MATH 776
Measure and Integration
Spring 2019, Section 001

Instructor : David Singman

Office: Exploratory Hall, Room 4203

E-mail and my web page: My email address is dsingman@gmu.edu and my web page is at **http://math.gmu.edu/∼dsingman/**. There you will find a link to the course web page.

Office hours: TTh, 10:30-11:45

Text: *Real Analysis: Measure Theory, Integration, & Hilbert Spaces, Princeton Lectures in Analysis III,* by Elias M. Stein & Rami Shakarchi, Princeton University Press, 2005. This is an excellent text and we will follow it closely. But as with most math texts, even excellent ones, there are lots of details in the proofs that need to be filled in. So the proofs given in class will be typically more detailed.

Course web site: You will find a link to the course web site at the bottom of my web page (indicated above). You are responsible for often checking the homepage of the site for updates. On it I will post material relevant to the course, such as this syllabus, lecture outlines, homework assignments, various announcements, etc.

Course: The main tools of measure theory from the point of view of real and complex analysis will be presented. The topics include Lebesgue measure, Lebesgue integration, differentiation and Lebesgue integration, abstract measure and integration theory.

Lecture Outlines: These are the slides which we will go over together in class. You will find them posted on the course web site. They consist essentially of the main definitions and theoretical points and statement of theorems (without proof). I will do the proofs of the theorems in class on the whiteboard. I will post a few lecture outlines in advance of the associated lecture, so you will profit by reading through them and reflecting on them prior to the lecture.

Grading: Homework assignments and class participation(50%), midterm exam (20%), final exam (30%).

Date of midterm exam: Thursday, March 21

Date of final exam: Thursday, May 9, 10:30am-1:15pm.