recommended: *Advanced Calculus* by Fitzpatrick, 2nd edition, AMS

Prerequisite: Math141
Corequisite: Math241 Please note that Math240 is also a prerequisite for Math410.

Math310 is designed to be a lead in course to Math410 (Advanced Calculus). The goal is to introduce you to introductory theory material and review some calculus with proof, so that you will be able to succeed in Math410. The majority of the course will be spent on introducing the theory of mathematics. You will learn different methods of proof and how to apply each technique to different situations. This course should not only prepare you for Math410, but also prepare you to study theoretical mathematics in any area. Approximately one third of the course will be spent reviewing some introductory calculus material with proof. We will discuss sequences and continuity in more detail as well.

Grading:

Five in-class Exams (75 pts each)	375 points
Weekly Homework (20 pts each)	220 points
Weekly Quizzes (15 pts each)	180 points
Final Exam	150 points
Total	**925 points**

Make-up exam policy: Exam makeups will only be given for University Excused Absences. Any student with a valid reason to be excused from an exam must contact me prior to the exam, either by email or by phone (leave a message at 301.405.5047), and present documentation at the next class session attended. If you need to be excused for a religious observance, you should let me know as soon as possible, but in any case no later than the end of the schedule adjustment period.

Rough Schedule: We will cover Chapters 0 through 10 and 12 of Chartrand, Polimeni and Zhang, as well as parts of Chapters 1, 2 and 3 of Fitzpatrick.

- Exam 1: Chapters 0–3
- Exam 2: Chapters 4–6, Pigeon Hole Principle
- Exam 3: Chapters 7–10
- Exam 4: 12.1 of Chartrand and Chapters 1–2 of Fitzpatrick
- Exam 5: Chapters 2–3 Fitzpatrick, 12.5 Chartrand

The tentative date for Exam 1 is September 20, 2010.
Homework 1 is due Friday, September, 3rd, and there will be a quiz on Friday on Chapter 0.

Final Exam: The final exam is Friday, December 17th, 8:00am–10:00am, in our class room. The final exam is cumulative.

Homework: I *encourage* you to work in groups on the homework assignments. Homework will be assigned daily, and collected approximately weekly (or slightly more frequently.) Exam and Quiz questions will be similar if not identical to homework questions. Quizzes will be on the day following homework collection date (on the homework collected) and days before exams (on all material since the last exam). Recently, the solutions manual has been available to download online, however, probably not legally. Because of this you will have two types of problems assigned, textbook problems - not collected - and a set of questions I make up that I will collect from (which may on occasion include a book problem or two also.) The problem sets will be handed out in class and appear on the class website in PDF format. I will not specify in advance which of the problems from the "collection set" I will collect. For this reason each problem must be done on a separate page (or half page) and you must include your name on each page (or half page). Even though I will not collect book problems, I will expect that you understand them for quizzes and exams. So, you should only look at the solutions if you are really stuck and try to only look as far into the solution as you need. All odd problems have solutions in the back of the text.

Late homework will not be accepted, except in extreme cases.

I reserve the right to give unannounced quizzes and make changes in the syllabus that I feel are necessary. Any changes in the syllabus will be announced in class and posted to the website.

First Homework Assignment

Book Problems	**"Collected Set"**	**Due Date**
Read Chapter 0 (Quiz Sept 3), 1.1, 1.5, 1.8, 1.9, 1.10, 1.19, 1.21, 1.41, 1.52, 2.1, 2.2, 2.3, 2.5, 2.8	Hwk1 pdf handed out	Sept 3