YAŞAR UNIVERSITY
FACULTY OF ECONOMICS AND ADMINISTRATIVE SCIENCES
INTERNATIONAL LOGISTICS MANAGEMENT
COURSE SYLLABUS

Course Title	Course Code	Semester	Course Hour/Week		Yaşar Credit	ECTS
Operations Research in Logistics	LOGI 321	3	3	0	3	5

Course Type	
1. Compulsory Courses	
1.1. Programme Compulsory Courses	**X**
1.2. University Compulsory Courses (UFND)	
1.3. YÖK (Higher Education Council) Compulsory Courses	
2. Elective Courses	
2.1. Program Elective Courses	
2.2. University Elective Courses	
3. Prerequisites Courses	
3.1. Compulsory Prerequisites Courses	
3.2. Elective Prerequisites Courses	

Language of Instruction	English
Level of Course	Undergraduate (First Cycle)
Prerequisites Course(s) (compulsory)	N/A
Special Pre-Conditions of the Course (recommended)	N/A

Course Coordinator	Asst. Prof. Dr. Ozgur Kabadurmus	Mail: ozgur.kabadurmus@yasar.edu.tr
Course Instructor(s)	Asst. Prof. Dr. Ozgur Kabadurmus	Mail: ozgur.kabadurmus@yasar.edu.tr
Course Assistant(s)/Tutor (s)		
Aim(s) of the Course	This course aims to give students the knowledge of operations research and modeling techniques. It also aims to improve students' modeling and analytical skills to solve real logistics problems.	
Learning Outcomes of the Course	1. Defining the basic concepts of operations research and logistics problems 2. Demonstrating and applying the methods for formulating operations research problems 3. Practicing the basic methodology to solve operations research problems 4. Illustrating and applying the methods to solve operations research problems 5. Analyzing and investigating specific logistics and supply chain problems 6. Applying computerized methods to solve operations research problems	

Course Content	Operations Research in Logistics is a main course in logistics education that provides students the basic skills and knowledge to identify, analyze, and solve real logistics problems using operations research methodology.

COURSE OUTLINE/SCHEDULE (Weekly)			
Week	**Topics**	**Preliminary Preparation**	**Methodology and Implementation (theory, practice, assignment etc)**
1	Intro to OR		Theory, real-life business cases and problem solving
2	Mathematical Modeling, LP, Integer Programming. Modeling Optimization problems.	Given problems	Theory, real-life business cases and problem solving
3	Modeling Optimization problems.	Given problems	Theory, real-life business cases and problem solving
4	Modeling Optimization problems.	Given problems	Theory, real-life business cases and problem solving
5	Modeling Optimization problems.	Homework 1 (due on Oct 26). Recitation session (will be scheduled to another day/time since Oct 29 is a national holiday).	Theory, real-life business cases and problem solving
6	Midterm I	Midterm will be non-comprehensive (Weeks 1-5)	Exam
7	Modeling Optimization problems. Graphical solution.	Given problems	Theory, real-life business cases and problem solving
8	Graphical solution. Using MS Excel Solver to solve problems.	Homework 2 (due on Nov 19). Lab session (on Nov 19).	Theory, real-life business cases and problem solving
9	Transportation problems. Assignment problems. Transshipment problems.	Given problems	Theory, real-life business cases and problem solving
10	Cargo loading (Knapsack) problem. Branch and Bound, implicit enumeration methods.	Homework 3 (due on Dec 3).	Theory, real-life business cases and problem solving
11	Midterm II	Midterm will be non-comprehensive (Weeks 7-10)	Exam
12	Traveling salesman problem. Variations of the problem. Network models.	Deadline for students to select a topic to present	Theory, real-life business cases and problem solving
13	Network models. Shortest path, max flow models. Sensitivity analysis	Given problems	Theory, real-life business cases and problem solving
14	Sensitivity analysis using MS Excel Solver. Presentations.	Lab session (Dec 31). December 31st is not a holiday unless otherwise specified	Theory, real-life business cases and problem solving
15	Project presentations	Homework 4 (due on Jan 7).	Presentations
	FINAL EXAM	Check the specific exam date with the registrar's office Final exam will be comprehensive (Weeks 1-15).	Exam

Required Course Material (s) /Reading(s)/Text Book (s)	• Operations Research: Applications and Algorithms, 2004: 4th ed., Winston, Wayne L., Brooks/Cole Cengage Learning. • Introduction to operations research, 2010: 9th ed., Hillier, Frederick S., Gerald, J. Lieberman, McGraw-Hill Higher Education.

ASSESSMENT		
Semester Activities/ Studies	**NUMBER**	**WEIGHT in %**
Mid- Term	1	40
Attendance	-	-
Quiz	-	-
Assignment (s)	4	10
Project	1	10
Laboratory	-	-
Field Studies (Technical Visits)	-	-
Presentation/ Seminar	-	-
Practice (Laboratory, Virtual Court, Studio Studies etc.)	-	-
Other (Placement/Internship etc.)		
TOTAL		**60**
Contribution of Semester Activities/Studies to the Final Grade		60
Contribution of Final Examination/Final Project/ Dissertation to the Final Grade		40
TOTAL	.	**100**

CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME OUTCOMES							
No	Programme Outcomes	Level of Contribution (1- lowest/ 5- highest)					
		1	2	3	4	5	
1	To ascertain how to become a manager in national and international logistics companies.				X		
2	To identify various activities of logistics: purchasing, stock management, warehouse and transportation management, sale and distribution, transporting, handling, traffic management, packaging, customer relationship management and reverse flow in supply chain management					X	
3	To explain modes of international transportation including road, sea, air, pipeline and multi-modal transportation systems			X			
4	To distinguish and explain the concepts in supply chain management and logistics					X	
5	To develop efficient logistics and supply chain strategies by using appropriate theory, tools and methods, to design logistics systems and make decisions that will support the mission and goals of business.					X	
6	To analyze companies from a managerial point of view					X	
7	To evaluate logistics and supply chain management practices critically, identify and analyze problems in logistics processes.					X	
8	To create innovative solutions for logistics problems to achieve a higher performance in logistics activities and developing recommendations for performance improvements					X	
9	To recognize the main actors, challenges and dynamics of the international logistics			X			
10	To identify and distinguish the legal framework of international logistics operations, and assess conformity of logistics operations to the national and international rules and regulations			X			
11	To recognize the importance and the need of adaptation to the rapidly evolving global business environment.					X	
12	To demonstrate effective written and verbal communication skills with people having different organizational cultures and from inside or outside of the organization				X		
13	To illustrate leadership skills in teamwork and contributing to the team while recognizing the contribution of teamwork to success				X		
14	To examine and adopt to the sophisticated and rapidly changing IT and computer technologies				X		

15	To appraise the appropriateness of data collection, interpretation, application, and announcement of the results with the social, scientific, cultural and ethical values.					X
16	To appraise the appropriateness of data collection, interpretation, application, and announcement of the results with the occupational safety rules and environmental regulations				X	
17	To recognize the significance of lifelong learning and apply the learning skills that have been developed through this program in other areas of life while attributing ethical values					X

ECTS /STUDENT WORKLOAD				
ACTIVITIES	**NUMBER**	**UNIT**	**HOUR**	**TOTAL (WORKLOAD)**
Course Teaching Hour (14 weeks* total course hours)	14	Week	3	42
Preliminary Preparation and finalizing of course notes, further self- study	14	Week	2	28
Assignment (s)	4	Number	2	8
Presentation/ Seminars	1	Number	8	8
Quiz and Preparation for the Quiz	-	Number	-	-
Mid- Term(s)	1	Number	15	15
Project (s)	1	Number	10	10
Field Studies (Technical Visits, Investigate Visit etc.)	-	Number	-	-
Practice (Laboratory, Virtual Court, Studio Studies etc.)	-	Number	-	-
Final Examination/ Final Project/ Dissertation and Preparation	1	Number	15	15
Other (Placement/Internship etc.)		Number		
Total Workload				126
Total Workload/ 25				5,04
ECTS				**5**

ETHICAL RULES WITH REGARD TO THE COURSE (IF AVAILABLE)

- Students must have the course book.
- Students must attend at least 70% of the course timetable during the term.
- Students are expected to be prompt at all times and to participate in all learning activities during class sessions.
- It is expected that all special assignments such as term papers, projects, or research papers to be completed on the scheduled dates.
- The project must be submitted in a hard copy (and an electronic copy must be submitted to the course lectures website). E-mails are not accepted.
- All academic honesty violations or alleged violations (Cheating on an examination, Plagiarism, Unauthorized collaboration) will not be tolerated and they are subject to disciplinary penalties.

ASSESSMENT and EVALUATION METHODS:	
Final Grades will be determined according to the Yaşar University Associate Degree, Bachelor Degree and Graduate Degree Education and Examination Regulation	
Prepared by	Asst. Prof. Dr. Ozgur Kabadurmus
Last Update	12/09/2015
APPROVAL PROCESS:	
Departmental Board Decision Date& Number	
Faculty Board Decision Date& Number	

Senate Decision Date& Number	