Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
MİS02	Production Management	2	3	0	0	3	6

Prerequisites	
Admission Requirements	

Language of Instruction	Turkish
Course Type	Compulsory
Course Level	Masters Degree
Objective	Operations management is intended for students to understand the problems of operations in the company and its relationship with other functional areas and business strategies. As a compulsory course in the curriculum, the course will help students learn how to analyze performance measures to identify and develop strategies to improve efficiency and effectiveness. Understanding these core principles and the corresponding analyses will enable students to optimize operational resources to meet the firm's strategic objectives. The objectives of this course are determined as follows: - to understand how to create value and competitive advantage along the supply chain in a rapidly changing global environment. - to introduce increasingly important OM topics of sustainability, corporate social responsibility, global trade policies, securing the supply chain, and risk and resilience. - to develop an understanding of the concepts, tools, and practices relating to an organization's operations. - to understand the various production and operations design decisions and how they relate to the overall strategies of organizations. - to understand the relationship of the various planning practices of capacity planning, aggregate planning, and forecasting. - to understand the roles of inventories and the essentials of managing inventories based on forecasting.
Content	Introduction - What is Operations and Supply Chain Management - Distinguishing Operations versus Supply Chain Processes - Categorizing Operations and Supply Chain Processes - Differences Between Services and Goods Strategy - A Sustainable Operations and Supply Chain Strategy - What is Operations and Supply Chain Strategy? - Assessing the Risk Associated with Operations and Supply Chain Strategies Strategic Capacity Management - Capacity Management in Operations and Supply Chain Management - Capacity Analysis - Using Decision Trees to Evaluate Capacity Alternatives Lean Supply Chains - Lean Production - The Toyota Production System - Lean Supply Chain Processes - Lean Services Logistics, Distribution and Transportation - Logistics

- Decisions Related to Logistics
- Locating Logistics Facilities

Global Sourcing and Procurement
- Strategic Sourcing
- Outsourcing
- Total Cost of Ownership

Enterprise Resource Planning Systems
- What is ERP?
- How ERP Connects the Functional Units
- How Supply Chain Planning and Control Fits within ERP

Forecasting
- Forecasting in Operations and Supply Chain Management
- Quantitative Forecasting Models
- Qualitative Techniques in Forecasting
- Web-Based Forecasting: Collaborative Planning, Forecasting, and Replenishment

Sales and Operations Planning
- Overview of Sales and Operations Planning
- Aggregate Planning Techniques

Inventory Management
- Definition of Inventory
- Inventory Costs
- Fixed-Order Quantity Models
- Fixed-Time Period Models
- Inventory Planning and Accuracy

Materials Requirements Planning
- Where MRP Can Be Used
- Master Production Schedule
- Materials Requirements Planning Systems
- Lot Sizing in MRP Systems

Process Design and Analysis
- Process Analysis
- Process Flowcharting
- Types of Processes
- Measuring Process Performance

Manufacturing Processes
- What are Manufacturing Processes
- Break-Even Analysis
- Manufacturing Process Flow Design

Service Processes
- The Nature of Services
- Designing Service Organizations
- Service Blueprinting and Fail-Safing

Design of Products and Services
- Product Design
- Designing for the Customer
- Designing Service Products

	Six Sigma Quality - Total Quality Management - Six Sigma Quality - ISO 9000 and ISO 14000
References	Jacobs, F.R., Chase, R.B., Operations and Supply Chain Management, McGraw Hill, 16th Global Edition, 2021. Harvard Business School Case Studies for SCM and Logistics

Theory Topics

Week	Weekly Contents
1	Introduction to Operations Management
2	Strategy
3	Strategic Capacity Management
4	Lean Supply Chains
5	Logistics, Distribution and Transportation
6	Global Sourcing and Procurement
7	Enterprise Resource Planning Systems
8	Forecasting
9	Sales and Operations Planning
10	Inventory Management
11	Material Requirements Planning
12	Process Design and Analysis
13	Manufacturing and Service Processes
14	Design of Products and Services and Six Sigma Quality