



# GUJARAT TECHNOLOGICAL UNIVERSITY

Master of Engineering

Subject Code: 3724613

Semester – II

Subject Name: Logistics and Supply Chain Management

Type of course: Elective

Prerequisite: Nil

### Rationale:

With the growing global competition, logistics and supply chain management is facing more challenges, such as lack of transportation and infrastructure capacity, optimizing inventory performance, shorten delivery lead times, achieving lower manufacturing costs, trade regulations, and a more encompassing distribution. Hence, logistic and supply chain management is becoming increasingly complex, and strategic planning of the supply chain reaches new level of difficulty. With increased globalization many organization have given their organization a multinational dimension, to make students work in this environment this subject is designed.

### Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
			ESE (E)	PA (M)	ESE (V)	PA (I)		
3	0	2	4	70	30	30	20	150

### Content:

Sr. No.	Content	Total Hrs
1	<b>Logistics &amp; Supply Chain Management:</b> Evolution of Supply Chain, Classification of Logistics Applications, Total logistics cost, Logistics to Supply Chain Management focus, Objectives of Supply Chain Management, Key factors (Drivers and Obstacles) of SCM, Size and potential of SCM market in India, Framework for supply chain planning and decision making, Strategic aspects and managing uncertainty.	06
2	<b>Dynamics of SCM:</b> Alignment processes with customer order-management system, Supply chain integration through push-pull mechanism, Bullwhip effect mechanism.	05
3	<b>World-class best practices in SCM:</b> Supplier tierization, Reverse logistics, Vendor-managed inventory, Milk round system, Hub and spoke, Third and Fourth party logistics (3PL and 4PL), Cross docking, Drop shipping, Trans-shipment, Risk-pooling, RFID, Lean operations.	06
4	<b>Procurement and Outsourcing Strategies:</b> Operational decisions and trends, Strategic outsourcing and partnerships, Bidding and negotiation processes, Vendor rating and development, e-procurement, Vendor Quality Assurance system.	06
5	<b>Customer Relationship Management:</b> Concept of CRM and its linkage with SCM, Marketing implications such as value added services, New product development, Strategic pricing.	05



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6	<b>Information Technology in SCM:</b> Need and role of IT in SCM, Software and various modules of the software, ERP and SCM – Indian Applications, Trends and future of IT in SCM.	<b>06</b>
7	<b>SCM Performance Measures:</b> Implementing SCM, Performance Measurement of SCM – Traditional and Contemporary Approaches (Supply Chain Operations Reference (SCOR) Model, Performance Benchmarking, Balance Scorecard etc.)	<b>06</b>
8	Industrial snapshots of SCM implementation in best-known Indian organizations - dynamics of SCM implementation and solutions achieved.	<b>05</b>

<b>Suggested Specification table with Marks (Theory): Distribution of Theory Marks</b>					
R Level	U Level	A Level	N Level	E Level	C Level
<b>10</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>20</b>	<b>10</b>

**Legends: R: Remembrance; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create and above Levels (Revised Bloom's Taxonomy)**

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

### Reference Books:

1. Supply Chain Management- Concepts, Practices, and Implementation by Sunil Sharma, Oxford University Press
2. Supply Chain Management- Processes, System And Practice by N. Chandrasekaran, Oxford University Press
3. Supply Chain Management: Strategy, Planning and Operation, by Sunil Chopra and Peter Meindl, Prentice Hall of India
4. Operations Management; Contemporary Concepts and Cases by Shroeder, G., McGraw Hill publication
5. Business Logistics/ Supply Chain Management by Ballou, Donald and Shrivastava, Person Education

### Course Outcomes:

Sr. No.	CO statement	Marks % weightage
CO-1	Understand the concepts of logistics and supply chain management, importance and application.	20
CO-2	Understand the dynamics of SCM and word class practices	30
CO-3	Understand the industrial procurement process and relationship management	30
CO-4	Understand the application of Information Technology in SCM and Performance measures	20



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**Term Work:**

The term work shall be based on the topics mentioned above.

**List of Open Source Software/learning website:**

- 1) NPTEL