ÇAĞ ÜNİVERSİTESİ
ÇAĞ UNIVERSITY

SYLLABUS

Faculty of Economics and Administration Sciences

Course Code	Course Title		Credits	ECTS Value
MAT 105	Statistics for Business		3 (2-1-3)	6
Prerequisite Courses:	None			
Course Language:	English	**Course Delivery Mode:**	Face to Face	
Course Type and Level:	Compulsory / 1st Year / Fall Semester			
Instructor's Title, Name, and Surname		**Course Hours**	**Office Hours**	**Contact**
Assist. Prof. Dr. Hazal Ezgi Mutlu		Tuesday 13:25 – 15:45	Thursday 10:00 – 12:00	**hazalezgiozbek@cag.edu.tr**
Course Coordinator:				

Course Objectives The objective is to provide students studying in social sciences fields such as management and finance with an introductory survey of the many applications of descriptive and inferential statistics.

Course Learning Outcomes	Upon successful completion of this course, the student will be able to;	Relations	
		Program Outcomes	Net Contribution
1	Comprehend collecting, organizing, analysing and interpreting statistical data.	5	5
2	Present statistical data in frequency distributions, histograms, pie charts, ogive charts.	5 & 7	5 & 4
3	Examine measures of location (mean, median, mode, percentiles, quartiles).	5 & 7	5 & 4
4	Describe measures of dispersion /variability (range, interquartile range, variance, standard deviation, coefficient of variation).	5 & 7	5 & 4
5	Comprehend the basic probability concepts, assigning probabilities to random events, classical and empirical probabilities, rules of addition and multiplication of probabilities.	5 & 7	5 & 4
6	Be able to recognize conditional probabilities and know how to use the laws that are available for computing the probabilities of events and Bayes theorem, Discrete probability distributions, Normal distribution	5 & 7	5 & 4

Course Content:	This course focuses on collecting and managing data in economics, management science, finance, business, international trade, and other fields. It is based on data description, that is, the display and exploration of data. The role of probability information in the decision-making process is conveyed with the aim of understanding probability as a numerical measure of the probability of occurrence.

Course Schedule (Weekly Plan)

Week	Topic	Preparation	Teaching Methods and Techniques
1	Introduction to Basic Concepts of Statistics	Reading what is statistics, application in business and economics	Lecture, discussion and examples
2	Introduction to Basic Concepts of Statistics	Reading the data, comparing qualitative and quantitative variables, measurement of scale,	Lecture, discussion and visual examples

		population and sample, parameter and statistic; random and systematic sampling	
3	Using table and graph for qualitative variables	Describing data by tables and graphs; summarizing categorical and numerical data, bar charts, pie charts, cross tables, Pareto diagram	Lecture and MS Excel exercises
4	Using table and graph for quantitative variables	Describing data by tables and graphs; summarizing numerical data,, class intervals, Frequency table, relative frequency and percentage frequency distributions, cumulative frequencies, stem leaf diagram, scatter diagram,	Lecture and MS Excel exercises
5	Using and Reading both variables on Pivot table	Practising in Excel to construct Pivot table by using qualitative and quantitative variables	Lecture and MS Excel exercises
6	Numerical measures to describe data	Summarizing quantitative data: cross tabulations, descriptive statistics,	Lecture and MS Excel exercises
7	Review	Preparation for Midterm Exam	Lecture and MS Excel exercises
8	Midterm Exam		
9	Midterm Exam		
10	Numerical measures to describe data	Presenting calculation techniques for measures of location: arithmetic mean, weighted mean, median, mode, percentiles, and quartiles.	Lecture and MS Excel exercises
11	Numerical measures to describe data	Explaining measures of dispersion by calculating range, interquartile range, variance, standard deviation, and coefficient of variation.	Lecture and MS Excel exercises
12	Relative Location and Exploratory Data Analysis	Measures of distributional shape, relative location and detecting outliers, computing Z-scores and central tendency	Lecture and MS Excel exercises
13	Measures of Association Between Two Variables	Measures of association between two variables, scatter diagram, covariance, interpretation of covariance, correlation coefficient	Lecture and MS Excel exercises
14	Introduction to probability	Reading the basic concepts of probability; some fundamental relations (such as the	Lecture and exercises

		addition rule).	
15	Introduction to probability	Solving question on probability and explaining the solutions	Lecture and exercises
16	Review	Preparation for Final Exam	MS Excel exercises
17	Final Exam		
18	Final Exam		

Course Resources	
Textbook:	"Statistics for Business and Economics", 14th ed. By Anderson, Sweeney, Williams, Camm, Cochran
Recommended References:	"Modern Business Statistics with Microsoft Office Excel",6th ed. By Anderson, Sweeney, Williams, Camm, Cochran "Statistics: Principles and Methods", 7th ed. By Johnson, Bhattacharyya. Prepared lecture notes from Textbook

Course Assessment and Evaluation

Activities	Number	Percentile	Notes
Midterm Exam	1	25%	Written exam
Assignment	5	25%	Individual assignment
Final	1	50%	Written exam

ECTS Table

Content	Number	Hours	Total
Course Duration	**14**	**3**	42
Out-of-Class Study	**14**	**3**	42
Assignment	**5**	**10**	50
Midterm Exam (Midterm Exam Duration + Midterm Exam Preparation)	**1**	**20**	30
Final Exam (Final Exam Duration + Final Exam Preparation)	**1**	**30**	40
		Total:	184
		Total / 30:	184/30
		ECTS Credit:	6,13=6

Past Term Achievements