Introduction to probability Models of business

Course Name	Course type (credit/hours)	Elective course(3/3)	Course code	I038
	Target students Division/major/grade	Business Administration/Sophomore	Opening semester	2018 2ND SEMESTER
	Class time and classroom	Mon B(Da309)Thu B(Da309)	English Grade	A(100%English)
Reference to this course	Prerequisite courses	Quantitative business analysis/Business Statistics		
	Related basic courses	Quantitative business analysis/Business Statistics		
	Recommended concurrent courses	Introduction to management science		
	Related advanced courses			

Instructor	Name (title/division)	Kim, Sunkyo(Professor, Business Administration)				
	Office Room Number	다528	Office phone Number	2841	e-mail	
	Office hours	T.B.A.	Homepage address	madang.ajou.ac.kr/~sunkyo		
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

1. Introduction

This course is an introduction to elementary probability theory and stochastic process. Topics include Poisson process, Markov chains, queueing theory, Brownian motion and simulation. Students will learn how probability models can be used in production/service management, finance, marketing and many other areas in business.

2. Course Objectives

Students will learn how probability models can be used in production/service management, finance, marketing and many other areas in business.

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K2	Students are capable of analyzing data and solving problems arisen in business/E-business practices. (Applicable Knowledge)

3. Class types and activities

4. Teaching Method

[V] lecture	[ ] discussion and debate
[ ] team project(presentation and case studies)	[ ] experiments(role-playing,etc)
[ ] designing and production	[ ] on-site learning(on-site training)
[ ] others	

5. Support Systems in Use

[V] AjouBb	[ ] automatic recording system	[ ] web-based assignment
[ ] cyber lecture	[ ] online content	
[ ] class behavior analyazing system	[ ] others	

6. Teaching Tools

[V] PBL(Problem Based Learning)	[ ] CBL(Case Based Learning)	[ ] TBL(Team Based Learning)
[ ] UR(Undergraduate Research)	[ ] FL(Flipped Learning)	[ ] DSAL(Data Science Active Learning)
[ ] others		

7. Knowledge and ability required for taking this course

Prerequisites:
i) Quantitative business analysis (계량경영) or equivalent,
ii) Business Statistics (경영통계) or equivalent

8. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance			
midterm exam	1	40	
final exam	1	40	
quiz			
presentation			
discussion			
homework	5	20	
etc			
study hours			

9. Textbook and supplementary material

Main/Sub	Title (Web-site)	Writer	Publisher	Publication year
Sub	Introduction to probability models	W.Winston	Duxbury	2004
Main	Introduction to probability models (9th ed.)	S.Ross	Academic Press	2007

10. Class system and Class shedule

< Class Schedule >

* language : K-korean, E-English

Weeks	Topics	language	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
1	Introduction to probability theory		Kim, Sunkyo			
2	Random Variables		Kim, Sunkyo			
3	Random Variables		Kim, Sunkyo			
4	Conditional probability/expectation		Kim, Sunkyo			
5	Markov chains		Kim, Sunkyo			
6	Markov chains		Kim, Sunkyo			
7	Exponential distribution and the Poisson pocess		Kim, Sunkyo			
8	Continuous-time Markov chains		Kim, Sunkyo			
9	Mid-term exam		Kim, Sunkyo			
10	Renewal theory		Kim, Sunkyo			
11	Queueing theory		Kim, Sunkyo			
12	Queueing theory		Kim, Sunkyo			
13	Brownian motion		Kim, Sunkyo			
14	Simulation		Kim, Sunkyo			
15	Simulation		Kim, Sunkyo			
16	Business Ethics and Final exam		Kim, Sunkyo			

11. Other items of notification