COURSE ANNOUNCEMENT

SPRING 2008

MAT 579

Functional Analysis II

Instructor: John Quigg
Time: 12:15 – 1:30 Tuesday & Thursday
Location: ECG 227
Class #: 31171
Credit Hours: 3

*** NOTE THE NEW TIME AND PLACE! ***

Course Description: This is the second half of a two-semester sequence in functional analysis, which is the study of vector spaces equipped with a compatible topology, and continuous linear maps among them. In MAT 579 we will cover C*-algebras and C*-dynamical systems. We will not go very deeply into C*-algebras, only far enough to allow a reasonable study of group C*-algebras and crossed products of C*-algebras by actions of locally compact groups.

Prerequisites: The prerequisite listed in the course catalog is, unsurprisingly, "MAT 578 or instructor approval". I will assume familiarity with bounded operators on Hilbert space, in particular the spectral theorem. You will also need a good course in real analysis (including integration in abstract measure spaces), and an acquaintance with basic topology (including, e.g., locally compact Hausdorff spaces and the Riesz Representation Theorem for bounded linear functionals on C(X)).

Textbook: No required text, but for the introduction to C*-algebras I will freely appeal to standard texts such as:

- "C*-Algebras" by Dixmier,
- "C*-Algebras and Operator Theory" by Murphy,
- "A Course in Functional Analysis" by Conway,
- "Functional Analysis" by Rudin,

and for the C*-dynamical systems I will cover what I can from the first 3 chapters of a new book

- "Crossed Product C*-Algebras" by Dana Williams.