MATH 5615H, Lecture 003, Fall 2019, MWF 12:20-1:10, Vincent Hall 207

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Office hours: MWF 2:30-3:20 (subject to change)

Course title and a brief description: Honors: Introduction to Analysis I

This is the first semester of one-year long course on real analysis at the honors level. The plan is to revisit basics of real numbers, sequences and series, functions of a real variable, continuity, derivatives, and the Riemann integral. Much of this material has been covered in calculus classes and the emphasis here is on a deeper understanding of the foundation with mathematical rigor. An important aspect of the course will be learning to read, understand, appreciate, and write rigorous mathematical theorems and proofs.

Text: Terence Tao, *Analysis I*, Springer Texts and Readings in Mathematics 37, 2017 (3rd edition).

The text is available as an e-book through Springer and our library. You are encouraged to purchase a printed copy. Note that the printed copy through Hindustan Book Agency is practically identical to the Springer e-book. When purchasing the printed copy, be aware that some ship from India with significant shipping delays. Many copies are available for instance on http://abebooks.com.

Assignments: Homework assignments will be posted on the web page www.math.umn.edu/~jiaping and collected in class on the following Monday.

One homework (the worst grade or a homework missed for any reason) will be dropped at the end. No late homework will be accepted. You may discuss homework problems with other students, however, you are supposed to work out and write down the solutions yourself. Please write complete solutions clearly on one side of letter-size sheets. Questions or objections to grading must be brought up within a week after the graded work is returned to you.

Exams: There will be three one-hour in class exams covering appropriate parts of the material. Books and notes are allowed for the exams.

Make-up exams are only possible for verified legitimate reasons as defined by the University policy on makeup work, and then only before the actual exam, except when unavoidable.

Exam dates: Wednesday, October 9, 2019; Wednesday, November 13, 2019; Wednesday, December 11, 2019;

Grading scheme: homework 25%, three midterm exams 75% (25% each).

Incomplete will only be assigned at extraordinary circumstances (such as hospitalization), and only if a major part of the class work has been completed. Academic dishonesty in any portion of the course shall be grounds for assigning a grade of F or N for the entire course.