



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Operation Research in Culturtechnique							
Course Code		ZTY537		Couse Level		Second Cycle (Master's Degree)			
ECTS Credit	7	Workload	175 (<i>Hours</i>)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		The aim of this course is to enable the students to identify the aims of irrigation system performance assessment, to evaluate the system performance, and to diagnose irrigation performance							
Course Content		Aim of the operation research, definition and application in culturetechnic, application of linear programming, integer programming, transportation model etc. in irrigation, drainage and land consolidation and interpretation of the results.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, 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	Öztürk, A., 2009. Operational Research (Yöneylem Araştırması), Ekin Kitabevi
2	Sezen, K., 2007. Operational Research (Yöneylem Araştırması), Ekin Kitabevi
3	Doğan, İ., 1995. Operational Research Techniques (Yöneylem Araştırması Teknikleri), Yetkin Yayınları

Week	Weekly Detailed Course Contents	
1	Theoretical	Course presentation: Scope, Reasons, Rules
2	Theoretical	Fundamentals conceptions in operation research
3	Theoretical	Formulation of linear programming
4	Theoretical	Analysis of linear programming
5	Theoretical	Sensitivity analysis
6	Theoretical	Transportation algorithms
7	Theoretical	Analysis of transportation problems
8	Theoretical	Integer linear programming algorithms
9	Intermediate Exam	MID-TERM EXAM
10	Theoretical	Analysis of integer linear programming problems
11	Theoretical	Analysis of irrigation systems by linear programming
12	Theoretical	Analysis of water resources problems by linear programming
13	Theoretical	Analysis of reallotment plan in land consolidation by transportation techniques
14	Theoretical	Other applications
15	Final Exam	FINAL EXAM

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	8	3	154
Midterm Examination	1	7	2	9
Final Examination	1	10	2	12
Total Workload (Hours)				175
[Total Workload (Hours) / 25*] = ECTS				7

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	Describe the problems related to agricultural structure and irrigation
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2	Formulate the problems related to agricultural structure and irrigation
3	Analyze the operation research problems
4	Apply the operation research techniques to agricultural structure and irrigation problems
5	Interpret the solution results

Programme Outcomes (Agricultural Structures and Irrigation Master)

1	Ability to use, evaluate and improve the knowledge gained from field of study at an expert level
2	Ability to reach necessary the knowledge
3	To able to conduct scientific studies (research) related to the field
4	Ability to consider academical and ethical values the studies
5	Ability to improve editing method and evaluate the results of researches
6	The studies, the ability to reach result and application, develop new approaches
7	A topic in the field of written, verbally and visually as the ability to express
8	Effective use of Turkish language and ability to communicate in a foreign language both written and verbal

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

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

