SYLLABUS

Faculty of Arts and Sciences

Course Code	Course Title		Credits	ECTS Value
PSY 121	Statistics in Social Sciences		(3-0-3)	7
Prerequisite Courses:	-			
Course Language:	English	**Course Delivery Mode:**	Face-to-face	
Course Type and Level:	**Compulsory/1st year/Fall Term**			

Instructor's Title, Name, and Surname	Course Hours	Office Hours	Contact
			senadogruyol@cag.edu.tr
Course Coordinator:	Asst. Prof. Dr. Sena Doğruyol		

Course Objectives

			Upon successful completion of this course, the student will be able to;	Relations	
				Program Outcomes	Net Contribution
Course Learning Outcomes	1		Introduces and explains basic statistical concepts using examples from everyday life.	1	5
	2		Defines basic statistical concepts such as population, sample, variable, and data types.	1,2	5,5
	3		Explains data using descriptive statistical methods (graphs, tables).	2,9	5,4
	4		Calculates and interprets measures of central tendency (mean, median, mode) and measures of dispersion (standard deviation, variance, etc.) on given psychological data sets.	2,9	5,5
	5		Classifies and compares situations related to random variables and basic distributions (e.g., normal distribution).	2,8	5,4
	6		Evaluates sampling distributions, confidence intervals, and hypothesis test results and explains their meaning in the context of psychological research.	2,8	4,4
Course Content:			This course aims to help students understand basic statistical concepts, apply descriptive statistical methods to psychological data, and acquire fundamental knowledge of probability.		

Course Schedule (Weekly Plan)

Week	Topic	Preparation	Teaching Methods and Techniques
1	Getting to know the students, informing them about the course content, and introducing resources		
2	Introduction to Statistics and Psychology	Basic texts on why it is important in statistics and psychology should be read. The difference between descriptive and inferential statistics should be learned. The	Presentation, Q&A, Discussion

		role of statistics in psychological research should be considered.	
3	Data Collection and Types of Data	Qualitative and quantitative data types should be reviewed. Scale types (nominal, ordinal, interval, ratio) and data collection methods should be researched.	Group work, Problem solving
4	Measures of Central Tendency	The concepts of mean, median, and mode should be studied. Students should learn when and how to use them. Calculation exercises can be done using simple examples.	Discussion, Problem solving
5	Measures of Distribution	Concepts such as variance, standard deviation, and coefficient of variation should be examined. The relationship between measures of central tendency and measures of dispersion should be understood.	Practical examples, Individual work
6	Normal Distribution and Z-Scores	By examining the normal distribution curve and its characteristics, simple Z-score calculations can be performed.	Group work, Problem solving
7	Fundamentals of Probability	Basic probability rules (sample space, probability rules) should be studied. The concepts of union, intersection, and conditional probability should be reviewed. Examples from daily life should be considered.	Presentation, Q&A, Practical work
8	Midterm Exam		
9	Midterm Exam		
10	Random Variables and Distributions	The concept of random variables (discrete and continuous) is emphasized, and basic information about normal distribution and other types of distributions is examined. Interpreting distributions using graphs	Presentation, Q&A, Group discussion

		is provided.	
11	Confidence Intervals	Information about the concept of confidence intervals and their interpretation is provided, along with example confidence interval calculations. The meaning of a 95% confidence level is discussed.	Presentation, Q&A, Group discussion
12	Introduction to Hypothesis Testing	The definitions of H0 (null hypothesis) and H1 (alternative hypothesis) and the concepts of Type I and Type II errors are discussed. The necessity of hypothesis testing is debated.	Problem solving, Practical examples
13	Hypothesis Tests-I	A general overview of parametric and non-parametric test types, along with basic information about the t-test and chi-square test, followed by solving sample questions.	Discussion, Q&A
14	Single Sample and Independent Samples t-Test Analyses	Definition and discussion of the purpose and application of one-sample and independent samples t-tests. Conducting applied examples.	Project work, Presentation
15	Hypothesis Tests and Analysis Applications	Conducting practical examples related to in-class hypothesis testing and analysis, and understanding the topics in practice	Presentation, Q&A, Discussion
16	Term Review		Q&A
17	Final Exam		
18	Final Exam		

Course Resources

| **Textbook:**	*Büyüköztürk, Ş., Çokluk-Bökeoğlu, Ö. ve Köklü, N.* (2011). *Sosyal bilimler için istatistik* (7.baskı). Ankara: Pegem Akademi Yayıncılık.
Recommended References:	Book: Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2012). *Sosyal bilimler için çok değişkenli istatistik: SPSS ve LISREL uygulamaları* (Vol. 2). Ankara: Pegem akademi.Alley, M. (2003). The Craft of Scientific Presentations. Springer Books. Rowe, N. (2017). Academic & Scientific Poster Presentation: A Modern Comprehensive Guide. Springer Books.

Course Assessment and Evaluation

Activities	**Number**	**Percentile**	**Notes**

Midterm Exam	**1**	**%45**	
Final	**1**	**%55**	

| ECTS Table			
Content	**Number**	**Hours**	**Total**
Course Duration	14	3	42
Out-of-Class Study	14	3	42
Assignment	1	25	25
Presentation	1	30	30
Project	1	20	20
Midterm Exam (Midterm Exam Duration + Midterm Exam Preparation)	1	30	30
Final Exam (Final Exam Duration + Final Exam Preparation)	1	20	20
		Total:	209
		Total / 30:	209/30≈6,9≈7
		ECTS Credit:	7

Past Term Achievements

2024-2025 Fall Semester
Course Code and Name
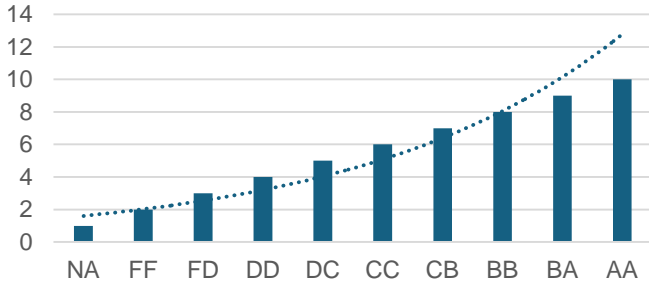
2024-2025 Spring Semester
Course Code and Name
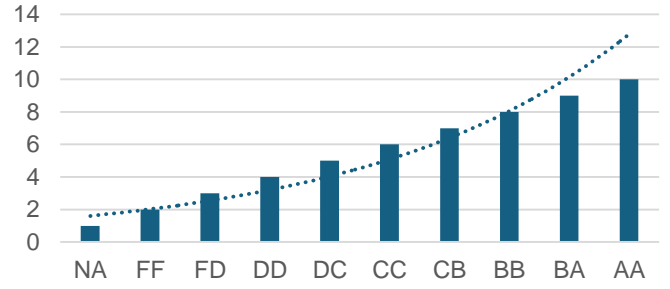
2025-2026 Fall Semester
Course Code and Name
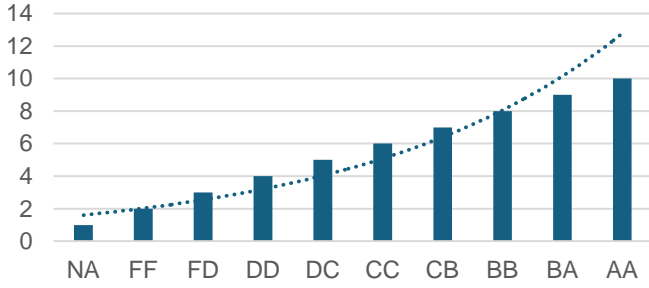
2025-2026 Spring Semester
Course Code and Name