SYLLABUS FOR MATH 630, SPRING 2007

Monday, Wednesday, Friday 10:00 a.m. - 10:50 a.m.

Instructor: Dr. Wojciech Czaja

Office: MTH 4406

Office Hours: TBA or by appointment

Phone: (301) 405 - 5106

Prerequisite: MATH 411 or equivalent.

Text: I shall provide the students with (**free of charge :)**) excerpts from the book we are currently finishing: "*Integration and Modern Analysis*", by J. J. Benedetto and W. Czaja, to appear in 2007, Birkhäuser, Boston.

Exams: Final exam and one midterm exam will be given. Midterm will be worth 50 points and the final examination will be worth 100 points. Format of the midterm exam will be home-take and the final exam will be in-class.

Homework: Homeworks will be assigned on Fridays and are due the next Friday. Each one is worth 10 points, and there will be 10 of such assignments.

Extra credit: Extra points will be given for typos and errors found in the fragments of the textbook provided to students. The point value of extra credit will be 1 point for each typo. The value of more serious problems will be negotiated.

Grading: The maximum point total is 250 points and the total used to calculate the final grade is the minimum of the two numbers: 250 points and the largest score in the class. The setting of letter grades will be based on this number of points and will be **no worse than**: 50% - D, 60% - C, 75% - B, 90% - A.

OUTLINE OF MATERIAL

Lebesgue measure and the Lebesgue integral on $\mathbf{R}$, differentiation of functions of bounded variation, absolute continuity and fundamental theorem of calculus, L^p spaces on $\mathbf{R}$, Riesz-Fischer theorem, bounded linear functionals on L^p, measure and outer measure, Fubini's theorem.