

September 2, 2009

## **MATH 245A - FALL 2009**

MWF 1:00 MS 6629, and

Tuesday 1:00 Kinsey Pavillion 1200 B (new Physics building behind IPAM)

First Lecture THURSDAY Sept. 24

### **Office hours:**

J. Garnett: MWF 11:00 in MS 7941

Josh Zahl: Tu. Wed. 2:00 in MS 6154

**Text:** E. M. Stein and R. Shakarchi, *Real Analysis, Measure Theory, Integration, and Hilbert Spaces*, (0-691-11386-6) (required).

G. B. Folland, *Real Analysis, Modern Techniques and Their Application, Second Edition*, (0-471-31716-0) (recommended now but required for 245B).

We will cover Chapters 1 - 4 of Stein-Shakarchi in 245A. In 245 B and C we will cover Chapters 5 - 7 of Stein-Shakarchi and Chapters 4 - 9 if Folland.

**Grade:** Homework 40%, final 40%, midterm 20%.

**Homework:** You must present at least one homework problem at the blackboard in quiz section. There will be 6 - 8 homework sets, including some very challenging problems.

**Homework I.** Due Oct. 9 in class: Stein-Shakarchi, page 37. Exercises 2, 3, 4, 5, 6, 7, 8, 9, 11, 13, 16, 17, 18.

**Homework II.** Due Oct. 19, in class: Page 37. Exercises 10, 20, 21, 22, 23, 27, 29, 35. Page 46. Problems 2, 3, 5.

**Homework III.** Due Nov. 2, in class: Page 89; Exercises 1, 4, 5, 8, 10, 11, 13, 14, 15, 17, 18, 19. Page 96; Problems 1, 2, 3.

John Garnett