

Math 617 CRN 24996 Winter, 2014
Linear Functional Analysis

PART I. GENERAL INFORMATION

1. **Classroom and Meeting Time:** Deady 210; MWF 9:00-9:50am
2. **Text Book:** G. Folland, Real analysis, 2nd ed., John Wiley, 1999
3. **Instructor:** Peng Lu
4. **Office Hours:** MWF 10:00-10:50am or by appointment
5. **Office and Phone Number:** Deady Hall 304, 346-4727
6. **Email Address:** penglu@uoregon.edu

PART II. OUTLINE

1. **Course plan:** We begin with linear functional analysis (Banach spaces, Hilbert spaces and bounded linear operators) from Chapter 5. We continue to L^p -spaces (a selection of topics from Chapter 6). We plan to discuss Fourier transform and Fourier series from Chapter 8. If time permits we will discuss distributions and Sobolev spaces from Chapter 9.

2. **Homework:** Homework will **due** on each **Wednesday** in class on the material of the previous week (about 7 homework). Group work on homework is encouraged, but each student must individually write and turn in her/his own assignment.

Late homework will not be accepted.

3. **Exams:** Midterm exam: Wednesday, February 12, 2014
Final exam: 10:15am-12:15, Friday, March 21th, 2014
No makeup for exams except there is a doctor's note

4. **Grade:** Homework: 35%, Midterm exam: 30%, Final exam: 35%