

MATH 307 - WINTER 2014

Instructor: Kate Truman

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Office: Math 1113

Office Hours: 9:30-10:00 in EGR 0110, 12:00-12:30, M-F in MTH 1113

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: EGR 0110 M-F 10:00-12:00

Text: *Mathematical Proofs* by Chartrand, Polimeni and Zhang, 3rd edition

Advanced Calculus by Fitzpatrick, 2nd 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, in particular, sequences, and as time permits continuity, will be studied.

Grading:	One take home exam	100 points
	Daily Homework (20 pts each)	200 points
	Daily Quizzes (10 pts each)	100 points
	Final Exam	200 points
	Total	600 points

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. 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 exams in the time given for it. 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 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. As per the new University illness policy, if you miss a class due to illness, you must make a reasonable effort to contact me prior to class (by email is fine) and provide me with a note signed by you detailing the date and reason for absence at the next class attended. If you miss more than one class or an exam you will be required to provide documentation signed by a health care professional.

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 specify in advance which problems will be graded, though all problems will be collected. Because there are two or three graders for each assignment each problem set (labeled 1, 2 or 3) must be done on a separate set of pages 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. 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 the web page or asking me for updates if you miss class.

I reserve the right to make changes to this syllabus as I deem necessary. All changes will be announced in class and posted to the webpage. It is your responsibility to contact em or check the webpage for updates if you miss class. I will also use the email list to contact you with information. Please remember to check the email you have registered with the University daily.

Rough Schedule: I expect you to read the textbook. You should at least skim the sections/chapters listed before class. This will allow us to move more quickly through the definitions and complete more examples during class. It will also allow more time for homework questions.

Day	Sections Covered	Date	Sections Covered
Day 1	1.1-1.3, 1.6, 2.1-5	Day 8	review Ch9, F-Ch 1
Day 2	2.6-10	Day 9	F-Ch 1, Ch 2
Day 3	3.1-5, 4.1, 4.3, 5.1-3	Day 10	F-Ch 2
Day 4	4.4-5, 5.4-5, maybe Ch 6	Day 11	F-Ch 2
Day 5	6.1-2, 7.2	Day 12	F-Ch 3
Day 6	7.3, 9.1,3, maybe 9.4-5	Day 13	Review
Day 7	9.4-5	Day 14	Final Exam

First Few Homework Assignments: These will be adjusted as necessary to move problems back (or forward) depending on what we cover each day.

Date Given	Problems	Date Due
Jan 2	1.1, 1.2, 1.4, 1.8, 1.9, 1.10, 1.20d, 1.21, 1.25, 1.28, 1.29, 1.58, 1.70, 1.72, 2.2, 2.4, 2.11, 2.13, 2.14, 2.16, 2.21, 2.24, 2.25, 2.27, 2.32ab	Jan 3
Jan 3	2.39ab, 2.40c, 2.42, 2.48, 2.50, 2.51, 2.52, 2.54, 2.59, 2.62, 2.67, 2.68, 2.70, 2.73, 2.78, 2.88, 2.89, 2.91, 2.100, 3.1, 3.6	Jan 6
Jan 6	Ch 3, 4.1, 4.3, 5.1-3	Jan 7
Jan 7	4.4-5, 5.4-5, maybe Ch 6	Jan 8
Jan 8	Ch 6, Ch 7	Jan 9
Jan 9	Ch7, 9.1,3 maybe 9.4-5	Jan 10