AYDIN ADNAN MENDERES UNIVERSITY
GRADUATE SCHOOL OF SOCIAL SCIENCES
MANAGEMENT INFORMATION SYSTEMS
MANAGEMENT INFORMATION SYSTEMS
MANAGEMENT INFORMATION SYSTEMS MASTER
COURSE INFORMATION FORM

Course Title	Operational Research								
Course Code	MIS515		Couse Level		Second Cycle (Master's Degree)				
ECTS Credit	7	Workload	180 *(Hours)*	Theory	3	Practice	0	Laboratory	0
Objectives of the Course	Gaining the basic competencies necessary for the students to model and solve different types of problems that they may encounter in business world and to interpret their solutions								
Course Content	Lesson; Linear Programming, Transportation and Assignment Problems, Integer Programming, Multipurpose Decision Making, Nonlinear Models and Decision Analyzes and Game Theory.								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Demonstration, Discussion, Case Study, Project Based Study, Individual Study, Problem Solving								
Name of Lecturer(s)									

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

Recommended or Required Reading	
1	Yönetim Bilimi, Murat Ayanoğlu, Sakarya Kitabevi, 2006
2	Yöneylem Araştırması, Hamdy A.Taha; (Çevirenler: Ş. Alp Baray, Şakir Esnaf), Literatür Yayınları

Week	Weekly Detailed Course Contents	
1	Theoretical	Linear Programming
2	Theoretical	Linear Programming Model Examples
3	Theoretical	Linear Programming and Graphical Method
4	Theoretical	Microsoft Excel and Analyzer Function
5	Theoretical	Simpleks Method I
6	Theoretical	Simplex Method II
7	Theoretical	Software Supported Linear Programming Solution
8	Intermediate Exam	MIDTERM
9	Theoretical	Transportation Problems I
10	Theoretical	Transportation Problems II
11	Theoretical	Software Supported Transportation Problem Solution
12	Theoretical	Assignment Problems I
13	Theoretical	Assignment Problems II
14	Theoretical	Software Assisted Assignment Problem Solution
15	Final Exam	Final

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	16	3	3	96
Assignment	16	1	3	64
Midterm Examination	1	5	5	10
Final Examination	1	5	5	10
			Total Workload (Hours)	180
			[Total Workload (Hours) / 25*] = **ECTS**	7
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	To have basic information about various methods and concepts that may be encountered in decision making process
2	To be able to analyze different types of problems and model them in order to solve these problems with appropriate methods
3	Be able to determine which type of numerical method, which problem type can help solve the problem
4	Be able to perform initial solutions with numerical techniques
5	Interpret the solution of the problem with appropriate criteria
6	Be aware of the fact that the information to be obtained after the interpretation is to be used appropriately in the decision-making process

Programme Outcomes *(Management Information Systems Master)*	
1	Be aware of the different types of ınformation technologies and systems using in business, have enough knowledge to design a suitable system
2	Analyse the needs for an information systems and have control over the processes at the analysis, design and implementation stages of the database that belongs to the system
3	Convey information about current trends and their own studies both verbally and visually ways.
4	Be able to follow current developments in modern business techniques and technologies, especially information technologies
5	Understand the interaction between his departmant and other relational departmants, if necessary make a team, take responsibility and do the works with team.
6	Know the information technologies and systems using in different types of business, if necessary take the system responsibility.
7	Be aware of the social transformation especially in their own field and social, legal and moral responsbilities belongs to other work field.
8	Develop their knowledge to the level of expertise which they learn them in license level.
9	Carry out a work which requires an expertness in their field.
10	Construct and perform an academic work.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5	L6
P1	4	4	3	4	4	4
P2		4	4	4	5	4
P3	4	4	5	4	5	4
P4	4	4	4	4	5	3
P5	4	4		4	4	3
P6	4	4	4	4		4
P7	4		4	4	4	4
P8	4		4	4	4	4
P9	4		4	4	4	4
P10	4		4	4	4	4