March 17, 2010

MATH 245C - SPRING 2010

Time and Place: MWF 1:00 MS 6221.

Office hours: J. Garnett, MWF 11:00 in MS 7941.

Texts:
E. M. Stein and R. Shakarchi, Real Analysis, Measure Theory, Integration, and Hilbert Spaces, (0-691-11386-6) (required for 245B and 245C).

Topics: We will finish all topics from Stein-Shakarchi that we have not yet covered, and almost all such topics from Folland. In particular, we will cover Chapters 5 and 7 of Stein-Shakarchi and Chapters 8, 9 and 11 of Folland.

Prerequisites: 245B or instructors permission. Some knowledge of complex analysis will be helpful, but not absolutely necessary.

Grade: Maximum of (homework 40%, take-home final 60%) and (homework 50%, take-home final 50%).

Take-Home Final Exam: Friday May 28 after class, returned Monday June 7, 5:00 PM in my office.

Homework I. Due April 12 in class: Stein-Shakarchi page 193: 30, 32, 34, 35; page 202: 6, 7, 8; page 251: 3, 4, 6, 7, 8.

Homework II. Due April 28 in class: Stein-Shakarchi page 253: Exercises 11, 12, 14, 15, 16, 17, 18, 20; page 259, Problems 1, 2, 3, 5.

Homework III. Due May 12 in class: Stein-Shakarchi page 380, Exercises 4, 7, 8, 9, 10, 11, 13, 16, 18, 20, 22, 23.