

Syllabus

Applied Statistics

Course Name	Course type (credit/hours)	전선(3/3)			Course code	
	Target students Division/major/grade	/			Opening semester	2017년 1학기
	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 course on multiple regression, aimed at mathematically trained graduates. Prerequisites for the course are “Probability and Statistics I/II” and “Mathematical Statistics I/II”. The main goals for this class are:

- That you learn to run a multiple regression analysis, and to interpret the results correctly. We will use the statistical software R to get hands-on experience with this.
- That you learn to interpret and critique regression analyses done by others. This is important because regression analysis is one of the most widely used statistical methods.
- That you make presentations about chapters of the book.

We will do lectures during the first 4 weeks of class and Students will do presentations about each chapter of the book during the 14 weeks of class.

2. Course Objectives

3. Class types and activities

4. Teaching Method

We will do lectures during the first 4 weeks of class and Students will do presentations about each chapter of the book during the 14 weeks of class.

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			

1. Presentations: 70%
2. Exam: 30%

7. Textbooks

Main/Sub	Title	Writer	Publisher	Publication year
주교재	Applied Regression Analysis	Normal R. Draper and Harry Smith	wiley Series	

8. Lecture Schedule

Week	Lecture contents	Lesson type	Remark
1	Regression-Introduction		
2	Simple Linear Regression analysis		
3	Multiple Linear Regression Model		
4	Model Adequacy Checking		
5	Transformation and Weighting to correct model in adequacies		
6	Diagnostic for Leverage and Influence		
7	Serial Correlation in the Residuals and the Durbin-Watson Test		
8	More on Checking Fitted Models		
9	Multiple Regression: Special Topics		
10	Bias in Regression Estimates and Expected Values of Mean Squares and sums of Squares		
11	Dummy Variables		
12	Selecting the best Regression equation		
13	Ridge Regression		
14	Logistic Regression Models		
15	Poisson Regression Models		
16	Generalized Linear Models		

9. Others

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