

# Syllabus

## Seminar in Statistics I

Course Name	Course type (credit/hours)		전선(3/3)		Course code	
	Target students Division/major/grade		/		Opening semester	2017년 2학기
	Class time and classroom					
Reference to this course	Related basic courses					
	Recommended concurrent courses					
	Related advanced courses					
Instructor	Name (title/division)					
	Office Room Number		Office phone Number	2562	e-mail	qrio1010@ajou.ac.kr
	Office hours			Homepage address		
Teaching Assistant	Name (title/division)					
	Office Room Number		Office phone Number		e-mail	

### 1. Introduction

This is a master's/advanced undergraduate level course in mathematical statistics.  
The emphasis of this course is to develop the fundamental statistical concepts of inference and hypothesis testing from a classical perspective using the tools of probability theory.

### 2. Course Objectives

### 3. Class types and activities

#### 4. Teaching Method

This class will be progressed as instructor-led courses and added the training time to give feedback about submitted homework.

#### 5. Knowledge and ability required for taking this course

#### 6. Method of Evaluation

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

Grades will be assigned on a curve, using the following percentages: 10% Homework, 30% Quizzes(2 times), 30% Midterm, 30% Final.  
No makeup midterm or quizzes will be given. (If you miss the midterm, the final will count towards 70% of your grade.)  
No late homework will be accepted; to compensate for this, we will drop the lowest score. We'll also drop the lowest quiz score (out of about three quizzes).

## 7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
주교재	Introduction to Mathematical Statistics, 7th	Hogg, McKean and Craig	Pearson	2013

## 8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Probability and Distribution Review		
2	Consistency		
3	Limiting Distributions		
4	Maximum likelihood estimation		
5	More on MLE		
6	Sufficient Statistics		
7	Minimal sufficiency; Rao–Blackwell theorem		
8	Midterm		
9	More on exponential families		
10	Simple hypotheses: ML test		
11	Power, size: Neyman–Pearson lemma		
12	Compound alternate hypotheses: uniformly most powerful tests		
13	Compound null and alternate: t–test in compound case		
14	Compound null and alternate: t–test; likelihood ratio test in compound case		
15	Nonparametric and Robust Statistics		
16	Final test		

## 9. Others

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