MATH 554 (Analysis I), Fall 2019

Meeting Information:
Classroom Location: Close-Hipp 534
Days and Times: MWF 9:40AM–10:30AM

Instructor Information
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Office Hours: MWF 10:45AM–11:45AM or by prior appointment
Course Homepage: people.math.sc.edu/xfliu/teaching/Fall2019/math554.htm

Textbook

Introduction to Analysis, 5th Edition, by Edward D. Gaughan.

Prerequisite

Completion of Math 300 with a grade of C or better. (But, in practice, most students in this course should have a C or better in, at least one of Math 550, 544, 520 or 534).

Subject Materials

This course will cover the materials presented in Chapters 0-5 of the text. One of the goals of this course is to provide the theoretical foundation of many results used in Calculus. In Calculus the emphasis is on how to calculate limits, derivatives and integrals, while here the emphasis will be on the definitions, theorems and proofs, which show the justification of what we do in Calculus.

Homework

Homework will be assigned for each section, and will be collected regularly (Wednesday or Friday). Late homework will not be accepted, and no make-ups for missing homework. Details about this will be given as appropriate. One lowest homework will be dropped from homework grade calculation.

Exams

There will be two midterm exams and a comprehensive final exam. The exams are "closed book": no books, no notes, no calculators, no computer or equivalent technology, etc. There are no early exams. A late exam is only possible for a written legitimate documented reason. Note that student athletes, participating in a USC athletic event and with appropriate documentation, are exempt from this rule. You must take your exams with the lecture for which you are registered.

Grades

Homework (30%) (One lowest dropped)
Exam 1 (20%), Friday, September 27, 2019
Exam 2 (20%), Friday, November 1, 2019
Final (30%), Monday, December 9, 2019 Chapters 0-5

The dates and materials for two mid-term exams are tentative and subject to change as announced in class.

Reading

Reading the textbook **in advance** of the lecture is strongly encouraged. Benefits of this preparation include obtaining a familiarity with the terminology and concepts that will be encountered (so you can distinguish major points from side issues), being able to formulate questions about the parts of the presentation that you do not understand, and having a chance to review the skills and techniques that will be needed to apply the new concepts.

Learning Outcome

Students will master concepts of real analysis and learn how to do proofs. Successful students in Analysis I will become knowledgeable about and will master concepts of real analysis and will improve their ability to write and read mathematical proofs, particularly those related to the least upper bound axiom, compactness, sequences, continuity, uniform continuity, differentiation, Riemann integration, and the fundamental theorem of calculus.

Attendance

Attendance at every class meeting is important - and expected.

Cell Phone and Computer Policy

Please remember to turn off or silence your cell phone prior to class. No texting allowed during class. Computers can only be used to make notes during class, and playing computer games during class is not tolerated.

Graduate Credit

Students taking Math 554 for graduate credit will have additional or some different questions on tests.

Academic Dishonesty

Cheating and plagiarism in any form is not tolerated. If a student is caught cheating, I will follow the guidelines as set forth in the USC Honor Code and other University guidelines.