

OPERATIONS RESEARCH I

1	Course Title:	OPERATIONS RESEARCH I
2	Course Code:	EKO3301 BH
3	Type of Course:	Compulsory
4	Level of Course:	Second Cycle
5	Year of Study:	0
6	Semester:	0
7	ECTS Credits Allocated:	5.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	No
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Doç. Dr. ARZU EREN ŞENARAS
15	Course Lecturers:	Doç.Dr.Arzu EREN ŞENARAS
16	Contact information of the Course Coordinator:	arzu.eren@uludag.edu.tr 02242940729 Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi A Blok 16059 Nilüfer/Bursa
17	Website:	
18	Objective of the Course:	The aim of this course is to provide the students focusing on the management problems, the application of system approach and the scientific methods on the management decision.
19	Contribution of the Course to Professional Development:	Be able to analyze the problems faced in their professional lives in different directions and produce solutions by using the knowledge of operations research.
20	Learning Outcomes:	
	1	The students are able to optimal decision making depending on the data
	2	The students are be able to model construction of the large scale business problems
	3	The students are be able to model solving of the large scale business
	4	The students are be able to comment of the model solutions
	5	The students are be able to design manufacturing systems and processes for the purpose of the company's management
	6	The students are be able to determine the optimal Inventory policies in business.
	7	The students are able to determine what the optimal decision problems would be in business
	8	The students are able to analyze LP Applications in MS Excel
	9	
	10	
21	Course Content:	
	Course Content:	

Week	Theoretical	Practice		
1	System Thinking			
2	Causal Feedback loop, Feedbacks			
3	Linear Programming Model and Basic Concepts			
4	Creating LP Model			
5	Graphic Method			
6	Graphic method solution via Pom program			
7	Simplex Method			
8	Simplex Method Applications			
9	Simplex Method Applications via Pom program			
10	Types of Simplex Method Applications			
11	LP Application Examples			
12	Excel Solution of Linear Programming Problems			
13	Dual Simplex Method			
14	Sensitivity Analysis			
Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical		27 Ahmet Öztürk, Fıneynin Araştırmada Giris, Ekin Kitabevi, 2011.	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preperation		14 Algorithms, Thomson Brooks/Cole, Australia, 2004.	4.00	56.00
Homeworks		1	7.00	7.00
Assesment Projects		0	0.00	0.00
TERM LEARNING ACTIVITIES		NUMBER	WEIGHT	
Field Studies		0	0.00	0.00
Midterm Exams		0	0.00	0.00
Others		0	0.00	0.00
Final Exams		0	0.00	0.00
Homeworks project		0	0.00	25.00
Total Work Load				130.00
Total work load/ 30 hr		1	100.00	5.00
ECTS Credit of the Course				5.00
Success Grade				
Contribution of Final Exam to Success Grade		100.00		
Total		100.00		
Measurement and Evaluation Techniques Used in the Course		Homework, midterm and final exam		
24	ECTS / WORK LOAD TABLE			

24 ECTS / WORK LOAD TABLE

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	5	4	5	4	4	5	4	5	4	4	4	4	0	0	0	0

ÖK2	5	5	5	5	4	5	5	5	5	4	4	4	0	0	0	0
ÖK3	5	4	5	5	5	4	4	4	5	5	5	5	0	0	0	0
ÖK4	5	5	5	4	4	4	4	4	4	4	5	4	0	0	0	0
ÖK5	5	4	5	5	5	4	4	5	4	5	4	5	0	0	0	0
ÖK6	5	5	5	5	4	4	4	4	5	4	4	4	0	0	0	0
ÖK7	5	4	5	4	4	4	4	4	4	4	4	4	0	0	0	0
ÖK8	5	4	5	4	4	4	4	4	4	4	4	4	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							