

**COURSE RECORD**

Code	<b>BA 222</b>
Name	<b>Business Statistics II</b>
Hour per week	3+0(Theory + Practice)
Credit	3
ECTS	5
Level/Year	Undergraduate/2
Semester	Spring
Type	Compulsory
Prerequisites	BA 223
Description	The focus is on broad treatment of applications of statistics, concentrating on techniques used in business. This course aims to focus on how to define, collect, organize, visualize and analyze the data for a business problem by applying statistical techniques. Topics include descriptive statistics, parameter estimation, confidence intervals, hypothesis testing, analysis of variance, and linear regression. The course includes computer implementations using available up-to-date statistical software.
Objectives	<ol style="list-style-type: none"> <li>1. To understand the role of statistics in research and business practice</li> <li>2. To develop skills in data gathering and analysis</li> <li>3. To interpret statistical results</li> <li>4. To obtain sufficient background to support further studies in business applications</li> </ol>
Learning Outcomes	<i>By the end of the course, the student will be able to</i> LO1: do descriptive statistics (summarize data numerically and graphically), LO2: calculate point estimates for unknown parameters of distributions, LO3: compute confidence intervals for unknown parameters of distributions, LO4: perform hypothesis testing with two samples, LO5: construct and interpret linear , multiple regression models, LO6: use a statistical software (preferably MATLAB, Python, Minitab) to carry out the above.

**CONTRIBUTION TO PROGRAMME OUTCOMES\***

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
L01	3	1	5	4	5	4	1	0	2	1
L02	5	0	2	4	2	5	5	0	1	1
L03	5	0	2	5	2	4	5	0	3	1
L04	3	0	0	2	1	3	5	0	3	5
L05	0	1	0	0	1	3	4	0	2	5
L06	3	0	3	0	5	1	1	0	1	1

\* Contribution Level: 0: None, 1: Very Low, 2: Low, 3: Medium, 4: High, 5: Very High

**COURSE CONTENT DETAILS**

Topics	Outcomes
Introduction, syllabus discussion	L01
Review of Probability and Statistics	L02, L03
Review of Linear Algebra	L02, L03
Statistical inference for two samples	L02, L04
Statistical inference for two samples	L02, L04
Decision Trees	L01, L04, L07
Midterm	L02, L03, L04, L07

Simple Linear Regression	L02, L03, L04, L07
Multi Linear Regression	L02, L03, L04
Correlation	L03, L04, L07
Midterm 2	L02, L03, L04, L07
ANOVA	L02, L03, L04, L07
ANOVA	L02, L07
Chi Square Goodness of Fit	L03, L04, L05
Project Presentations	L05, L06, L07

### DERS BİLGİLERİ

Kodu	<b>BA 222</b>
İsmi	<b>İstatistik II</b>
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	5
Seviye/Yıl	Lisans
Dönem	Bahar
Dersin Dili	İngilizce
Tip	Zorunlu
Ön Şart	BA 223
İçerik	Odak noktası, iş dünyasında kullanılan tekniklere odaklanarak, istatistik uygulamalarının geniş bir şekilde ele alınmasıdır. Bu ders, istatistiksel teknikleri uygulayarak bir iş problemi için verilerin nasıl tanımlanacağı, toplanacağı, organize edileceği, görselleştirileceği ve analiz edileceğine odaklanmayı amaçlamaktadır. Konular, tanımlayıcı istatistikler, parametre tahmini, güven aralıkları, hipotez testi, varyans analizi ve doğrusal regresyon içerir. Ders, mevcut güncel istatistiksel yazılımları kullanan bilgisayar uygulamalarını içerir.