

Real Analysis and Probability
Spring 2009
Department of International Business
National Taiwan University

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Class hours: Monday 9:10 am – 12:10 am
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OBJECTIVE: After taking this course, the students would have a solid knowledge of the theory of stochastic processes used in asset pricing models.

Textbooks

1. Billingsley, Patrick, 1995, *Probability and Measure*, 3rd ed., John Wiley & Sons.
2. Karlin, Samuel and Howard M. Taylor, 1975, *A First Course in Stochastic Processes*, 2nd ed., Academic Press.

TOPICS (preliminary): General Measures, Lebesgue Measure, Measurable Functions, Distribution Functions, Lebesgue Integral, Fubini's Theorem, L^p Space, Random Variables and Distributions, Expected Values, Markov Chains, Poisson Processes, Martingales.

GRADING: Homework and Presentations: 30%. Mid-Term Exam: 35%. Final Exam: 35%.