

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
STATISTICS I	HVY2134110	Fall Semester	3+0	3	5
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	Turkish				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Required				
Course Coordinator	Assist.Prof. Mutlu GÜRSOY				
Name of Lecturer(s)	Assist.Prof. Mutlu GÜRSOY				
Assistant(s)					
Aim	Students are aimed to understand the logic of research study and the importance of statistical analysis in a research study, and to gain an ability about gathering, summarizing and presentation of information.				
Course Content	This course contains; Introduction to Statistics - Basic Concepts ,Organizing Data – Frequency Distributions and Graphs for Nominal and Ordinal Variables,Organizing Data – Frequency Distributions and Graphs for Interval and Ratio Variables,Measures of Central Tendency,Measures of Variability ,Measures of Distribution Shape, Relative Location, and Detecting Outliers ,Measure of Association Between Two Variables - Covariance and Correlation,Introduction to Probability - Basic Concepts,Discrete Probability Distributions ,Continuous Probability Distributions ,Sampling and Sampling Distributions, Selecting of a Sample, Point Estimation,Sampling Distribution of the Sample Mean and Proportion,Confidence Intervals,Confidence Intervals for a Population Proportion.				
Course Learning Outcomes				Teaching Methods	Assessment Methods
1. Will be able to describe the limited but crucial role of statistics in social research				16, 6, 9	A
1.1 Differentiate between the two branches of statistics					
1.2 Identify types of data and the measurement level for each variable					
1.3 Explain the difference between an observational and an experimental study					
2. Will be able to explain the purpose of descriptive statistics in making data comprehensible				16, 6, 9	A
2.1 Summarize qualitative and quantitative data by using frequency distributions, bar charts, pie charts, and histograms					
2.2 Summarize data, using measures of central tendency, such as the mean, median, and mode					
2.3 Describe data, using measures of variation, such as the range, variance, and standard deviation					
3. Will be able to explain how we can use measures of association to describe and analyze the importance of relationships				16, 6, 9	A
3.1 Define association in the context of bivariate tables and in terms of changing conditional distributions					
3.2 Interpret a scattergram					
3.3 Interpret covariance and correlation coefficient of a bivariate data set					
4. Will be able to recall know how to make use of probability theory to help make decisions in situations of uncertainty				16, 6, 9	A
4.1 Calculate the probability of an event using classical probability or empirical probability					
4.2 Find the probability of compound events, using the addition and multiplication rules					
4.3 Find the conditional probability of an event					
5. Will be able to tell how the behaviour of a random variable can often be summarised by a probability distribution				16, 6, 9	A
5.1 Explain the difference between a discrete random variable and a continuous random variable					
5.2 Express areas under the curve in terms of probabilities					
5.3 Recognise the most common probability distributions and be aware of their uses					
6. Will be able to explain sampling procedures and sampling distributions				16, 6, 9	A
6.1 Explain the concept of random sampling					
6.2 Use the sampling distribution of the sample mean					
6.3 Explain the Central Limit Theorem					
7. Will be able to explain the logic of estimation and the role of the sample, sampling distribution, and population				16, 6, 9	A
7.1 Calculate a z-based confidence interval for a population mean					
7.2 Use the t table					
7.3 Calculate a t-based confidence interval for a population mean					
Teaching Methods	16: Question - Answer Technique, 6: Experiential Learning, 9: Lecture Method				
Assessment Methods	A: Traditional Written Exam				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	Introduction to Statistics - Basic Concepts	The relevant section will be read from the book.			
2	Organizing Data – Frequency Distributions and Graphs for Nominal and Ordinal Variables	The relevant section will be read from the book.			
3	Organizing Data – Frequency Distributions and Graphs for Interval and Ratio Variables	The relevant section will be read from the book.			
4	Measures of Central Tendency	The relevant section will be read from the book.			
5	Measures of Variability	The relevant section will be read from the book.			
6	Measures of Distribution Shape, Relative Location, and Detecting Outliers	The relevant section will be read from the book.			
7	Measure of Association Between Two Variables - Covariance and Correlation	The relevant section will be read from the book.			
8	Introduction to Probability - Basic Concepts	The relevant section will be read from the book.			
9	Discrete Probability Distributions	The relevant section will be read from the book.			
10	Continuous Probability Distributions	The relevant section will be read from the book.			
11	Sampling and Sampling Distributions, Selecting of a Sample, Point Estimation	The relevant section will be read from the book.			

School of Business and Management Sciences / Aviation Management
2024 - 2025 Academic Year
STATISTICS I
Syllabus

Lecture Schedule		
Sequence	Topics	Preliminary Preparation
12	Sampling Distribution of the Sample Mean and Proportion	The relevant section will be read from the book.
13	Confidence Intervals	The relevant section will be read from the book.
14	Confidence Intervals for a Population Proportion	The relevant section will be read from the book.
Evaluation Methods		Weight(%)
Midterm Exam		40
General Exam		60

Resources
[1] will be available at http://mebis.medipol.edu.tr . [2] Bruce L. Bowerman, Richard T. O'Connell, Emily S. Murphree, James B. Orris (2013), İşletme İstatistiğinin Temelleri, 4.basımdan Çeviri, Çeviri Editörleri: N.Orhunbilge, M.Can, Ş.Er, Nobel Akademik Yayıncılık
[3] David R. Anderson, Dennis J. Sweeney, Thomas A. Williams (2011), Statistics for Business and Economics, Eleventh Edition, South-Western Cengage Learning