Department of Mathematics & Statistics
Concordia University

MATH 467 (MAST 669 & MAST 837C)

Measure Theory

Winter 2015

Instructor: Dr. G. Dafni, Office: LB 927-15 (SGW), Phone: 848-2424, Ext. 3216
Email: galia.dafni@concordia.ca
Webpage: http://www.mathstat.concordia.ca/faculty/gdafni/

Office Hours: _____

Textbook: *Real Analysis*, by H.L. Royden, Macmillan, 1988 (3rd or 4th Edition).

Other Textbooks: *Real Analysis, Measure Theory and Integration,* by E.M. Stein and R. Shakarchi, Princeton University Press, 2005.

Functional Analysis, by E.M. Stein and R. Shakarchi, Princeton University Press, Macmillan, 2011.

Topics: The main part of the course will consist of the following topics taken from the text (Chapters 3-6, 11, 12 in Royden, 3rd Edition):

- Lebesgue measure
- Lebesgue integral
- Differentiation and integration
- Lebesgue (L^p) spaces
- Abstract measure theory

Additional topics may be covered if time permits.

Assignments: Homework will be assigned approximately once every two weeks, during lecture. In the case of an absence, it is the student's responsibility to find out the homework assignment and turn in the homework on time. **Late homework will not be accepted.**

All assignments must be handwritten and must be submitted on paper, not electronically. Students should be aware of the code of academic conduct: if consulting other sources, you must express the solution in your own words. Understanding of the homework is essential to success on the exams.

As part of the homework grade, students may be required to present solutions to the assignments during class time (orally or on quizzes).

Midterm Exam: There will be an in-class test in week 7 or 8. The exact date of the exam will be announced in class at least a week in advance.

Final Exam: To be announced.

Evaluation: Homework 15%, Midterm exam 25%, Final exam 60%.
Graduate students will be required to do additional work, to be determined.