

COURSE ANNOUNCEMENT
FALL 2007
MAT 578
Functional Analysis

Instructor: Jack Spielberg
Time: 1:40 - 1:55 Tuesday & Thursday
Location: Farmer 212
Schedule Line #: 80252
Credits: 3

Course Description: In this course we will study linear operators on Hilbert space. The main goal will be the spectral theorem for bounded normal, and unbounded self-adjoint, operators. On the way we will give the general background necessary on Banach algebras, compact operators, Fredholm theory, and rudimentary C*-algebra theory.

Prerequisites: general topology, measure theory (MAT 473 or 570), and basic functional analysis in topological vector spaces (boundedness; Hahn-Banach, open mapping, closed graph, uniform boundedness theorems; Hilbert space; local convexity).

The lectures will be self-contained, for the most part, but I will use Arveson's book as a guide. (Any) other books on functional analysis will also be useful.

Recommended References: Arveson, A Short Course on Spectral Theory
Conway, Functional Analysis
Rudin, Functional Analysis
Reed & Simon, Functional Analysis

Questions should be addressed to the instructor at 965-3286, or by email to jack.spielberg@asu.edu.