M365C: Real Analysis I (Unique number: 53690)

Professor: Dan Freed, RLM 9.162.

Lectures: Tuesday, Thursday 11:00–12:15, RLM 5.114.

Professor’s Office Hours: Tuesday 2:30–3:30 and Wednesday 2:30–3:30. I will be in my office tomorrow starting at 2:00. Also, I would like to meet each of you, so please come by in the first few weeks of class. Office hours are an excellent opportunity to ask questions, learn more, seek advice, etc. Take advantage in all of your classes!

TA: Jacob Carruth, RLM 9.132.

Class Web site: http://www.ma.utexas.edu/users/dafr/M365C. Homeworks and partial solutions will be posted here, as will additional readings and links to web pages.

Text: Principles of Mathematical Analysis by Walter Rudin, 3rd edition. We will cover approximately the first seven chapters of the text during the semester, though some sections will be skipped. In lectures I will introduce ideas, notations, examples, etc. which are not in the text. Therefore, the lectures are an integral part of the class and you should take notes. Also, reading the text in advance of the lectures is very helpful.

Homework: The only way to learn mathematics is to do mathematics! So you will have plenty of problems to work on. I encourage you to form study groups, help each other, and to seek help elsewhere (friends, parents) if you like. The best places for help are office hours. An optimal strategy is to try each problem yourself first, then get together with others to discuss your solutions and questions, and finally write up the solutions yourself. Please work out problems neatly—don’t hand in your scratch work. One of the goals is to sharpen your mathematical writing skills, and homework is an ideal place to practice. Homework will be collected at the beginning of the Thursday lecture. No late homework is accepted. Homework and some solutions will be posted on the website.

Proof presentation: At some point during the semester you will come to my office, normally during office hours, and present a problem from the homework to me on the blackboard. It will be very brief, 5–10 minutes. Appropriate problems will be starred throughout the semester, and you’re free to choose among them.

Tests: There will be 2 midterm exams and a final exam. They are tentatively scheduled during class on the February 25 and April 12. The final exam is May 17 at 9:00 AM. You must take the final exam. There are no makeup exams for any reason (see below).

Grading Scheme: You will receive 6 grades: a homework grade, proof presentation completion grade, the 2 midterm exams, and the final which counts double. I will drop the lowest of the 4 test grades and average the remaining 4 grades to determine 90% of your overall course grade; the proof presentation is the remainder. (The lowest two weekly homework scores will be dropped to determine your overall homework grade.) The policy of dropping the lowest grade justifies the no makeup policy.

Policy: The University of Texas provides appropriate academic accommodations for qualified students with disabilities. For more information, contact the Office of the Dean of Students at 471-6259, 471-6441 TTY. If you plan on using accommodations, you need to notify your Instructors early in the semester.

Remark: Above all I hope you have fun in this course. I’ll give you interesting, sometimes challenging, problems in addition to the routine problems you must do to develop your technique. When you get frustrated please seek help—from classmates, from me, or from whomever you have around to help. If you never get frustrated, then please come see me; I’ll arrange for something more challenging. (I’m serious.)