

# Real Analysis - Math 524/525/526

## **INSTRUCTOR INFORMATION:**

Instructor: Tatiana Toro

Office: Padelford C-343, Phone: 543-1173.

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Office hours: Monday 1:30-2:30, Wednesday 9:15-10:15 or by appointment.

## **TA INFORMATION:**

TA: Weiyang Ning.

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Office hours: or by appointment.

## **TEXTS:**

- Real Analysis, Measure Theory, Integration & Hilbert Spaces, Stein & Shakarchi (required)
- Real Analysis, Folland, 2nd Edition (recommended)

## **RESERVE LIST:**

- Real Analysis, Measure Theory, Integration & Hilbert Spaces, Stein & Shakarchi.
- Real Analysis, Folland, 2nd Edition.
- Real Analysis, Royden, 3rd Edition
- Real and Abstract Analysis, Hewitt & Stromberg.
- Real and Complex Analysis, Rudin.
- Functional Analysis, Rudin.

In these three courses students are expected to learn the fundamental tools needed to work in the general field of analysis. The sequence includes: Measure and Integration and Functional Analysis. The following syllabus should give you a reasonable idea of what lies ahead this quarter.

**COURSE SYLLABUS:**

- Lebesgue measure & abstract measure (Chapters 1 and 6)
- Integration (Chapters 2 & 6)
- Differentiation and Integration (Chapter 3)
- Hilbert Spaces (Chapter 4)

**IMPORTANT DATES:**

- Midterm: Friday November 12th, 2010
- Final exam: Wednesday December 15th, 2010, 2:30-5:30 pm.

**GRADING POLICY:**

- Homework 40%. There will be 9 weekly homeworks due on Wednesday at the beginning of class. No homework due on Wednesday November 10.
- Midterm 20%
- Final Exam 40%.