ÇAĞ ÜNİVERSİTESİ
ÇAĞ UNIVERSITY

SYLLABUS

Faculty of Arts and Sciences

Course Code	Course Title	Credits	ECTS Value
PSY 140	Statistics in Social Sciences-II	(3-0-3)	6

Prerequisite Courses:	None		
Course Language:	English	**Course Delivery Mode:**	Face-to-face
Course Type and Level:	**Compulsory/1st year/Spring Term**		

Instructor's Title, Name, and Surname	Course Hours	Office Hours	Contact
Asst. Prof. Dr. Sena DOĞRUYOL	Thursday: 10:00-12:20	Friday: 13:20-15:40	senadogruyol@cag.edu.tr

Course Coordinator:	Asst. Prof. Dr. Sena Doğruyol

Course Objectives

Course Learning Outcomes	Upon successful completion of this course, the student will be able to;	Relations: Program Outcomes	Relations: Net Contribution
1	explain the logic and assumptions of inferential statistical methods used in psychological research.	3	5
2	apply appropriate statistical techniques such as correlation, regression, t-tests, and analysis of variance (ANOVA) to analyze research data.	5	5
3	interpret statistical results and significance levels in the context of research questions and hypotheses.	4,13	5, 4
4	compare different statistical techniques and determine the most appropriate method for different research designs.	3,5	4, 5
5	analyze and report statistical findings using tables, graphs, and appropriate statistical terminology.	5,14	5, 5
6	critically evaluate statistical results presented in scientific research articles.	13,4	5, 4

Course Content:	This course focuses on inferential statistical methods commonly used in psychological and social science research. It begins with a review of probability concepts and the logic of statistical inference, including hypothesis testing and significance levels. Also, the course introduces correlation and simple regression analysis, focusing on examining relationships between variables. Group comparison techniques such as independent and paired sample t-tests are discussed, followed by analysis of variance (ANOVA) for comparing more than two groups. Students learn the assumptions, interpretation, and appropriate use of these statistical methods. The course also covers the interpretation of statistical outputs, the presentation of results through tables and figures, and the reporting of statistical findings according to academic standards. Throughout the course, students develop the ability to select appropriate statistical techniques, analyze data, and interpret results in relation to research questions in psychology.

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	Review the course syllabus and basic resource list to learn about the scope of the course	
2	Introduction to course resources	Review previous term	Presentation, Q&A, Discussion
3	One-sample and Independent Samples t-test	Review lecture notes from Statistics-I, read textbook chapter on descriptive stats; revise mean, SD, variance.	Group work, Problem solving
4	Paired Samples t-test & Effect Sizes	Review previous t-test notes; read about paired designs; bring own small dataset if possible.	Discussion, Problem solving
5	Introduction to ANOVA: One-way ANOVA	Review ANOVA; variance concepts; prepare questions on group comparison.	Discussion, Problem solving
6	Factorial ANOVA & Post-hoc Tests and ANCOVA (Analysis of Covariance)	Read about factorial designs and interactions; practice identifying factors and levels.	Presentation, Group work, Problem solving
7	MANOVA (Multivariate ANOVA)	Review ANOVA and regression basics; read textbook chapter on ANCOVA; prepare questions on covariates.	Presentation, Q&A
8	Midterm Exam		
9	Midterm Exam		
10	Hypothesis Testing: Basics - SPSS Applications	Review t-test, ANOVA, ANCOVA, MANOVA notes; read textbook chapter on hypothesis testing; attempt practice problems.	Presentation, Q&A, Group discussion, SPSS Applications

11	Hypothesis Testing: t-tests & Chi-square- SPSS Applications		Presentation, Q&A, Group discussion, SPSS Applications
12	Correlation & Regression Analysis- SPSS Applications	Correlation and regression; calculate correlation coefficients from sample data.	Problem solving, Practical examples, SPSS Applications
13	Multiple Regression & Model Assumptions- SPSS Applications	Regression basics; read about multi-collinearity and normality.	Discussion, Q&A, SPSS Applications
14	Non-parametric Tests	Read chapters on non-parametric methods; attempt small example problems	Problem solving, Presentation
15	Reliability & Validity in Data Analysis	Read chapters on reliability (Cronbach's alpha) and validity; prepare example items/questions.	Presentation, Q&A
16	Term Review	General review	Presentation, Q&A
17	Final Exam		
18	Final Exam		

Course Resources

Textbook:	Field, A. (2018). *Discovering Statistics Using IBM SPSS Statistics* (5th ed.). Sage Publications.
Recommended References:	Gravetter, F. J., & Wallnau, L. B. (2017). *Statistics for the Behavioral Sciences* (10th ed.). Cengage Learning. Howell, D. C. (2013). *Statistical Methods for Psychology* (8th ed.). Wadsworth Cengage Learning. Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences* (3rd ed.). Routledge.

Course Assessment and Evaluation

Activities	Number	Percentile	Notes
Midterm Exam	**1**	**%40**	
Final Exam	**1**	**%60**	

ECTS Table

Content	Number	Hours	Total
Course Duration	**14**	**3**	**42**
Out-of-Class Study	**14**	**3**	**42**

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**

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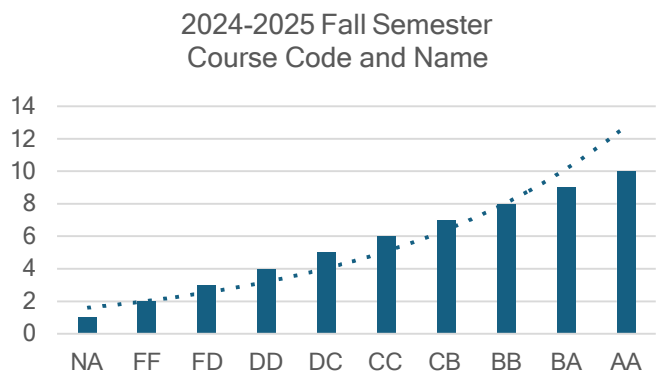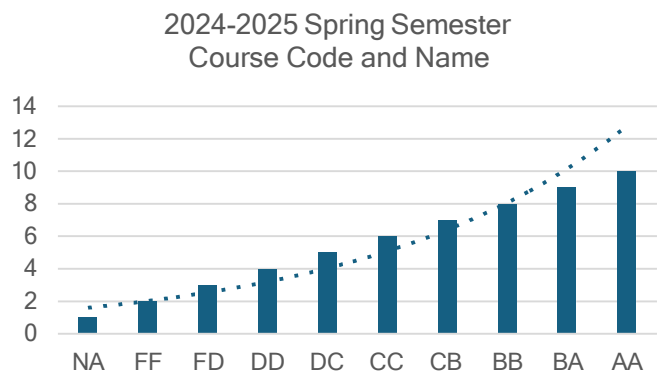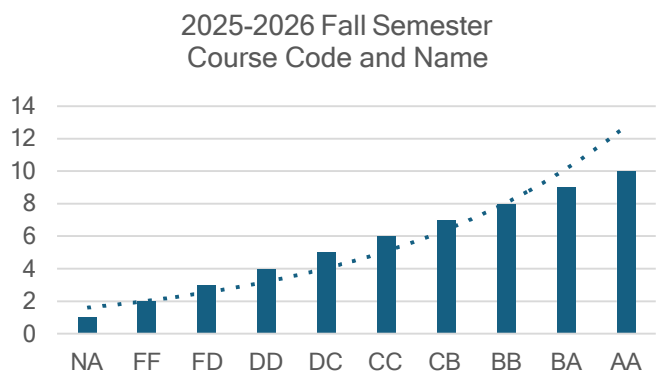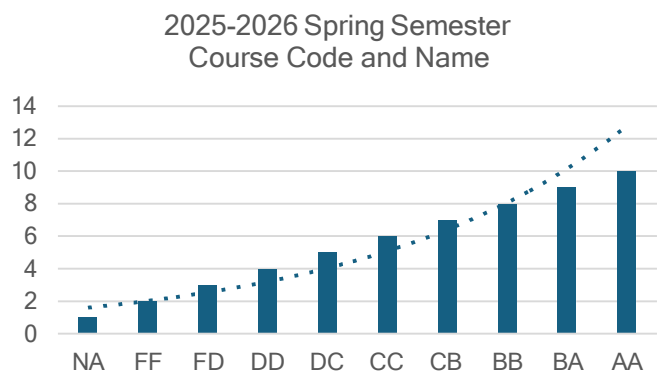
Past Term Achievements