

School of Engineering and Natural Sciences / Industrial Engineering (English)

2022 - 2023 Academic Year

SUPPLY CHAIN MANAGEMENT

Syllabus

Course Description					
Name	Code	Semester	T+A Hour	Credit	ECTS
SUPPLY CHAIN MANAGEMENT	IND3249170	Spring Semester	3+0	3	6
Prerequisites Courses					
Recommended Elective Courses					
Language of Instruction	English				
Course Level	First Cycle (Bachelor's Degree)				
Course Type	Elective				
Course Coordinator	Assoc.Prof. Melis Almula KARADAYI				
Name of Lecturer(s)					
Assistant(s)					
Aim	To introduce the general structure of supply chains and to examine problems in supply chains				
Course Content	This course contains; What is Supply Chain and Supply Chain Management ?, Basic Problems in Supply Chain Management, Supply Chain Activities-I, Supply Chain Activities-II, Supply Chain Distribution Network Design-I, Supply Chain Distribution Network Design-II, Distribution Network Design Steps and Models-II, Distribution Network Design Stages and Models-II (Facility Location and Capacity Assignment Models), Distribution Network Design Stages and Models-III (Gravity Settlement Models), Stock Planning and Management in Supply Chains: Economic Order Quantity Model, Inventory Planning and Management in Supply Chains: Joint Ordering Models - I, Inventory Planning and Management in Supply Chains: Joint Ordering Models -II, The Importance of Coordination in Supply Chains-I, The Importance of Coordination in Supply Chains-II, Uncertainty Management in Supply Chains: Security Stocks.				
Course Learning Outcomes		Teaching Methods		Assessment Methods	
6) Can describe the basic components of a supply chain		1, 2, 3		A, C	
5) Can describe the factors that affect the required safety stock levels		1, 2, 3		A, C	
4) Can interpret the role of security stock		1, 2, 3		A, C	
3) Can identify managerial leverage that reduces cycle stock and order volume without increasing costs		1, 2, 3, 6		A, C	
2) Can perform cost balance to determine the optimal cycle stock in a supply chain		1, 2, 3, 6		A, C	
1) Can use optimization techniques in site location and capacity allocation decisions		1, 2, 3, 6		A, C	
7) Can define the cycle viewpoint and push-pull viewpoint in a supply chain		1, 2, 3		A, C	
8) Can describe the key factors to consider when designing the distribution network		1, 2, 3		A, C	
9) Can discuss the strengths and weaknesses of various distribution options		1, 2		A, C	
Teaching Methods	1: Lecture, 2: Question - Answer, 3: Discussion, 6: Role Model, Making an example				
Assessment Methods	A: Written Exam, C: Homework				
Lecture Schedule					
Sequence	Topics	Preliminary Preparation			
1	What is Supply Chain and Supply Chain Management ?, Basic Problems in Supply Chain Management				
2	Supply Chain Activities-I				
3	Supply Chain Activities-II				
4	Supply Chain Distribution Network Design-I				
5	Supply Chain Distribution Network Design-II				
6	Distribution Network Design Steps and Models-II				
7	Distribution Network Design Stages and Models-II (Facility Location and Capacity Assignment Models)				
8	Distribution Network Design Stages and Models-III (Gravity Settlement Models)				
9	Stock Planning and Management in Supply Chains: Economic Order Quantity Model				
10	Inventory Planning and Management in Supply Chains: Joint Ordering Models -I				
11	Inventory Planning and Management in Supply Chains: Joint Ordering Models -II				
12	The Importance of Coordination in Supply Chains-I				
13	The Importance of Coordination in Supply Chains-II				
14	Uncertainty Management in Supply Chains: Security Stocks				
Evaluation Methods		Weight(%)			
Midterm Exam		30			
General Exam		70			

Resources

Lecture notes Chopra, S., Meindl, P., Supply Chain Management