Department of Mathematics & Statistics
Concordia University

MATH 467 (MAST 669)
Measure Theory
Winter 2016

Instructor: Dr. A. Stancu, Office: LB 927-21 (SGW), Phone: 848-2424, Ext. 5345
Email: alina.stancu@concordia.ca
Webpage: http://alcor.concordia.ca/~astancu/

Office Hours: Monday 11:00am-12:30pm

Required Textbook: *Real Analysis* by H.L. Royden and P.M. Fitzpatrick, Pearson, 2010 (4th ed.)

Other Textbooks: *Real Analysis* by H.L. Royden, Macmillan, 1988 (3rd ed.)

Real Analysis: Measure Theory, Integration and Hilbert spaces, by E.M. Stein and R. Shakarchi, Princeton University Press, 2005.

Real and Complex Analysis, by W. Rudin, McGraw-Hill, 1986 (3rd ed.).

Topics: The main part of the course will consist of the following topics taken from Chapters 2-7, 17-19 of the textbook:

- Lebesgue measure, measurable sets and functions
- 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.**

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 doing well in 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 on March 7, 2016. **There will be no make-up midterm examination.**

Final Exam: To be announced.

Evaluation: Homework 15%, Midterm exam 25%, Final exam 60%. If it is in the student's advantage, the final exam will replace the midterm, thus the final exam will count for 85% of the grade.

Graduate students will be required to do additional work, to be determined.