

2025Year 1st Semester Syllabus

Created Date	2024-12-12 21:33:21		Last-Modified	2024-12-12 21:55:51
Course Title	INTRODUCTION TO STATISTICS		Course Code-Section	STA1001-11
Credit/Time/ Experiment, Lab, Practical Technique Time	3/(Tue1)Tue2/Thu1,2		Department	Common Curriculum (Sinchon Campus)
Time	(Tue1)Tue2/Thu1,2		Location	(DWHMB103)DWHMB103/Pre-recorded lecture
Exam Date & Time	Midterm exam		Final exam	
Class Language	English		Evaluation Type	Absolute evaluation

Instructor's Profile	Name	Kim Mijung	Contact Information	Telephone	
	Department	DEPARTMENT OF APPLIED STATISTICS		Mail	MJKIM@YONSEI.AC.KR
	Office			Interview information	

TA's Name & Contact Information	Name		Contact Information	Telephone	
---------------------------------	------	--	---------------------	-----------	--

Course Description Brief Introduction of the Course	<p>This course will provide an introduction to probability and statistics with a view toward applications. It includes topics on mathematical models for random phenomena, random variables, expectation, and discrete & continuous distributions. This course also covers laws of large numbers, central limit theorem, and basic techniques of inferential statistics.</p> <p>Students are expected to be familiar with statistical thinking and the basic concepts of descriptive statistics, probability distribution, and inferential statistics through this course.</p>
--	--

Course Goals	1.	Korean	통계학의 기본개념을 학습하기 위하여 확률론의 기본 개념인 확률 및 확률변수와 확률 분포 함수에 대하여 학습한다. 확률론에 대한 이해를 바탕으로 통계학의 기본 이론인 중심극한 정리에 대하여 학습한다.	40%
		English	For learning the basic concepts of statistics, students study probability, random variables, and probability distribution functions, which are the basic concepts of probability theory. Based on the understanding of probability theory, students learn about the central limit theorem, which is the basic theory of statistics.	
	2.	Korean	학기 전반부에 배운 확률론과 중심극한정리에 대한 이해를 바탕으로 통계적 추론의 방법을 학습한다. 이로부터 표본자료에 근거한 통계적 추론의 전반적인 절차를 이해하도록 한다.	40%
		English	Students learn statistical inference based on the understanding of probability theory and central limit theorem learned in the first half of the semester. From this, students will understand the overall process of statistical inference based on sample data.	
	3.	Korean	통계학의 개념에 대한 실제적 이해를 돕기 위하여 R 프로그램을 활용한 시뮬레이션 학습을 병행한다.	20%
		English	Students will get help understanding the concept of statistics with simulation study using the R program combined.	
	4.	Korean		0%
		English		

	5.	Korean							0%
		English							
Core Competencies	The total measurable competencies must be 100%. Each course objective should set the competency as 25%. The core and major competencies should equal at least 50%.								
Sub-Competencies/Learning Unit1									
Sub-Competencies/Learning Unit2									
Sub-Competencies/Learning Unit3									
Core Competencies(Liberal Arts)Major competency(Must reflect the interrelationship between core competencies (elective courses) and major competencies (major studies).								
Sustainable Development Goals									
Average Recommended Amount of Learning per	Average Reading Volume			Average amount of writing(Based on A4)					
Course Methods (%) Total Amount 100	Lecture	Practice Training	Presentation	Dabate	Team Project				
	70%	30%	0%	0%	0%				
Course Methods 2 Select Relevant Items	PBL Subject	Capstone Design	CBL, Social Innovation Course	Flipped Classroom	Work Experience,Internsh				
Grading Policy(%) Total Amount 100 Free Input for Other Information	Midterm exam	Final exam	Quiz	Individual Assignment	Team Assignment	Attendance	Others		
	40%	40%	0%	10%	0%	10%	0%		
Assignment/ Report, Project Guide	Title of Assignment/Project Name, and Method of Filling Out			Submission Deadline		Type of Submission and Method			
Prerequisite	Calculus is recommended.			Online Course Address		LearnUs			
Course Material	Course Material Name	Author	Publisher	Publish Year	ISBN				
참고자료									
참고자료	Probability & Statistics for Engineers and Scientists	Walpole, Myers, Myers, Ye	Pearson						

Main Learner Precautions	Undergraduate students who want to learn statistics.
--------------------------	--

Attachment	

Weekly Plan

week	Period	Weekly Topic & Contents	Remarks
1	2025-03-04 2025-03-10	Introduction to: relation between probability and statistics statistics & data analysis	(3.4.) Spring semester classes begin (3.6. - 3.10.) Course add and drop period
2	2025-03-11 2025-03-17	Concepts for Probability : Definition of Probability, Conditional Probability, Properties of Probability	
3	2025-03-18 2025-03-24	Random Variables, Probability Distributions	
4	2025-03-25 2025-03-31	Expectation and Variance	
5	2025-04-01 2025-04-07	Discrete probability models	
6	2025-04-08 2025-04-14	Continuous probability models (1)	(4.9.) First third of the semester ends
7	2025-04-15 2025-04-21	Continuous probability models (2)	(4.15. - 4.17.) Course withdrawal period
8	2025-04-22 2025-04-28	**Supplementary Lecture for May 6 ** Midterm Exam (10:00~11:40 am on Saturday, Apr. 26)	(4.22. - 4.28.) Midterm Examinations
9	2025-04-29 2025-05-05	Random Sample Statistics and their distributions Distribution of sample mean	(4.29. - 5.1.) Application period for S/U evaluation (5.5.) Children's day, The day of Buddha's coming 05.05 부처님오신날
10	2025-05-06 2025-05-12	Central Limit Theorem Distribution of sample variance Distribution of sample proportion	(5.6.) Alternative holiday for Children's Day 05.06 대체공휴일
11	2025-05-13 2025-05-19	Inference : Estimation (1)	(5.16.) Second third of the semester ends
12	2025-05-20 2025-05-26	Inference : Estimation (2)	
13	2025-05-27 2025-06-02	Inference : Testing Hypotheses (1)	
14	2025-06-03 2025-06-09	Inference : Testing Hypotheses (2)	(6.6.) Memorial day 06.06 현충일
15	2025-06-10 2025-06-16	** Final Exam (10:00~11:40 am on Saturday, June 14)	(6.10. - 6.16.) Self-study
16	2025-06-17 2025-06-23		(6.17. - 6.23.) Final Examinations

- Students with disabilities(SWDs) can request accommodations related to lectures, assignments, or tests by contacting the course professor at the beginning of semester.

(However, accommodations may vary depending on the essentiality of lecture and discretion of professors.)

[Lecture]

- Visual Impairment: alternative, braille, enlarged reading materials, note-taker
- Physical Impairment: alternative reading materials, access to classroom, note-taker, assigned seat
- Hearing Impairment: note-taker/stenographer, recording lecture
- Intellectual Disability/Autism: note-taker

[Assignments and Test]

- Visual/Physical/Hearing Impairment: (reasonable) extra days for submission, alternative type of assignment, extended test time, alternative type of test, arranging separate test room, and proctors, test ghostwriter
- Intellectual Disability/Autism: (reasonable) extra days for submission, alternative type of assignment