SYLLABUS

DB801 Advanced Statistical Analysis
Part II: Probability

Semester 1, Academic Year 2014

Instructor: Asst. Prof. Sittisak Leelahanon, Ph.D.

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Class Time: Tuesday and Thursday 13:30 - 16:30

Textbooks:

1. [Ross] Sheldon Ross, *A First Course in Probability*, 8th ed.
2. [CB] George Casella and Roger L. Berger, *Statistical Inference*, 2nd ed.
3. [Resnick] Sidney I. Resnick, *Adventures in Stochastic Process.*
4. [BR] Martin Baxter and Andrew Rennie, *Financial Calculus: An introduction to derivative pricing.*

Course Objective:

Probability is an essential theory for econometrics and for analyzing business under uncertainty. Therefore this course is compulsory for every Ph.D. students in business and economics. The backgrounds needed for this course are the undergraduate univariate and multivariate calculus.

Grading:

Midterm Exam	50%
Final Exam	50%

Tentative Schedule:

Date	Time	Topics	Ross	CB	Resnick	BR
Tue. 1 July	13:30-16:30	Probability	Ch.1,2,3	Ch.1		
Thu. 3 July	13:30-16:30	Random Variables and Distributions	Ch.3,4	Ch.2		
Tue. 8 July	13:30-16:30	Important Distributions	Ch.4,5	Ch.3		
Tue. 15 July	13:30-16:30	**Midterm Examination**				
Thu. 17 July	13:30-16:30	Multiple Random Variables	Ch.6,7	Ch.4		
Tue. 22 July	13:30-16:30	Limit Theorems	Ch.8	Ch.5		
Thu. 24 July	13:30-16:30	Markov Chain	Ch.9		Ch.2	
Tue. 29 July	13:30-16:30	Poisson Process	Ch.9		Ch.4	
Thu. 31 July	13:30-16:30	Brownian Motion and Stochastic Calculus			Ch.6	Ch.3
Thu. 7 August	13:30-16:30	**Final Examination**				