Financial Time Series
Fall 2010
Department of International Business
National Taiwan University

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Class hours: Friday 9:10 am – 12:10 pm
Office hours: By appointment

OBJECTIVE: After taking this course, the students would have a solid knowledge of stochastic processes and the limit theorems used in financial time series analysis.

Prerequisites: The students should already have a working knowledge of measure theory and Lebesgue integration, which have been taught in the course "Stochastic Models of Asset Pricing".

References
1. Ross, Sheldon, 1996, **Stochastic Processes**, 2nd ed., John Wiley &Sons.
2. Jacod, Jean and Philip Protter, 2004, **Probability Essentials**, 2nd ed., Springer.
3. Durrett, Richard, 2004, **Probability: Theory and Examples**, 3rd ed., Duxbury Press.
4. Tsay, Ruey S., 2005, **Analysis of Financial Time Series**, 2nd ed., Wiley.

TOPICS: Poisson Process, Renewal Theory, Markov Chains, Statistical Independence, Characteristic Functions, Modes of Convergence, Laws of Large Numbers, Central Limit Theorems, Stationary Stochastic Processes.

GRADING: Class Participation: 20%. Mid-Term Exam: 40%. Final Exam: 40%.