



Syllabus (2021-Spring)

Course Title	Bayesian Statistics and Statistical Computing	Course No.	35301
Department/ Major	Department of Statistics / Statistics	Credit/Hours	3/3
Class Time/ Classroom	Mon(11:00~12:15) / Wed(09:30~10:45)		
Instructor	Name: Jae Keun Yoo	Department: Department of Statistics	
	E-mail:peter.yoo@ewha.ac.kr	Telephone: 02-3277-6717	
Office Hours/ Office Location	Mon 13:00 - 13:50		

I. Course Overview

1. Course Description

This course aims to give an introduction to the broad set of techniques known as Bayesian method. In statistics, Bayesian inference is a method of inference in which Bayes' rule is used to update the probability estimate for a hypothesis as additional evidence is learned. This course explains the theory behind Bayesian methods and their practical implementation, and also compares them with classical (frequentist) methods. The course emphasizes data analysis via modern computer simulation methods using R (free statistical software) that is introduced and used in the course.

IMPORTANT: There will be no additional opening for the class after the official registration period. Students who want to take the course HAVE TO register it during the period.

2. Prerequisites

Mathematical Statistics I/II ; Statistical Graphics ; Statistical Language R

3. Course Format

Lecture	Discussion/Presentation	Experiment/Practicum	Field Study	Other
100 %	%	%		%

(Instructor can change to match the actual format of the class.)

Explanation of course format:



4. Course Objectives

- (1) Learn Bayes' theorem
- (2) Be comfortable with Bayesian computing

5. Evaluation System

Midterm Exam	Final Exam	Quizzes	Presentation	Projects	Assignments	Participation	Other
%	40 %	%	%	%	30 %	30 %	%

(Instructor can change to match the actual format of the class.)

* Evaluation of group projects may include peer evaluations.

Explanation of evaluation system:

REMEMBER: The class attendance will NOT ALWAYS be checked at every class, but almost ALL. If students do not want to lose some points in Participation, they must be at every class.

The coverage of Final exam is all class contents through the semester.

II. Course Materials and Additional Readings

1. Required Materials

R과 JAGS 몬테칼로와 함께하는 베이지안 통계추론, 오만숙 저, 2017, 자유 아카데미

2. Supplementary Materials

3. Optional Additional Readings

III. Course Policies

* For laboratory courses, all students are required to complete lab safety training.



IV. Course Schedule (15 credit hours must be completed.)

Week	Date	Topics & Class Materials, Assignments
Week 1	03/03	Opening
	03/08	Chap 1
Week 2	03/10	Chap 2
	03/15	Chap 2
Week 3	03/17	Chap 3
	03/22	Chap 3
Week 4	03/24	Chap 4
	03/29	Chap 4
Week 5	03/31	Chap 4
	04/05	Chap 5
Week 6	04/07	Chap 5
	04/12	Chap 5
Week 7	04/14	Chap 6
	04/19	Chap 6
Week 8	04/21	Chap 7
	04/26	Chap 7
Week 9	04/28	Chap 7
	05/03	Chap 8
Week 10	05/05	Chap 8 (Thru VOD) - Children's day
	05/10	Chap 9
Week 11	05/12	Chap 9
	05/17	Chap 10
Week 12	05/19	Chap 10 (Thru VOD) - Buddha's Birthday
	05/24	Chap 11
Week 13	05/26	QnA for Chap 1-10
	05/31	Chap 11 (Thru VOD) - University Foundation day
Week 14	06/02	Summary for Final (Chap 1-10)
	06/07	Final from 18:30-20:30 on 06/09 It can be take-home or in-class depeding on COVID-19
Week 15	06/09	
	06/14	Summary for Semester
Makeup Classes 1		
Makeup Classes 2		

Note. This schedule is subject to change.



V. Special Accommodations

* According to the University regulation #57, students with disabilities can request special accommodation related to attendance, lectures, assignments, and/or tests by contacting the course professor at the beginning of semester. Based on the nature of the students' requests, students can receive support for such accommodations from the course professor and/or from the Support Center for Students with Disabilities (SCSD).

* The contents of this syllabus are not final—they may be updated.

사유결석

이화여자대학교학칙 제40조(결석자에 대한 처리)

① 1학기 수업시간의 3분의 1 이상을 결석한 때에는 그 교과목의 성적을 F로 한다.

② 학생이 다음 각 호의 사유로 결석한 때에 사유발생 2주 이내에 증빙서류를 제출하면 교과목 담당교수는 출석으로 인정할 수 있다.

1. 중대한 질병으로 인한 경우
2. 직계존비속의 사망으로 인한 경우
3. 국제대회, 연수, 훈련, 교육실습 등의 참가에 의한 경우
4. 그 밖에 총장이 필요하다고 인정하여 허가한 경우

- (1) 재학기간 중 취업한 학생이 출근하여야 하는 경우
- (2) 재학기간 중 취업한 학생이 인턴십, 기업연수·교육에 참여하는 경우
- (3) 취업예정자가 취업에 필수적인 활동(면접, 인턴십 등)에 참여하는 경우
- (4) 공공기관의 요청에 의해 공식행사에 참여하는 경우
- (5) 그 외 소속대학 등에서 필요하다고 판단하여 총장의 허가를 받은 경우

사유결석의 출석인정을 위한 증빙서류

- 학칙 제40조의 ② 출석인정을 위해서는 아래와 같이 증빙서류를 제출받고 확인하여야 합니다.

※ 해당 증빙은 “성적 처리에 관한 규정” 제5조의2(결시신청) 제4항을 준용함

사 유	증빙서류
중대한 질병으로 인한 경우	본교 부속병원장 또는 그에 준하는 종합병원장 발행 진단서
직계존비속의 사망으로 인한 경우	가족관계증명서 및 사망진단서
국제대회, 연수, 훈련, 교육실습 등의 참가에 의한 경우	주관 기관장명의 증빙서류
그 밖에 총장이 필요하다고 인정하여 허가한 경우	해당 증빙서류

※ 증빙서류 : 원본제출이 원칙이나 원본에 대한 추가 발급이 불가한 서류(사망진단서 등)일 경우 사본으로 인정 가능