



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Design and Analysis of Logistics Systems							
Course Code		LYM510		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	5	Workload	127 ( <i>Hours</i> )	Theory	3	Practice	0	Laboratory	0
Objectives of the Course		Improving the students' knowledge and Professional skills on analyzing, designing and modeling logistics systems							
Course Content		This course mainly deals with fundamentals of transportation management, distribution's contribution to the logistics process, transport systems, modes of transport and intermodal transportation, urban transport, the role of customer service, ecommerce and physical distribution, transport cost characteristics and rate profiles by the modes of transportation and services. Transportation modeling through computer information systems, decision support systems, optimization models, simulation, advanced statistics, and commercial logistics software systems will also be emphasized.							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	60

### Recommended or Required Reading

1	Course notes and reading material, Operations Research Applications and Algorithms, Wayne L. Winston, Fourth Edition, Thomson Books
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Week	Weekly Detailed Course Contents	
1	Theoretical	Introduction: Logistics system analysis
2	Theoretical	Linear Programming and Transportation Problems
3	Theoretical	Integer Programming Review
4	Theoretical	Designing the Logistics Network
5	Theoretical	Designing the Logistics Network
6	Theoretical	Supplier Selection
7	Theoretical	Network Design
8	Theoretical	Long Haul Freight Transportation
9	Intermediate Exam	Midterms
10	Intermediate Exam	Midterms
11	Theoretical	Long Haul Freight Transportation
12	Theoretical	Long Haul Freight Transportation
13	Theoretical	Short Haul Freight Transportation
14	Theoretical	Short Haul Freight Transportation
15	Theoretical	Warehouse Design and Operations
16	Final Exam	Finals

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	0	3	39
Individual Work	13	0	2	26
Midterm Examination	1	25	1	26



Final Examination	1	35	1	36
Total Workload (Hours)				127
[Total Workload (Hours) / 25*] = ECTS				5
*25 hour workload is accepted as 1 ECTS				

### Learning Outcomes

1	Student will be able to analyze logistics systems.
2	Student will be able to design new systems.
3	Student will be able to explain information about modeling techniques.
4	Student will be able to model logistics systems.
5	Student will be able to define necessary solution methods for model.

### Programme Outcomes (Logistics Management Interdisciplinary Master)

1	Being able to contribute to the institution the participant works for and the logistics sector by the use of the knowledge and abilities gained during the education period; and manage change in the institution and the sector;
2	Reaching a competency about contemporary business and technology applications in the area of logistics and supply chain management and analysis and strategy development methods;
3	Being able to create opportunities by combining supply chain management with information technologies and innovative processes by the use of the interdisciplinary courses the participants take;
4	Having the ability to develop creative solutions by working on global logistics and supply chain subjects and realizing these by the use of their project management knowledge;
5	Having the knowledge, abilities and capabilities required for effective logistics and supply chain management by the use of a problem and case analysis based learning;
6	Being able to examine logistics and supply chain processes with the management science viewpoint, analyze related concepts and ideas by scientific methods;
7	If continuing to work in the academia, having the necessary information on logistics applications; if continuing to work in the sector, having the necessary knowledge on conceptual subjects;
8	Being able to specify appropriate research questions about his/her research area, conduct an effective research with the use of necessary methods and apply the research outcomes in the sector or the academia;
9	Being able to follow the changes and developments in the sector the participant works in, in order to keep his/her personal and professional competence updated and develop himself/herself when necessary;
10	Have the necessary capabilities to pursue doctoral studies in national and foreign institutions

### 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	5	5	3	3	4
P2	3	5	1	2	5
P3	1	2	5	4	3
P4	3	3	3	5	5
P5	4	4	1	1	2
P6	5	2	2	5	3
P7	1	1	1	4	5
P8	5	5	5	5	3
P9	4	4	3	5	2
P10		2	5		5

