

Syllabus

Probability Theory

Course Name	Course type (credit/hours)		전선(3/3)		Course code	
	Target students Division/major/grade		금융공학과/		Opening semester	2017년 1학기
	Class time and classroom		금7(다505) 금8(다505) 금9(다505)(다505)			
Reference to this course	Related basic courses					
	Recommended concurrent courses					
	Related advanced courses					
Instructor	Name (title/division)		심규철(교수/금융공학과)			
	Office Room Number	다산관 431호	Office phone Number	1880	e-mail	gshim@ajou.ac.kr
	Office hours			Homepage address		
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

1. Introduction

In this course, the students study probability theory which can be applied to understanding and modeling a random environment and solving problems in such an environment . In particular, studies in this course are helpful in studying financial engineering. This course covers basic measure theory including probability measure, random variables and distributions, (conditional) expectations, L^p spaces, limit concept, and Radon-Nikodym theorem.

2. Course Objectives

3. Class types and activities

Mainly by lectures.

4. Teaching Method

Mainly by lecture

5. Knowledge and ability required for taking this course

6. Method of Evaluation

Evaluation Item	The Number of Times	Evaluation Proportion	Remarks
Attendance		10%	
midterm exam	1	40%	
final exam	1	40%	
quiz			
presentation			
discussion			
homework		10%	
etc			

Class participation: 10%
Mid-term Exam.: 40%
Final Exam.: 40%
Assignments: 10%"

7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
주교재	Probability Essentials	Jean Jacod and Philip Protter	Springer	2004

8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Basic Measure Theory	Lecture	
2	Random Variables	Lecture	
3	Distributions	Lecture	
4	Expectation	Lecture	
5	Expectation	Lecture	
6	Some Important Distributions	Lecture	
7	Some Important Distributions	Lecture	
8	Mid-term Exam		
9	Convergence	Lecture	
10	Convergence	Lecture	
11	Moments and Laws of Large Numbers	Lecture	
12	Moments and Laws of Large Numbers	Lecture	
13	L^p Spaces and Radon-Nikodym Theorem	Lecture	
14	L^p Spaces and Radon-Nikodym Theorem	Lecture	
15	L^p Spaces and Radon-Nikodym Theorem	Lecture	
16	Final Exam		

9. Others

What is once put off is more difficult than before. Study hard while you are young.