

<b>Course Description</b>					
<b>Name</b>	<b>Code</b>	<b>Semester</b>	<b>T+A Hour</b>	<b>Credit</b>	<b>ECTS</b>
STATISTICS II	HVY2234160	Spring Semester	3+0	3	5
<b>Prerequisites Courses</b>	İSTATİSTİK I				
<b>Recommended Elective Courses</b>					
<b>Language of Instruction</b>	Turkish				
<b>Course Level</b>	First Cycle (Bachelor's Degree)				
<b>Course Type</b>	Required				
<b>Course Coordinator</b>	Assist.Prof. Mutlu GÜRSOY				
<b>Name of Lecturer(s)</b>	Assist.Prof. Recep ÖZSÜRÜNÇ				
<b>Assistant(s)</b>					
<b>Aim</b>	Students are aimed to understand the logic of inferential statistics and to apply hypothesis testing and regression analysis for simple business problems				
<b>Course Content</b>	This course contains; Introduction to Hypothesis Testing , Five - Step Procedure for Hypothesis Testing,z and t Tests About a Population Mean, z Tests About a Population Proportion,Sample Size Determination, The Chi – Square Distribution and Statistical Inference for Population Variance, One – Sample Hypothesis Testing Using EXCEL and SPSS,Statistical Inference Based On Two Samples ,Comparing Two Population Proportions and Variances by Using Large Independent Samples,Two Sample Hypothesis Testing Using Excel and SPSS,Experimental Design and Analysis of Variance,Two – Way Analysis of Variance,Chi – Square Tests,Simple Linear Regression Analysis,Regression Analysis - Confidence and Prediction Intervals,Simple Coefficients of Determination and Correlation, An F – Test for the Model, Residual Analysis.				
<b>Course Learning Outcomes</b>				<b>Teaching Methods</b>	<b>Assessment Methods</b>
1. Will be able to explain the logic of hypothesis testing				16, 6, 9	A
1.1 Locate hypothesis testing in inferential statistics					A
1.2 Set up appropriate null and alternative hypotheses					A
1.3 Describe Type I and Type II errors and their probabilities					A
2. Will be able to translate one – sample hypothesis tests				16, 6, 9	A
2.1 Use critical values and p-values to perform a z test about a population mean					A
2.2 Use critical values and p-values to perform a t-test about a population mean					A
2.3 Use critical values and p-values to perform a large sample z test about a population proportion.					A
3. Will be able to use technology for one – sample hypothesis testing				16, 6, 9	A
3.1 Realize one – sample tests using Excel					A
3.2 Realize one – sample tests using SPSS					A
4. Will be able to locate two – sample hypothesis tests				16, 6, 9	A
4.1 Compare two population means when the samples are independent					A
4.2 Recognize when data come from independent samples and when they are paired					A
4.3 Compare two population means when the data are paired					A
5. Will be able to use technology for two – sample hypothesis testing				16, 6, 9	A
5.1 Realize two – sample tests using Excel					A
5.2 Realize two – sample tests using SPSS					A
6. Will be able to tell Analysis of Variance				16, 6, 9	A
6.1 Explain the basic terminology and concepts of experimental design					A
6.2 Compare several different population means by using a one-way analysis of variance					A
6.3 Compare treatment effects and block effects by using a randomized block design					A
7. Will be able to use simple regression analysis				16, 6, 9	A
7.1 Explain the simple linear regression model					A
7.2 Describe the assumptions behind simple linear regression and the standard error					A
7.3 Interpret the basic coefficient of determination and the regression coefficient					A
<b>Teaching Methods</b>	16: Question - Answer Technique, 6: Experiential Learning, 9: Lecture Method				
<b>Assessment Methods</b>	A: Traditional Written Exam				
<b>Lecture Schedule</b>					
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>			
1	Introduction to Hypothesis Testing				
2	Five - Step Procedure for Hypothesis Testing				
3	z and t Tests About a Population Mean, z Tests About a Population Proportion				
4	Sample Size Determination, The Chi – Square Distribution and Statistical Inference for Population Variance				
5	One – Sample Hypothesis Testing Using EXCEL and SPSS				
6	Statistical Inference Based On Two Samples				
7	Comparing Two Population Proportions and Variances by Using Large Independent Samples				
8	Two Sample Hypothesis Testing Using Excel and SPSS				
9	Experimental Design and Analysis of Variance				
10	Two – Way Analysis of Variance				
11	Chi – Square Tests				
12	Simple Linear Regression Analysis				
13	Regression Analysis - Confidence and Prediction Intervals				

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

<b>Lecture Schedule</b>		
<b>Sequence</b>	<b>Topics</b>	<b>Preliminary Preparation</b>
14	Simple Coefficients of Determination and Correlation, An F – Test for the Model, Residual Analysis	
<b>Evaluation Methods</b>		<b>Weight(%)</b>
Midterm Exam		40
General Exam		60

<b>Resources</b>
[1] will be available at <a href="http://mebis.medipol.edu.tr">http://mebis.medipol.edu.tr</a> [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