

MATH 310 Spring 2008

Instructor: Dr. Kathryn Truman
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Office Hours: TBA

Course Web Page: <http://www.math.umd.edu/~rendke/math310/>

Classroom and Time: Mth 1308, TuTh 12:30-1:45

Text: MATHEMATICAL THINKING, D'Angelo

Prerequisite: Math 141 (Calculus II)

Co-requisite: Math 241 (Calculus III), please also note that Math 240 (Linear Algebra) 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 series in more detail as well. We will also spend time gaining a deeper understanding of the real numbers as a field.

Grading:

Three 1.25 hour Exams (100 pts each)	300 pts
Daily Homework (10pts each)	180 pts
Weekly Quizzes (15pts each)	120 pts
Final (Cumulative)	150 pts
Total	750 pts

I expect to give grades based on cutoffs of 90%, 80%, 70%, and 60%. There will be no curving during the semester. **IF** any curving is done it will be only for the course totals and the final grades.

Make-up exam and quiz policy: Exam or Quiz 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.

Homework will be assigned and due daily. I expect to assign somewhere between 6 and 12 problems each day, but I will only collect 3 problems the next class period. I will not specify in advance which problems will be collected. For this reason each problem must be done on a separate page and you must include your name on each page. Late homework will not be accepted, except in extreme cases. Quiz and exam problems will be similar to assigned homework problems. The text has hints to many problems. To learn best, you should not look at the hints unless you are really stuck. I reserve the right to give unannounced quizzes and make changes in the syllabus that I feel are necessary. These changes will be announced in class and posted to the website. It is advisable to keep up with class work and attend class regularly. Extra help is available during my office hours and by appointment.

Chapters and sections to be covered (tentative):

I intend to cover Chapters 1, 2, 3, 4, 13 and 14 thoroughly and parts of Chapters 8, 10, 12 and possibly 15. I hope to hand out a more detailed schedule a week or so into the semester.

Exam 1:

Chapter 1 and 2

Exam 2:

Chapter 3, 4, 8, 10, and 12

Exam 3:

Chapter 13, 14, and possibly 15

Final:

Cumulative - so all material covered

Honor Code: You should be familiar with the University's policies on Academic Integrity, including the Honor Pledge. In this course: you are cheating on homework if you copy someone else's work. It is fine to have someone explain a problem to you, or show you her work – you just have to write a solution from your own understanding, without simply copying. Copying does not benefit you, as you are unlikely to be able to reproduce the answer on a quiz or exam. Homework is a very important part of this course, but your overall understanding is more important.

Homework 1 (due January 31): (Chapter 1) 1.1, 1.5, 1.6, 1.7, 1.9, 1.10, 1.13

Homework 2 (due February 5): (Chapter 1) 1.14, 1.18, 1.21, 1.24, 1.25, 1.32, 1.38, 1.41

Homework 3 (due February 7): (Chapter 1) 1.42, 1.45(a,c), 1.47, 1.49, +possibly more to be announced in class and on the web page.

Quiz 1 (February 7): Covers all of Chapter 1.