

**PE372: PRINCIPLES OF SUPPLY CHAIN MANAGEMENT**  
**CREDITS = 4 (L=3, T=1, P=0)**

**Teaching and Assessment Scheme:**

Teaching Scheme			Credits	Marks Distribution				Total Marks
L	T	P		Theory Marks		Practical Marks		
			ESE	CE	ESE	CE		
3	1	0	4	70	30	30	20	150

**Course Content:**

Sr. No.	Topics	Teaching Hours
1	<p><b><u>Introduction to Supply Chain Management:</u></b></p> <p>Definition of Supply Chain, Objectives of Supply Chain, Supply Chain principles, building blocks of a supply chain network, Types of supply chains, Supply Chain as a source of competitive advantage, business processes in supply chains. Strategic, tactical, and operational decisions in supply chains, supply chain design issues, role and importance of Supply Chain Management, Supply Chain Management methodology. Functional view of Supply Chain Management.</p>	07
2	<p><b><u>Logistics Management:</u></b></p> <p>Nature and scope of logistics, modes of transportation and their performance characteristics, Logistics environment, Logistic decisions: facility location, transportation, storage and material handling. Logistics information systems, Logistics audit and control. Logistics Applications, Logistics &amp; Competitive strategies and global supply chain management, total logistics cost, Logistics to Supply Chain Management focus, Material handling, facility planning and warehousing/storage/retrieval. The role of IT in supply chain, E-supply Chain.</p>	09
3	<p><b><u>Supply Chain: Drivers, Metrics &amp; Forecasting:</u></b></p> <p>Drivers of supply chain performance, Framework for structuring drivers, Obstacles to achieving strategic fit. Role of forecasting in a supply chain, Components of a forecast and forecasting methods, Risk management in forecasting.</p>	06
4	<p><b><u>Co-ordination in Supply Chain and Bullwhip Effect:</u></b></p> <p>Role and importance of Supply Chain Coordination, Coordinating procurement, Coordinating pricing decision, coordinating process and product design, coordination for reduced sourcing, vendor development and supplier partnership, Business cycle ownership with Supply Chain Management, Supply Chain integration through push-pull mechanism, Bullwhip Effect.</p>	07

5	<b><u>Inventory Management &amp; Lot Sizing:</u></b>	07
	Traditional Inventory Management, Lean Inventory Management, Kanban Sizing, WIP Inventory: FIFO Management, Lot Sizing in Lean, One Piece, Every Part Every Interval (EPEI), lot Sizing as Part of Scheduling. Applying the EPEI to Traditional Planning Systems: The Period Order Quantity, interval as Goal Setting, high-mix interval, Determining the Interval, interval in Value Stream Loops, reducing Pipeline Inventory: Kanban-Visual Card, Inventory Reduction through Reducing Lot Sizes, Point of Sale Data.	
6	<b><u>Supply Chain Globalization:</u></b>	04
	The impact of Globalization, enterprise globalization strategies, the global integrated enterprise, requirements and challenges, operational differences, potential hidden costs and total cost strategy.	
7	<b><u>Supply Chain Management Performance Measures:</u></b>	02
	Performance Measurement of Supply Chain Management, Traditional and Contemporary approaches (Supply Chain Operation Reference Model (SCOR), Performance Benchmarking, Balance Score Card)	

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<b>TOTAL</b>	<b>42</b>
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**Reference Books:**

1. Supply Chain Management – Ronald Ballou, Pearson Education.
2. Supply Chain Management – Concepts, Practice, and implementation by Sunil Sharma, Oxford University Press.
3. Supply Chain Management – Process, Systems and Practice by N. Chandrasekaran, Oxford University Press.
4. The Management of Business Logistics A Supply Chain Perspective, Coyle, Bardi, and Langley, Thomson Asia.
5. Designing and Managing the Supply Chain, David Simchi Levi, Philip Kaminsky, Edith Simchi Levi, and Tata McGraw Hill.
6. Logistics: An Introduction to Supply Chain Management, Walters, Palgrave Macmillan.
7. Blanchard, B.S., Logistics Engineering & Management, Prentice Hall, New Jersey, 1997
8. Lambert, D.M., Stock J.R., Fundamentals of Logistics Management, Irwing McGraw Hill, 1998.
9. Sunil Chopra and Peter Menidl, Prentice Hall, 2001, Supply Chain Management- Stretagy Planning and Operations.
10. Manish Govil and Jean Marie Prop, Supply Chain Design and Management: Statistical and Tactical Perspectives, Academic Press, San Diego.
11. Sridhar Tayur, Ram Ganeshan and Micheal Magazine, Quantitative Models for Supply Chain Management, Kluwer Academic Publishers, 2002.