B.Tech III Year I Semester
JNTUA COLLEGE OF ENGINEERING (AUTONOMOUS) PULIVENDULA
19AME55f – SUPPLY CHAIN MANAGEMENT
(Open Elective-I)

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Course Objectives: The objectives of the course are to make the students learn about
- Explain the basics of supply chain management.
- Familiarize inventory management techniques and models to ensure EOQ batch size under risk management.
- Demonstrate various distribution strategies for shipment of products.
- Focus on evaluating of strategic alliance partners and understanding of RDBMS.

UNIT I   **12 Hours**

Understanding the supply chain: What is SCM? Why SCM? The Complexity, Key issues in SCM Logistics network - Introduction, Data Collection, Transportation, Ware house Management, Strategic location of ware houses, Demand forecasting, Role of aggregate planning, MRP, ERP, Managing variability, Key features of Network configuration.

Learning Outcomes:
At the end of this unit, the student will be able to
- Explain the strategic importance of SCM and how operations relate to other business functions.   L2
- Summarize working knowledge of the concepts and methods of SCM   L2
- Apply concepts for continuous improvement for practical problems   L3

UNIT II   **8 Hours**

Inventory management: Concepts of Materials Management, Economic lot size model, Effect of Demand uncertainly, Fixed order costs, Variable lead frames, Inventory under certainly & uncertainty, Risk Management

Learning Outcomes:
At the end of this unit, the student will be able to
- Explain why companies keep inventory and costs of inventory for inventory decisions.   L2
- Outline the key elements and relationship with customer service.   L2
- Determine the appropriate reorder point in a continuous inventory system based on a target service level.   L3
- Apply the order quantity estimate for a periodic inventory system.   L3

UNIT III   **8 Hours**

Distribution strategies: Introduction, Centralized vs Decentralized control, Direct shipment, Cross Docking, Push based vs Pull based supply chain.

Learning Outcomes:
At the end of this unit, the student will be able to
- Discuss outsourcing as a strategic decision.   L3
- Classify the distribution strategies, systems and processes   L2
- Analyze issues and trends in the supply chain   L4

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UNIT IV   **8 hours**

Strategic alliances: Third party Logistics (3PL), Retailer – supplier relationship issues, requirements, success & failures, Distributor integration Types & issues.

Learning Outcomes:
At the end of this unit, the student will be able to
- Explain the third party logistics   L2
- Develop retailer supplier relationship issues   L2
- Compare distribution integration types and issues   L2

UNIT V   **10 hours**

MIS & SCM: Relational Data Base Management (RDBMS), System Architecture, Communications, and Implementation of ERP, Decision support systems for SCM: Analytical tools, Presentation tools, Smooth production flow Current issues & directing challenges for future, e-Commerce strategies and world class supply chain management.

Learning Outcomes:
At the end of this unit, the student will be able to
- Interpret the basic modes of RDBMS for communication and ERP implementation.   L5
- Identify support systems for supply chain management   L3
- Explain the analytical and presentation tools   L2
- Outline E-commerce strategies for world class SCM   L2

Text Books:
1. Sunil Chopra, Peter Meindl, Supply Chain Management: Strategy, Planning, and Operation, 4/e, Pearson, 2010.
2. David N. Burt, Donald W. Dobler , World Class Supply Management: The Key to Supply Chain Management, 2/e, McGraw-Hill/Irwin, 2003

Reference Books:
1. John Joseph Coyle, Edward J. Bardi, C. John Langley, The Management of Business Logistics: A Supply Chain Perspective, South-Western/Thomson Learning, 2003.
2. Upendra Kachru, Logistics and Supply Chain Management, Excel Books, 2009.

Course Outcomes:
At the end of this Course the student will be able to
- Apply the concepts of supply chain management for demand forecasting.   L3
- Make use of SCM and inventory management for procurement.   L3
- Analyze the shipment activities and related issues.   L4
- Build third party alliances.   L5
- Adapt the RDBMS data for communications and analyzing future challenges and understand e-commerce strategies.   L6

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