

**I>Course Content:**

Semester	III Core
Subject	Supply Chain Management
Course Code	MMSOC301 (RGCMS)
Credits	4
Duration	40

**Learning Objective:**

1. Familiarize with the basic concepts of Logistics Management in relation to Inbound Logistics, Process Logistics, and Outbound Logistics phases of business.
2. To explore the major elements of supply chain and expose to leading edge thinking on supply chain strategy, Designing supply chain, customer satisfaction; inventory management; risk management, alliances, issues and challenges, performance measurement.

**Module**

<b>S No</b>	<b>Content</b>	<b>Activity</b>	<b>Learning outcomes</b>
1	<p><b>Understanding the supply chain</b>            What is a supply chain? Decision phases in a supply chain.            Evolution of SCM, SCM integration, Linkages and Decisions in SCM.            Difference of Supply Chains in Product (Mfg.)            Industry and Service-based Industry. Supply Chain and Demand chain, Value creation.            Delivery and Value addition through supply chain.            Process view of a supply chain. The importance of supply chain flows.            Competitive Supply Chain Strategies.            Achieving strategic fit.</p>	Lecture and discussion.	Understanding of Supply chain
2	<p><b>Logistics</b>            Competitive advantage and three C,            Competitive advantage through logistics.            Logistics-A system concept, Customer value chain, Logistics functions.            Logistics Mission, Objectives, Goals, Decisions. Reverse Logistics.</p>	Lecture and discussion.	Understanding of Logistics concept
3	<p><b>Warehousing and Distribution</b>            Role of warehouse in Logistics,</p>	Lecture and discussion.	Understanding of Warehousing function
S No	<b>Content</b>	Activity	Learning outcomes

	<p><b>Warehousing functions, Types of warehouses</b>  <b>Warehouse site selection, Layout design, Warehouse Decision model.</b>  <b>Warehouse automation, strategies, performance, costing.</b>  <b>Distribution, Role, Importance, Levels, Channels, Structure, Functions.</b>  <b>Channel partners, functions, Tasks, Flows, Strategy.</b>  <b>Free trade zones and special economic zones.</b></p>		and distribution channel
4	<p><b>Order Processing and Logistics Information system</b>  <b>Order Preparation, Transmittal, Order entry, Order filling, Order status reporting Industrial order processing and Retail order processing.</b>  <b>Web based order processing. Processing priorities.</b></p>	Lecture and discussion.	Understanding of Warehouse process and logistics information system
5	<p><b>Performance Measurement and Controls in Supply Chain Management Pre-transaction, Transaction, Post-transaction elements, Service attributes Value added customer service, Importance of Logistics Customer service Sales and Service relationship, Cost and Service relationship.</b>  <b>Objective, Levels, Parameters of performance measures- Cycle time, Fill Rate.</b>  <b>Inventory Turnover, On-time Shipping and Delivery, Perfect Order, Stock out.</b>  <b>Transportation measurements, Customer perception measure, Audit.</b>  <b>Gap Analysis</b>  <b>Concept of Benchmarking Benchmarking for Best Practices SCOR and DCOR</b></p>	Lecture and discussion.	Understanding of customer service and performance measurement
6	<p><b>Transportation Infrastructure, road, rail, air water, pipeline. Freight Management, Freight cost.</b>  <b>Transportation Network Route planning, Containerization, Packing.</b>  <b>Effective / Cost Optimizing Distribution strategies- Direct shipment, Cross-docking, Milk run, transshipment.</b></p>	Lecture and discussion.	Understanding of Transportation modes
S No	<b>Content</b>	Activity	Learning outcomes

7	<p><b>Designing Logistics and distribution network in a supply chain Applications to Online Sales Network Design in the SC the role of distribution in the supply chain. Importance of Smart Transportation Distribution Center Concept , Modern DC's , Robotics Usage for pick and pack Factors influencing distribution network design.</b></p> <p><b>Supply Chain Integration</b>  <b>Design option for a distribution network.</b>  <b>Distribution network in practice.</b></p>	Lecture and discussion.	Understanding various distribution networks
8	<p><b>The value of Information Bullwhip effect. Effective forecasts. Information for the coordination of systems.</b></p> <p><b>Collaborative Planning Forecasting Replenishment (CPRF) concept.</b></p> <p><b>Locating desired products. Lead time reduction.</b></p> <p><b>Information and supply chain trade-off.</b></p> <p><b>Designing the supply chain for conflicting goals.</b></p> <p><b>Inventory Management and Risk pooling, Logistics Information system Function, OMS, WMS, TMS.</b></p> <p><b>Internal Operations – Input, Database management, Output</b></p>	Lecture and discussion.	Understanding importance of information in supply chain.
9	<p><b>Strategic Alliances</b></p> <p><b>A framework for strategic alliances. Third party / fourth party logistics.</b></p> <p><b>What are 3PL/4PL, Advantages and disadvantages of 3PL, 3PL issues and requirements?</b></p> <p><b>Retailer supplier partnership. Types of RSP, Requirements of RSP</b></p> <p><b>Inventory ownership in RSP, Issues and steps in RSP implementation Advantages and disadvantages of RSP. Distribution Integration</b></p> <p><b>Types of and issues in Distribution integration.</b></p> <p><b>Customer Value</b></p>	Lecture and discussion.	Understanding of various outsourcing activities and RSP
10	<p><b>E-procurement and outsourcing Outsourcing benefits and risks. A framework for Buy/Make decisions E-procurement. A framework of E-procurement.</b></p>	Lecture and discussion.	Understanding procurement through Internet and impact.

	<b>Impact of Internet on supply chain</b>	Activity	Learning outcomes
	<b>strategies (E-business).</b>		
11	<b>Designing Global Supply Chain Networks</b> <b>Global market / Technological/ Cost/ Political and Economic Forces.</b> <b>Risks and advantages of international supply chain.</b> <b>International versus Regional products.</b> <b>Local autonomy versus central control.</b> <b>Regional differences in Logistics- Cultural differences/ infrastructure/ performance expectation and evaluation</b> <b>Information systems availability, human resources. Global business logistics.</b>	Lecture and discussion.	Understanding various international issues and challenges
12	<b>Performance Measurement and Controls in Supply Chain Management</b> <b>Measurement of a Robust Supply Chain.</b> <b>Cost / Quality / Service Measurement</b> <b>Introduction and concept of Benchmarking. Gap Analysis.</b> <b>Key actions in benchmarking for best practices.</b> <b>Overview of Supply Chain Operations Reference (SCOR) Modeling.</b> <b>Balance scorecard for SCM.</b> <b>Lean Manufacturing and Mass Customisation</b>	Lecture and discussion.	Understanding various performance measurements tools in supply chain.
13	<b>Ethical issues in SCM</b> <b>Supply chain vulnerability. Conformance to applicable laws such as Contract and commercial laws,</b> <b>Trade regulation, government procurement regulations, patents</b> <b>Copyrights, trademark laws, transportation and logistics laws and regulations</b> <b>Environmental laws. International practices. Confidentiality and proprietary information.</b>	Lecture and discussion.	Understanding various ethics, Rules and regulations in supply chain.
14	<b>Current Trends in Supply Chain Goldratt</b> <b>Supply Chains Sustainable Supply Chain</b> <b>Resilient supply chains</b> <b>Green Supply chain Lean supply chain</b>	Lecture and discussion.	Understanding recent trends in supply chain.

## II&gt;Course Outcomes

## Course Outcome

Students will be able to.....

Code	Course Outcome	Cognition
MMSOC301.1	Understand fundamental supply chain management concepts.	Understand
MMSOC301.2	Apply the current supply chain theories, practices and concepts utilizing case problems and problem-based learning situations	Analyse
MMSOC301.3	Evaluate the emerging trends and impact of IT on Supply chain management	Evaluate
MMSOC301.4	Analyze decisions affecting supply chain's "plan," "deliver," and "customer management" functions.	Analyse
MMSOC301.5	Analyze and improve supply chain processes.	Analyse

Text books

Text books		
1	Supply Chain Management - Strategy, Planning and Operation	Sunil Chopra and Peter Meindl
2	Supply Chain Management by	Simchi Levi

Reference Books

Reference books		
1	Logistics Management	V.V.Sople
2	Supply Chian Management	V.V.Sople
3	Business Logistics	Ronald H.Ballou
4	Logistics and Supply Chain Management	Martin Christopher
6	Designing & Managing the supply chain	David, Philip Kminsky

