COURSE RECORD

Code	**BA 442**
Name	**Data Models and Decisions**
Hour per week	3+0(Theory + Practice)
Credit	3
ECTS	5
Level/Year	Undergraduate/4
Semester	Spring
Type	Elective
Prerequisites	BA208
Description	The objective of this course is to introduce students to the basic tools in using data to make informed management decisions ad enchance decision making skills. The course covers linear, discrete, and non-linear optimization and simulation modeling, as well as multi-criteria optimization. Computer exercises and examples drawn from marketing, finance, operations management and spreadsheet-based software packages will be used extensively.
Objectives	This course aims to • endow the student with concepts, techniques and tools to design, analyze and improve decision making models. • Improve the interdependence of the operating system with other key functional areas of the firm
Learning Outcomes	*By the end of this course, students will be able*: LO1 Identify the need for quantitative managerial decision making tools LO2 Analyze the best solution with respect to changes in the parameters of the problem, and evaluate solutions. LO3 Demonstrate the role decision making in a business context

CONTRIBUTION TO PROGRAMME OUTCOMES*

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
LO1	5	5	0	3	0	0	0	5	5	5
LO2	5	5	2	3	2	0	0	5	5	5
LO3	5	5	2	3	2	2	2	5	5	3

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

COURSE CONTENT DETAILS

Topic	Outcomes
Describing data: Graphs, tables, summary measures	LO1-LO2-LO3
Probability distributions	LO1-LO2-LO3
Confidence interval estimation and hypothesis testing	LO1-LO2-LO3
Regression analysis	LO1-LO2-LO3
Building linear programming (LP) models - Graphical method, Solver	LO1-LO2-LO3
LP applications, Data Envelopment Analysis	LO1-LO2-LO3
Optimization with integer variables	LO1-LO2-LO3
Non-linear optimization, multi-objective decision making	LO1-LO2-LO3

DERS BİLGİLERİ

Kodu	**BA 442**
İsmi	**Veri Modelleri ve Kararlar**
Haftalık Saati	3+0 (Teori + Pratik)
Kredi	3
AKTS	5
Seviye/Yıl	Lisans/4
Dönem	Bahar
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	BA208
İçerik	Bu dersin amacı öğrencilere yönetim kararlarını vermek ve karar verme becerilerini geliştirmek için verileri kullanmadaki temel araçları tanıtmaktır. Tabii doğrusaļ ayrık ve doğrusal olmayan optiminjasyon ve simülasyon modellerinin yanı sıra çoklu ölçüt optimizasyonunu da kapsar. Pazarlama, finans, operasyon yönetimi ve elektronik tablo tabanlı LJanjılım paketlerinden hanjırlanan bilgisayar alıştırmaları ve önekler yoğun olarak kullanılacaktır.