

COURSE INFORMATION					
Course Title	Code	Semester	L+P Hour	Credits	ECTS
Supply Chain Management	ESYE564	1	3	3	10

Prerequisites	None
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Language of Instruction	English
Course Level	M. Sc.
Course Type	Elective
Course Coordinator	
Instructors	Prof. Linet Özdamar
Assistants	
Goals	The goal in this course is to understand how logistical decisions impact the performance of the firm as well as the entire supply chain. The key will be to understand the link between supply chain structures and logistical capabilities in a firm or supply chain.
Content	Operations management review (inventory management, ERP, medium term planning), supply chain network design, logistical issues and optimization, green supply chains, pricing, e-business.

Course Learning Outcomes	Program Learning Outcomes	Teaching Methods	Assessment Methods
1) Student uses push and pull conceptual principles in supply chains to position a company in a given chain and allocates the proper inventory management schemes.	1,3,5	1,2,4	A,D
2) Student can optimize parameters of inventory systems for products, raw materials and components.	3,5	1,2,4	A,D
3) Student can develop new inventory models according to business environment.	1,3,5	1,2	A,D
4) Student can optimize medium term plans and can develop appropriate models.	1,3,5	1,2,4	A,D
5) Student can analyze relationships between ERP components.	4	1,2	D
6) Student can develop supply chain network design and optimize distribution channels.	3,5,11,12	1,2,4	D

Teaching Methods:	1: Lecture, 2: Question-Answer, 3: Lab, 4: Case-study
Assessment Methods:	A: Testing, B: Experiment, C: Homework, D: Project

COURSE CONTENT		
Week	Topics	Study Materials
1	Supply Chain Concepts	Textbook, Notes
2	Designing Distribution Network	Textbook, Notes
3	Network Design under Uncertainty	Textbook, Notes
4	Aggregate Planning, Planning Supply and Demand	Textbook, Notes

5	Inventory Management under Certainty and Uncertainty	Textbook, Notes
6	Special models in SCM	Textbook, Notes
7	Product Positioning and Availability	Textbook, Notes
8	Sourcing in Supply Chain	Textbook, Notes
9	Transportation in Supply Chain	Textbook, Notes
10	Pricing in Supply Chain	Textbook, Notes
11	E-business and Supply Chain	Textbook, Notes
12	Project Presentations	Innovation in practical applications
13	Paper Presentations	Literature survey
14	Review	Textbook, Notes

RECOMMENDED SOURCES

Textbook	Supply Chain Management, S. Chopra & P. Meindl, Prentice Hall, 2004
Additional Resources	Lecture Notes: on esy564@gmail.com address

MATERIAL SHARING

Documents	Lecture notes
Assignments	Two projects (Supply Chain Network Design, Logistics Optimization)
Exams	1 final

ASSESSMENT

	IN-TERM STUDIES	NUMBER	PERCENTAGE
Paper presentations		1	20
Projects		2	80
	Total		100
CONTRIBUTION OF FINAL EXAMINATION TO OVERALL GRADE			20
CONTRIBUTION OF IN-TERM STUDIES TO OVERALL GRADE			80
	Total		100

COURSE CATEGORY	Expertise/Field Courses
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COURSE'S CONTRIBUTION TO PROGRAM

No	Program Learning Outcomes	Contribution				
		1	2	3	4	5
1	Ability to reach knowledge in breadth and depth through scientific research in Systems Engineering field; to have extensive knowledge about current techniques and procedures together with their constraints.				X	
2	Ability to complement and apply knowledge by scientific methods utilizing limited or missing data; to use knowledge in different					

	disciplines effectively by blending them.						
3	Ability to formulate Systems Engineering problems; to develop novel and original ideas and procedures for their solutions and to use innovative procedures in solutions.					X	
4	Awareness of new and developing applications in Systems Engineering; ability to investigate and learn these applications when required.					X	
5	Ability to design and apply analytical, and modeling and experimental based research; to solve and interpret complex situations encountered in this process.					X	
6	Ability to lead multi-disciplinary teams; to develop solution approaches in complicated situations and to take responsibility.						
7	Ability to develop novel and/or original ideas and methods; to develop innovative solutions for the design of systems, parts or the processes.						
8	Ability to communicate orally or in writing the process and the results of Systems Engineering studies systematically and openly in national or international platforms.						
9	Ability to master a foreign language (English) at the European Language Portfolio B2 General Level to communicate orally or in writing.					X	
10	Ability to recognize social, scientific and ethical values in the process of collection, interpretation and publishing of data, and in all professional activities.						
11	Ability to visualize social and environmental dimensions of Systems Engineering applications and to observe these dimensions in professional practice.				X		
12	Ability to develop appropriate methodology and procedures for the modeling, improvement, control and design of complex systems for a specified target.					X	

ECTS ALLOCATED BASED ON STUDENT WORKLOAD BY THE COURSE DESCRIPTION			
Activities	Quantity	Duration (Hour)	Total Workload (Hour)
Course Duration (Excluding the exam weeks: 14x Total course hours)	14	3	42
Hours for off-the-classroom study (Pre-study, practice)	14	11	154
Paper presentation	1	2	2
Project	2	20	40
Final examination	1	3	3
			241
			9,64
			10
	Total Work Load		
	Total Work Load / 25 (h)		
	ECTS Credit of the Course		

