

COURSE RECORD

Code	BA 442
Name	Data Models and Decisions
Hour per week	3 (3+0)
Credit	3
ECTS	5
Level/Year	Undergraduate/4
Type	Elective
Prerequisites	BA 208
Description	The objective of this course is to introduce students to the basic tools in using data to make informed management decisions and enhance 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	Providing concepts, techniques, and tools to design, analyze, and improve decision-making models. Outlining the interdependence of the operating system with other key functional areas of the firm.
Learning Outcomes	<i>By the end of the course, the student will be able to</i> 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 of decision-making in a business context.

CONTRIBUTION TO PROGRAMME OUTCOMES*

	P01	P02	P03	P04	P05	P06	P07	P08	P09	P010
LO1	5	5	5	4	2	1	5	5	5	5
LO2	5	5	5	4	3	3	5	5	5	5
LO3	5	5	5	3	2	1	5	5	5	5

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

CONTRIBUTION TO INSTITUTIONAL LEARNING OUTCOMES*

	ILO1	ILO2	ILO3	ILO4	ILO5	ILO6	ILO7
LO1	5	5	4	3	4	3	4
LO2	5	5	3	3	3	3	4
LO3	5	5	5	3	2	3	4

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

COURSE CONTENT DETAILS

Topics	Outcomes
Describing data: Graphs, tables, summary measures	LO1, LO2, LO3
Probability Distribution	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 (3+0)
Kredi	3
AKTS	5
Seviye/Yıl	Lisans/4
Dersin Dili	İngilizce
Tip	Seçmeli
Ön Şart	BA 208
İçerik	Bu dersin amacı öğrencilere yönetim kararlarını vermek ve karar verme becerilerini geliştirmek için verileri kullanmadaki temel araçları tanıtmaktır. Tabii doğrusal ayrık ve doğrusal olmayan optiminasyon ve simülasyon modellerinin yanı sıra çoklu ölçüt optimizasyonunu da kapsar. Pazarlama, finans, operasyon yönetimi ve elektronik tablo tabanlı Ljanjılım paketlerinden hazırlanan bilgisayar alıştırımları ve örnekler yoğun olarak kullanılacaktır.