September 24, 2014

**MATH 131AH - FALL 2014**

MWF 11:00 MS 5127, and
Tues 11:00 MS 5127

**Office hours:**
- J. Garnett MW 4:00 in MS 7941, and by appointment
- Casey Jao, TBA, MS 6154

**Texts:**
- T. Tao, Math 131AH notes, Week 1 (available as a handout the first day of class and on the web at http://www.math.ucla.edu/~tao/131ah.1.03w/).

**Material:** The object of the course is to get you to understand the logical foundations of analysis, including basic calculus. Proofs will be important, and the best attitude to bring to this class is to not believe any theorem that you don’t know how to prove. First we will have a brief introduction to elementary logic. Next we will cover the construction of the rational numbers from the Peano axioms for the natural numbers, as in Tao’s notes, Week 1. Then we will follow the first six chapters of Rudin.

**Grade:** Homework 40%, final 40%, midterm 20%. You must present at least one homework problem at the blackboard in quiz section.

The final exam is 8:00 - 11:00 December 18. No books, notes, computers or phones are allowed, but you may bring a 4-6 file card with things written on both sides.

**Prerequisite:** 33B, 32B and my permission.

**Homework:** Assigned weekly, due at the beginning of quiz section the following week. The first assignment will be due October 14

You may work on the homework problems together, but you must write up your solutions alone. You will be asked to present your homework solutions at the blackboard in class.

John Garnett

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