



GUJARAT TECHNOLOGICAL UNIVERSITY

Bachelor of Engineering

Subject Code: 3161511

Semester –VI

Industrial Engineering

Subject Name: Logistics and Supply Chain Management

Type of course:

Prerequisite: Nil

Rationale:

Supply chain management (SCM), a term which denotes the integration of key business processes from end user through original suppliers for the purpose of adding value for the firm, its key supply chain members, to include customers and other stakeholders. This course approaches Logistics & SCM from a managerial perspective and introduces concepts in a format useful for management decision making. Basic terms, concepts, and principles are examined in light of how they interrelate and interface within the firm and across the supply chain.

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	Logistics management: Introduction, Logistics system design, Demand planning, Multiple channel distribution, Multi-echlon system, Model development, Concept of warehousing, Methods of storage, Primary and secondary transportation, Logistics information system, Logistics costing	08
2	Supply chain management: Overview, Supply chain basics, Decision phases in a supply chain, Planning and operations, Importance of supply chain process, Functional and organizational scope of SCM, Management of Demand and supply in SCM, Capacity, Inventory, market segments, Supply chain forecasting, Supply chain forecasting management performance (SCFMP). Collaborative planning forecasting and replenishment (CPFR).	06
3	Drivers of outsourcing: Procurement approaches to SCM, Operational, strategic and global outsourcing, Production supply chain model, Intra firm production, Build to order production, Lean, JIT, Dispersed production Relevance and role of supply chain coordination,	08
4	Bull whip effect: Modeling the impact of information on inventories, Role of Marketing, sales and R& D in SCM, Information systems and technology in supply chain, E-Business models: B to B, B to C. Managing service.	04



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	Total Hours	45
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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	15	25	20	15	15

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. Blanchard, B.S., Logistics Engineering & management, Prentice Hall, New Jersey, 1997
2. Lambert, D.M., Stock J.R., Fundamentals of Logistics management, Irwing McGraw Hill, 1998
3. Sunil Chopra and Peter Menidl, Prentice Hall, 2001, Supply chain management- Strategy planning and operations.
4. Manish Govil and Jean Marie Prop, Supply chain design and management: Statistical and Tactical perspectives, Academic press, San Diego.
5. Sridhar Tayur, Ram Ganeshan and Micheal Magazine, Quantitative models for supply chain management, Kluwer Academic publishers, 2002

Course Outcomes: Students will be able to:

Sr. No.	CO statement	Marks % weightage
CO-1	Describe knowledge of the logistics.	20
CO-2	Explain the sequential nature of supply chain management.	30
CO-3	Examine the elements leading to effective partnering and strategic sourcing relationships.	25
CO-4	Develop mathematical modeling and solution tools for logistics and supply chain management.	25

Term Work:

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

List of Experiments: As per syllabus

List of Open Source Software/learning website:

NPTEL