

**DEPARTMENT of INDUSTRIAL ENGINEERING
COURSE CATALOGUE FORM**



Course Code: INDE3283				Course Title: Logistic Systems			
Semester	L + R + L	Credits	AKTS	Language	Category	Instructional Methods	Prerequisites
6	3+0+0	3	5	English	Elective	Lecture	INDE2001
Course Objectives			Fundamental concepts and problems in logistics systems, mathematical models and solution methods.				
Course Content			the main topics covered in this course are logistics network design, location models, warehousing, transportation management, and fleet management including the vehicle routing problem.				
Course Learning Outcomes			<p>Students, who pass the course satisfactorily:</p> <ol style="list-style-type: none"> 1. Understand the basic terminology and fundamental issues in logistics [2] 2. Be able to recognize the major classes of problems and the areas of improvement in the supply chain network design, transportation, and warehousing [2] 3. Be able to model the different logistic problems and optimizing with different objectives and constraints [2] 4. Learn to solve these logistic problems using numerical analysis methods.[2] <p>[Note: Numbers in brackets are indicating the related program outcomes]</p>				
ISCED Category of the course			52 Engineering				
Textbook			H. Ballou, <i>Business Logistics / Supply Chain Management</i>				
Supplementary Material			G. Ghiani, G. Laporte, and R. Musmanno, <i>Introduction to Logistics Systems Planning and Control</i>				

COURSE PLAN

Week	Topics	Laboratory / Tutorial Work
1	Introduction and general framework.	
2	Nature of the product in logistics and supply chains.	
3	Customer in Logistics and supply chains	
4	The key features of transporting the products	
5	The problems of transporting the product and transportation	
6	The problems of transporting the product and transportation	
7	Inventory Problems	
8	Storage systems, equipment and vehicles	
9	Construction of depots and equipment problems	
10	Construction of depots and equipment problems	
11	Location and premises problems	
12	Location and premises problems	
13	Logistic network problems	
14	Logistic network problems	

COURSE ASSESSMENT SYSTEM

	Activities	Contribution (%)
Semester Activities	Semester Written Exams	50
	Homework	20
	Reports	
	Labs	
	Seminars	
	Presentations	5
	Term Project	
	Other (attendance, field trip etc.)	
FINAL EXAM		25
Total		100

CONTRIBUTION of the COURSE on INDUSTRIAL ENGINEERING PROGRAM OUTCOMES

	Program Outcomes	Low	High
1	Adequate knowledge in mathematics, science and subjects pertaining to Industrial Engineering; ability to use theoretical and applied knowledge in these areas in complex engineering problems.		
2	Ability to identify, formulate, and solve complex Industrial Engineering problems; ability to select and apply proper analysis and modeling methods for this purpose.		X
3	Ability to design a complex system, process, device or product under realistic constraints and conditions, in such a way as to meet the desired result; ability to apply modern design methods for this purpose.		
4	Ability to devise, select, and use modern techniques and tools needed for analyzing and solving problems encountered in engineering practice; ability to employ information technologies effectively.		
5	Ability to design and conduct experiments, gather data, analyze and interpret results for investigating complex engineering problems or discipline specific research questions.		
6	Ability to work efficiently individually and in intra-disciplinary / multi-disciplinary teams.		
7	Knowledge of Turkish and English languages; ability to communicate effectively orally, inscriptive and visually by using these languages (via business methods such as reports, presentations and instructions).		
8	Recognition of the need for lifelong learning; ability to access information, to follow developments in science and technology, and to continue to educate him/herself.		
9	Consciousness to behave according to ethical principles and professional and ethical responsibility; knowledge on standards used in engineering practice.		
10	Knowledge about business life practices (management activities such as project, risk, change and quality etc.); awareness in entrepreneurship, innovation; knowledge about sustainable development.		
11	Knowledge about the global and social effects of engineering practices on health, environment, economics and safety, and contemporary issues of the century reflected into the field of engineering; awareness of the legal consequences of engineering solutions.		

ECTS - WORK LOAD TABLE

COURSE ACTIVITIES	Quantity	Time (hr)	Work Load (hr)
Lectures	14	3	42
Final Exam (Preparation included)	1	10	10
Semester Written Exams (Preparation included)	2	8	16
Out of class study time	14	2	28
Homework	5	5	25
Reports			
Labs			
Seminar			
Presentations	1	10	10
Term Project			
Total Load (hr)			131
ECTS Credits of the course (Total Work Load / 25)			5

Revision/Date 5/02/2020	Coordinator / Prepared By Seyhun Altunbay	Approved By Çağlar Aksezer
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