

## Introduction to probability Models of business

Course Name	Course type (credit/hours)	Elective course(3/3)		Course code	I003
	Target students Division/major/grade	Business Administration/Sophomore		Opening semester	2017 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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조회된 데이터가 없습니다.

### 3. Class types and activities

### 4. Teaching Method

<input checked="" type="checkbox"/> lecture	<input type="checkbox"/> discussion and debate
<input type="checkbox"/> team project(presentation and case studies)	<input type="checkbox"/> experiments(role-playing,etc)
<input type="checkbox"/> designing and production	<input type="checkbox"/> on-site learning(on-site training)
<input type="checkbox"/> others	

### 5. Support Systems in Use

<input checked="" type="checkbox"/> e-class / AjouBb	<input type="checkbox"/> automatic recording system	<input type="checkbox"/> web-based assignment
<input type="checkbox"/> cyber lecture	<input type="checkbox"/> online content	
<input type="checkbox"/> class behavior analyzing system	<input type="checkbox"/> others	

### 6. Teaching Tools

<input checked="" type="checkbox"/> PBL(Problem Based Learning)	<input type="checkbox"/> CBL(Case Based Learning)	<input type="checkbox"/> TBL(Team Based Learning)
<input type="checkbox"/> UR(Undergraduate Research)	<input type="checkbox"/> FL(Flipped Learning)	<input type="checkbox"/> DSAL(Data Science Active Learning)
<input type="checkbox"/> 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

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### < 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			

< Class Schedule >

\* language : K-korean, E-English

Weeks	Topics	language	Instructor	Teaching Method	Evaluation Method	Matter to be prepared
5	Markov chains		Kim, Sunkyo			
6	Markov chains		Kim, Sunkyo			
7	Exponential distribution and the Poisson process		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