

Real Variables II

MATH 7351

Syllabus

Class: Dunn Hall room 203, MWF 11:30am-12:25pm

Instructor: Fernanda Botelho
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Office 363 in Dunn Hall
(901)-678-3131

Office hours: MW at 10:00; or by appointment

Textbooks (recommended):

1. *Real Analysis*, H.R.Royden and F.M. Fitzpatrick, Prentice Hall
2. *Course in Real Analysis* by Weiss

Topics:

Review of metric spaces and basic results from Topology. Topics from basic Functional Analysis. The Hahn Banach theorem, uniform boundedness principle, closed graph theorem and applications. Bounded operators on Hilbert spaces and between Banach spaces.

General measure theory, signed measures, the Radon-Nikodym theorem, product measures, and the Fubini's theorem

Evaluation: Your grade in the course will be based on homework assignments, class presentations, an in-class mid-term and a take-home final exam.

First class: January 20, 2015

Last class: April 29, 2015

Spring Break: March 9-15 (no classes)

