



# GUJARAT TECHNOLOGICAL UNIVERSITY

**Master of Engineering**

**Subject Code: 3732810**

**Semester – III**

**Subject Name: Logistics and Supply Chain Management**

**Type of course: Program Elective V**

**Prerequisite: Nil**

**Rationale:**

The aim of this course is to make students understand and appreciate the importance of Logistics and Supply Chain operations in the industrial and business systems. Students can develop understanding of logistics process, procurement and out sourcing, contemporary and world class supply chain management practices as well as impact of IT in supply chain operations. The course is also aimed at making students aware of supplier and customer relations in the context of supply chain management.

**Teaching and Examination Scheme:**

Teaching Scheme			Credits C	Examination Marks				Total Marks
L	T	P		Theory Marks		Practical Marks		
				ESE (E)	PA (M)	ESE (V)	PA (I)	
3	0	0	3	70	30	0	0	100

**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.	07
2	<b>Dynamics of SCM:</b> Alignment processes with customer order-management system, Supply chain integration through push-pull mechanism, Bullwhip effect mechanism.	08
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.	08
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.	08
5	<b>Customer Relationship Management and Information Technology in SCM:</b> Concept of CRM and its linkage with SCM, Marketing implications such as value added services, New product development, Strategic pricing, Need and role of IT in SCM, ERP and SCM	06



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6	<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.)	08
	<b>Total Hours</b>	45

**Suggested Specification table with Marks (Theory): (For BE only)**

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
10	10	30	30	20	10

**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

### Course Outcomes:

Sr. No.	CO statement	Marks % weightage
CO-1	Understand and Appreciate the importance of logistics and supply chain management function with interrelationship in overall success of any business/industrial sector.	20
CO-2	Understand the importance and dynamics of supply chain management in any business/industrial sector.	30
CO-3	Know the world class best practices being carried out in supply chain management and Understand the procurement and outsourcing strategies.	30
CO-4	Understand the impact of customer relationship management in effective supply chain management.	10
CO-5	Know how to measure the performance of supply chain operations.	10

**Major Equipment: Nil**



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

1. The concerned faculty member shall provide the list of peer reviewed Journals and Tier-I and Tier-II Conferences relating to the subject (or relating to the area of thesis for seminar) to the students in the beginning of the semester.
2. NPTEL