OPERATIONS RESEARCH II

1	Course Title:	OPERATIONS RESEARCH II	
2	Course Code:	EKO3302	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	3	
6	Semester:	6	
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. VESİLE SİNEM ARIKAN KARGI	
15	Course Lecturers:	Doç.Dr.Arzu EREN ŞENARAS	
16	Contact information of the Course Coordinator:	vesa@uludag.edu.tr 0224 2941105 Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi A Blok 16059 Nilüfer7Bursa	
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 equipped with advanced theoretical and applied knowledge and assess an organization from different perspectives. Take responsibilities as a team member when dealing with issues and problems encountered in practice. Notice and make use of business opportunities in the field of economy. Effective use information and communication technologies	
20	Learning Outcomes:		
		1	To be able to define the problem in Project planning
		2	To be able to decide the most appropriate in competitive environment
		3	To be able to determine a shedule of the shortest route and the highest possible flow chart within a system
		4	To be able to measure cost and performance of the service system with quantitative models
		5	To be able to predict outcomes at different stages of the processes
		6	To be able to solve the problems involving the decision series
		7	To be able to optimal decision making depending on the data
		8	To be able to formulate transport, transfer and assignment problems
		9	
		10	
21	Course Content:		

	Course Content:	
Week	Theoretical	Practice
1	Mathematical model and solution algorithm of the transportation problem	
2	Initial solution algorithms	
3	The most appropriate solution tecniques of transport models	
4	Distortion and sensitivity analysis in transport models	
5	Assignment model and sensitivity analysis	
6	Traveling salesman problem and Introduction to network analysis	
7	The shortest path problem	
8	Maximum flow and critical path method	
9	PERT analysis	
10	Time-cost relationship on project planning	
11	Concepts and definitions related to game teory	
12	Balanced games, superior strategies	
13	Played game under a full uncertanity	
14	Graphical solution method for the games	

22	Textbooks, References and/or Other	1.Ahmet Öztürk, Yönevlem Arastırması, Ekin Kitabevi

Activites		Number	Duration (hour)	Total Work Load (hour)
23 Theoretical Assesment		14	3.00	42.00
Practicals/Labs		0	0.00	0.00
Self study and preperation	**R**	14	4.00	56.00
Homeworks		1	10.00	10.00
Quiz	0	0.00		
Projects		0	0.00	0.00
Field Studies		0	0.00	0.00
Final Exam				
Midterm exams	1	60.00		
Others		1	15.00	15.00
Contribution of Term (Year) Learning Activities to Success Grade	40.00	0	0.00	0.00
Final Exams		1	20.00	20.00
Total Work Load				158.00
Contribution of Final Exam to Success Grade	60.00			
Total work load/ 30 hr				4.77
ECTS Credit of the Course				5.00
Measurement and Evaluation Techniques Used in the Course	Classic Exam			

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	5	4	5	4	5	5	5	5	5	0	0	0	0
ÖK2	4	5	5	5	5	4	5	5	4	4	4	4	0	0	0	0
ÖK3	4	4	5	5	5	5	4	5	5	4	4	4	0	0	0	0

ÖK4	5	5	4	4	5	5	4	5	5	4	5	4	0	0	0	0
ÖK5	4	5	5	5	4	4	4	5	5	4	4	4	0	0	0	0
ÖK6	5	4	4	5	4	5	4	5	4	4	4	4	0	0	0	0
ÖK7	5	5	4	5	5	5	4	5	4	5	4	4	0	0	0	0
ÖK8	5	4	5	4	4	5	4	5	5	4	4	5	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**