MATH 776: Measure and Integration

Course Syllabus for the Spring of 2018

Instructor: Prof. Flavia Colonna

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Office Hours: TR 1:30 p.m.-3:00 p.m., or by appointment.

Prerequisite: Math 675 (Linear Analysis) or permission of instructor.

Textbook: H. L. Royden and P. M. Fitzpatrick, *Real Analysis*, 4th ed., Prentice Hall, 2010. Available free of charge online at http://math.harvard.edu/~ctm/home/text/books/royden-fitzpatrick/royden-fitzpatrick.pdf

Material to be covered: Chapters 2-8, a selection of topics from chapters 12-14, and chapters 17 and 18. Topics include Lebesgue measure and integration on the real line, L^p spaces, some important theorems from Banach space theory, general measure spaces and integration over general measure spaces.

Homework: Homework will be collected every other week. Although not all of it will be graded, you are expected to solve all assigned HW problems.

Presentation: Each student will prepare an oral presentation on a course topic and be prepared to answer questions on that topic.

Exams: There will be a take-home final exam assigned on the last week of classes. The due date is Thursday May 10 at 1:30 pm.

Grading Policy:

Homework Problems:	50%
Presentation:	15%
Final Eaxam:	25%
Class Participation:	10%