

*COURSE ANNOUNCEMENT*

SPRING 2008

MAT 571

***Real Analysis II***

**Instructor:** Jack Spielberg  
**Time:** 1:40 – 2:55 Tuesdays & Thursdays  
**Location:** LL 265  
**Class #:** 31169  
**Credit Hours:** 3

**Course Description:** This is the continuation of MAT 570. Topics to be covered include Fourier analysis in  $\mathbb{R}^n$  and  $\mathbb{Z}^n$ , an introduction to general topology, and those portions of functional analysis involving topological vector spaces (including Banach spaces, Hilbert space, local convexity, open mapping theorem, closed graph theorem, uniform boundedness principle, Hahn-Banach theorem, and the Riesz representation theorem). This course is a suitable preparation for a course on operator theory and spectral theory.

For most of the course we will follow the text of Folland. Notes on topological vector spaces will be posted for the last part of the course.

There will be weekly problem sets and a final examination.

**Prerequisites:** MAT 570, or some knowledge of measure theory (and instructor approval).

**Textbook:** *Real Analysis, Modern Techniques and their Applications*, Gerald Folland, Wiley.

Questions about the course are welcome, and should be directed to the instructor, at (96)5-3286 or jack.spielberg@asu.edu