Math 27200 - Section 20
Basic Functional Analysis

Instructor: Chris Henderson  
Office: Eckhart 228

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Office: Eckhart 27 (OH held in classrooms listed below)

Course Web-page: http://math.uchicago.edu/~henderson/2019/27200/27200.html

Schedule: TTh 9:30 - 11:00 am in Eckhart 308.


Office Hours: (CH) M,F: 1:30-2:30 pm; (MD) M: 4-5 pm in E207, F: 3:30 - 4:30 pm in E312.
Problem Sessions: Th: 5- 6 pm (E312)

Math 27200 is a first course in functional analysis covering the main principles of the subject. The central objects for the course are Banach and Hilbert spaces, with a particular emphasis on the $L^p$ spaces as the quintessential examples of these. As such, a basic understanding of the Lebesgue integral is required. The focus is on stating, proving, and understanding the closed graph theorem, the open mapping theorem, and the uniform bounded principle.

Grading: Your final grade will be calculated as follows:

- **Homework : 15%** - Homework will be due in class on Tuesdays. Homework problems will be posted on the course web-page site. Late assignments will not be accepted except under extreme circumstances. Your lowest homework grade will be dropped to balance the strictness of this policy and life’s uncertainties (illness, etc.). You are encouraged to work collaboratively on the assignments with your fellow classmates but solutions should be written up independently. Solutions will be graded for both technical correctness and coherence. Homework must be stapled.
- **Midterm (× 2): 25%** - These will be in-class exams whose dates will be announced at a future time (roughly, one during fourth week and one during seventh).
- **Final : 35%** - Preliminary time/date is Thursday, June 13th, 10:30 am - 12:30 pm. (Date/time is set by the registrar and is non-negotiable – see department policy below.)

Department Policy: It is the policy of the Department of Mathematics that the following rules apply to final exams in all undergraduate mathematics courses:

1. The final exam must occur at the time and place designated on the College Final Exam Schedule. In particular, no final examinations may be given during the tenth week of the quarter, except in the case of graduating seniors.
2. Instructors are not permitted to excuse students from the scheduled time of the final exam except in the cases of an Incomplete.

The policies outlined above are subject to reasonable change at instructors discretion. In the event of a change, written or verbal notice will be given.