Information Sheet MATH630 Fall 2017 <u>Real Analysis I</u>

Instructor: Radu Balan Lectures: Tuesday, Thursday, 12:30pm-1:45pm, CSIC 4122. Office Hours: By appointment Contact Information: Email <u>rvbalan@math.umd.edu</u>, Math Building, Room 2308, x55492 / CSCAMM, Room 4131, x51217

MATH 630 Real Analysis I is the graduate level course in mathematics that presents in a rigouros manner fundamental concepts in analysis: Lebesgue measure and the Lebesgue integral on R, differentiation of functions of bounded variation, absolute continuity and fundamental theorem of calculus, L^p spaces on R, Riesz-Fischer theorem, bounded linear functionals on L^p, measure and outer measure, Fubini's theorem.

Prerequisite: MATH 411

Required Textbook: *Real Analysis (A Comprehensive Course in Analysis, Part I)*, Barry Simon, AMS Press 2015

Recommended Textbooks:

Integration and Modern Analysis, John J. Benedetto, Wojciech Czaja, Birkhauser 2009 Analysis, Elliott H. Lieb and Michael Loss, AMS 2001.

Grading. There will be one mid-term exam (100 points), homework assignments (for a total of 100 points), and a final exam (200 points - cumulative). Students are allowed one single-sided formula sheet during the mid-term, and one double-sided formula sheet during the final.

Homeworks. Homework must be submitted on the date assigned. Homework must be prepared without consulting any other person. You may however consult any written reference. In this case you should cite the reference. Results taken from the reference should be (re)stated to the notation used in the course. Explanations should be given in complete English sentences. Written work must be legible and clear.

Academic Integrity. You are expected to adhere to the University's Code of Academic Integrity, available on the University's web site, at: <u>https://www.shc.umd.edu</u>

Students with Disabilities: If you have a documented disability and wish to discuss academic accommodations with me, please contact me as soon as possible.

Religious Observances. If you will be absent from class because of religious observances, please submit a list of the dates of your absences within a couple of days.

Syllabus MATH 630 / Fall 2017 <u>Real Analysis I</u>

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