

# MATH 7337 SYLLABUS

FALL 2012

Course Number: Math 7337 A

Course Name: Harmonic Analysis

Lecture Time: TuTh 3:05-4:25 p.m.

Lecture Room: Skiles 154

Instructor: Dr. Christopher Heil  
Office: Skiles 109  
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Office Hours: TuTh 4:30-5:30 and by appointment.

Course Web Page: <http://www.math.gatech.edu/~heil>

Prerequisite: Math 6337 (Real Analysis I)

Recommended Math 6580 (Introduction to Hilbert Spaces)

Prerequisites: Math 4317, 4318 (Undergraduate Real Analysis)

Text: Web notes

Material: Chapter 1: The Fourier Transforms on  $L^1(\mathbf{R})$   
Chapter 2: Fourier Series and the Abstract Fourier Transform  
Chapter 3: The Fourier Transforms on  $L^2(\mathbf{R})$   
Chapter 4: Distributions  
Chapter 5: Measures  
Chapter 6: Time-Frequency Analysis  
Chapter 7: Discrete Time-Frequency Analysis

**Academic Dishonesty.** All students are expected to comply with the Georgia Tech Honor Code. Any evidence of cheating or other violations of the Georgia Tech Honor Code will be submitted directly to the Dean of Students. The institute honor code is available at <http://www.osi.gatech.edu/plugins/content/index.php?id=46>

**Grading.** We will have 6 homework assignments, due approximately every other week and worth 50 points each, and a (take-home) final exam, also worth 50 points.

Homeworks should be written on the front side of the page only, and must be stapled. Late homeworks will not be accepted.