



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Operations Research							
Course Code		LGT102		Course Level		Short Cycle (Associate's Degree)			
ECTS Credit	3	Workload	75 (Hours)	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Introduction and practice to the students about Operations Research Stochastic Processes, Queuing Systems, Network Models, Dynamic Programming and Inventory Models							
Course Content		Stochastic mathematical models, discrete-state, discrete time stochastic process. Time-dependent Markov chains, equilibrium conditions, steady-state analysis of the intuitive interpretation. Average number of steps first pass. Absorber (Absorber) chains. Queuing theory. Network models, PERT and CPM. Dynamic programming. Inventory Models							
Work Placement		A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Case 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	Ahmet ÖZTÜRK, Yöneylem Araştırması, 12. Basım, Ekin Kitabevi, Bursa, 2009.
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Week	Weekly Detailed Course Contents	
1	Theoretical	Markov Chain-Definition, Transition Probability Matrix, after the period probabilities
2	Theoretical	Markov Chain-gambler's bankruptcy example, vase-top sample
3	Theoretical	Classification of Status, Steady State Probabilities, Steady State Probability of Intuitive Review
4	Theoretical	Average Number of First Pass, Absorbent-Absorbing Markov Chains
5	Theoretical	Markov Chain Samples
6	Theoretical	Queuing Theory -1
7	Theoretical	Queuing Theory -2
8	Theoretical	Queuing Theory-application
9	Theoretical	Midterm
10	Theoretical	Network Models -1
11	Theoretical	Network Models -2CPM
12	Theoretical	Network Models-3PERT
13	Theoretical	Inventory Models-1Deterministic
14	Theoretical	Inventory Models-2Stochastic
15	Theoretical	Revision of all units
16	Theoretical	Final

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	2	0	28
Lecture - Practice	14	2	0	28
Assignment	1	0	13	13
Midterm Examination	1	1	1	2
Final Examination	1	3	1	4
Total Workload (Hours)				75
[Total Workload (Hours) / 25*] = ECTS				3

*25 hour workload is accepted as 1 ECTS



Learning Outcomes

1	To classify decision problems in the management process.
2	the problems in manufacturing and service systems to perform optimization modeling.
3	Alternative solutions to reveal their decision problems
4	Interdisciplinary problem solving; Applying the methodology of operational systems
5	The systematic and analytical thinking; To apply to real-life problems
6	Interpret the solutions of decision problems with the economic analysis approach.

Programme Outcomes (Logistics)

1	Understanding of the basics needed for the mobility of production and consumption of goods.
2	Provide warehouse and inventory management decisions.
3	To decide on the mode of transport and handling equipment to be used.
4	Logistics information systems benefit from the process of the realization of the activities.
5	To dominate the national and international legislation regulating the field of logistics.
6	Administration, management and marketing ideas and conducting.
7	Sensitivity to the requirements of professional ethics move
8	Idea about the conduct of national and international transport policies.
9	Having written and oral communication skills.
10	Current society and understand the world.

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	3	3	3	3	3	3
P3	2	2	2	2	2	2
P4	2	2	2	2	2	2
P5	3	3	3	3	3	3
P8	2	2	2	2	2	2
P9	2	2	2	2	2	2
P10	4	4	4	4	4	4

