

MATH 362A - FUNCTIONAL ANALYSIS - FALL 2014

Instructor: Jesse Peterson

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Office: SC 1414

Office Hours:

Mondays: 3:00-3:50pm

Wednesdays: 3:00-3:50pm

Fridays: 3:00-3:50pm

Or by appointment

Website: <http://www.math.vanderbilt.edu/~peters10/teaching/fall2014/math362A.html>

Prerequisites: An introductory course in Real Analysis.

Textbook:

Methods of Modern Mathematical Physics I: Functional Analysis, by Michael Reed and Barry Simon.

ISBN: 0125850506.

Description:

This course will be an introduction to techniques from functional analysis. We'll study locally convex topological vector spaces, Banach spaces, and Hilbert spaces as well as operators on such spaces. We'll also discuss applications of these techniques to ergodic theory, differential equations, and locally compact groups.

Grades:

Grades will be based on class attendance/participation, assigned homework and in class presentations.

Seminar:

The Subfactor Seminar is held each Friday from 4:10-5:30pm in SC 1432. This seminar focuses on topics from von Neumann algebras, subfactors, and related areas. If students feel that they might be interested in operator algebras, it is the best opportunity to get a feel for the subject. There is also beer and pizza afterwards.