



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Master of Engineering

Level: PG

Subject Code: ME02000911

Subject Name: Logistics and Supply Chain Management

w. e. f. Academic Year:	2024-25
Semester:	2
Category of the Course:	Professional Elective Course

<b>Prerequisite:</b>	Nil
<b>Rationale:</b>	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.

## Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT level
1	Understand the concepts of logistics and supply chain management.	20
2	Practice strategic aspect and management uncertainty of Logistic and SCM.	15
3	Compare the dynamics of SCM and word class practices	15
4	Demonstrate the industrial procurement process and relationship management	25
5	Illustrate the application of Information Technology in SCM and Performance measures	25

## Teaching and Examination Scheme:

Teaching Scheme (in Hours)			Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Tutorial / Practical		
				ESE (E)	PA / CA (M)	PA/CA (I)	ESE (V)	
3	0	2	4	70	30	30	20	150



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## Course Content:

Unit No.	Content	No. of Hours	% of Weightage
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.	08	20
2.	<b>Dynamics of SCM:</b> Alignment processes with customer order-management system, Supply chain integration through push-pull mechanism, Bullwhip effect mechanism.	04	10
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	14
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	14
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	08
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.	07	14
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.). Industrial snapshots of SCM implementation in best-known Indian organizations - dynamics of SCM implementation and solutions achieved.	09	20



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	<b>Total</b>	<b>45</b>	<b>100</b>

**Suggested Specification Table with Marks (Theory):**

Distribution of Theory Marks					
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>

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

**References/Suggested Learning Resources:**

**(a) 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

**(b) Open-source software and website:**

**Suggested Course Practical List:**

As per the above content and Course Outcome, Practice and case study of Logistic and SCM.

**List of Laboratory/Learning Resources Required:**

As per the above content

**Suggested Activities for Students: Any activity based on above syllabus content**

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