

## MATH 307 - WINTER 2011

**Instructor:** Dr. Kate Truman

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**Office:** Math 1113

**Office Hours:** 9:30-10:00 M-F, 2:00-2:40 MWF

**Course Web Page:** <http://www.math.umd.edu/~rendke/Math307/>

**The webpage is the definitive source for up to date information about the class.**

**Classroom and Time:** Math1313 M-F 10:00-12:00

**Text:** *Mathematical Proofs* by Chartrand, Polimeni and Zhang, 2<sup>nd</sup> edition

*Advanced Calculus* by Fitzpatrick, 2<sup>nd</sup> edition, AMS

**Prerequisite:** Math240, Math241

MATH307 is designed to be a lead in course to MATH410 (Advanced Calculus). It is approximately 2/3 of MATH310. 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. 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 half 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:

Two take home hour Exams (75 pts each)	150 points
Daily Homework (30 pts each)	300 points
Daily Quizzes (15 pts each)	135 points
Final Exam	165 points
<b>Total</b>	<b>750 points</b>

**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. For the take home exams, you are on your honor not to use outside help or materials - i.e., just you, your brain, pencil and paper, and to complete the exam in one hour. Your goal is to test yourself to determine whether you know the material well enough to take an exam on it. Taking more time or getting help from others will only hurt you in the long run, since you will not know whether you can do the material yourself.

**Make-up exam (quiz) 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.

**Homework:** I *encourage* you to work in groups on the homework assignments. Homework will be assigned and due daily. I expect to assign somewhere between 10 and 16 problems each day. I will not collect odd problems (the solutions are in the back), but other than that I will not specify in advance which problems will be collected. For this reason and because there are multiple graders each problem must be done on a separate page and you must include your name on each page. If you do not do this it will take longer for your homework to be graded and returned to you. Late homework will not be accepted. This course is very short, so don't get behind. Quiz and exam problems will be similar to assigned homework problems. I reserve the right to make changes in the syllabus that I feel are necessary. These changes will be announced in class and posted to the website. It is necessary to keep up with class work and attend class every day. Extra help is available during my office hours and by appointment. All assignments are tentative until given in class - you are responsible for checking this page or asking me for updates if you miss class.

**Rough Schedule:**

Date	Sections Covered
Jan 3	1.1-1.3, 1.6, 2.1, 2.2
Jan 4	2.3-2.9
Jan 5	2.10, 3.2, 3.3, read 3.4 and 3.5
Jan 6	4.1, 4.3-4.5
Jan 7	5.1, 5.2, 5.4, 5.5, read 5.3
Jan 10	6.1, 6.2, 7.2
Jan 11	7.3, 9.1, 9.3
Jan 12	9.4, 9.5, F-Ch 1
Jan 13	F-Ch 1, 2
Jan 14	F-Ch 2
Jan 17	MLK Holiday
Jan 18	F-Ch 2
Jan 19	F-Ch 3
Jan 20	Review
Jan 21	Final Exam

**First Few Homework Assignments:**

Assignment Date	Odd (not collected)	Even/Extra Problems (collected from)	Due Date
Jan 3	1.1, 1.11, 1.19, 2.3	1.2, 1.8, 1.18, 1.20, 1.24, 1.52, 1.57, 2.2, 2.4, 2.8, 2.56	Jan 4
Jan 4	2.11, 2.15, 2.19, 2.31, 2.37, 2.39	2.10, 2.14, 2.16, 2.20, 2.24, 2.28, 2.30, 2.36, 2.40, 2.57	Jan 5
Jan 5	2.43, 2.51, 3.11, 3.17, 3.27	2.46, 2.48(a-h), 2.61, 3.6, 3.12, 3.16, 3.42, 3.46	Jan 6
Jan 6	4.3, 4.5, 4.25, 4.31	4.4, 4.18, 4.20, 4.28, 4.30, 4.38, 4.50, 4.61, 4.66, 4.68	Jan 7
Jan 7	5.13, 5.27*, 5.33, 5.35	5.2, 5.4, 5.12, 5.16, 5.22, 5.24, 5.38, 5.43, 5.45, 5.46, 5.32, 5.36	Jan 10