

Course Type	Course Code	Name of the Course	L	T	P	Credits
DE	EMSD503	Managing Supply Chains	3	0	0	3

### Course Objective

To introduce students to the key fundamental concepts, performance metrics, and critical decisions in supply chain management.

### Learning Out comes

Students will develop an understanding of fundamental concepts and techniques in supply chain processes. They will be equipped to evaluate supply chain performance and provide recommendations to improve competitiveness.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	What Is a Supply Chain?; The Objective of a Supply Chain; The Importance of Supply Chain Decisions; Decision Phases in a Supply Chain; Process Views of a Supply Chain; Examples of Supply Chains.  Competitive and Supply Chain Strategies; Achieving Strategic Fit; Challenges to Achieving and Maintaining Strategic Fit. Drivers of Supply Chain Performance; Framework for Structuring Drivers; Facilities; Inventory; Transportation; Information; Sourcing; Pricing.	9	Students will be able to: - Understand the goals of a supply chain and explain how supply chain decisions affect a firm's success. - Comprehend how a company attains strategic alignment between its supply chain strategy and its competitive strategy
2	Basic concepts of supply chain network design. Factors influencing network design decisions; Models for facility location and capacity allocation like Capacitated plant location model, locating plants and warehouses simultaneously etc. Aggregate planning strategies, Aggregate planning using linear programming.	9	Students will be able to: - Recognize the essential factors involved in designing a distribution network. - Comprehend the importance of network design in supply chain management. - Understand the fundamentals of aggregate production planning.
3	Managing economies of scale in Supply chain. Inventory models – EOQ, Quantity discounts models and uncertainty. Concept of centralization for holding inventory. Concept of service level, Reorder point, Safety Stock.	9	Will able to understand - issues related to EOQ, quantity discounts, centralization and decentralization and service level, Reorder point, Safety stock
4	Supply Chain Coordination and the Bullwhip Effect, The Effect on Performance of Lack of Coordination, Obstacles to Coordination in a Supply Chain, Managerial Levers to Achieve Coordination, Vendor-Managed Inventories, Collaborative Planning, Forecasting, and Replenishment	6	After completing this chapter, students will be able to - Explain supply chain coordination, understand the bullwhip effect, and recognize their influence on supply chain performance. - Identify challenges to achieving coordination within a supply chain.

			- Understand various approaches to collaborative planning, forecasting, and replenishment within a supply chain.
5	Design and planning of transportation network. Sourcing decision, Recent developments in supply chain. Case study	9	Will able to understand - Different types of transportation networks and their importance, different strategies of sourcing.
	Total	42	

**Text Books:**

1. Supply Chain Management: Strategy, Planning, and Operation- Sunil Chopra, Peter Meindl, Pearson

**Reference Books:**

2. Supply chain management: Text and Cases. Janat Shah, Pearson Education India.
3. Designing and managing the supply chain: concepts, strategies and case studies. David Simchi Levi, Philip Kaminsky, Edith Simchi Levi, & Ravi Shankar, McGraw-Hill Education.