

Gautam Buddha University, Greater Noida

School of Engineering (Mechanical Engineering)

Degree	Course Name	Course Code	Marks:100
M. Tech.	Supply Chain Management	MEI 504	SM+MT+ET 25+25+50
Semester	Credits	L-T-P	Exam.
II	4	3-1-0	3 Hours

Unit - I

Introduction to Supply Chain: Basic concepts of supply chain management (definitions and key issues); Decisions phases in a supply chain; Push and pull views of supply chain; Bull-Whip effect; supply chain strategies. **(05 Hours)**

Unit - II

Performance Evaluation and Design of Supply Chain Network: Drivers of supply chain performance and their associated Metrics; Supply chain decision making framework; Network design factors; Facility location and capacity allocation models; Distribution network design. **(10 Hours)**

Unit - III

Supply Chain Planning Phase: Demand forecasting; Basic approaches of demand forecasting; Qualitative forecasting methods; Quantitative forecasting methods; Measures of forecast error capacity and aggregate planning; Aggregate planning strategies; Planning and managing inventories; Managing uncertainty in inventory levels; Designing and planning of transportation networks: Design options for a transportation network; Performance characteristics for evaluating transportation modes; Trade-offs in transportation design; Managing risk in transportation. **(11 Hours)**

Unit - IV

Supply Chain Pricing and Revenue Management: Role of pricing and revenue management; Pricing and revenue management for perishable and seasonal goods; Pricing and revenue management for bulk and spot contracts.

(07 Hours)

Unit - V

Information Technology in Supply Chain: Supply chain IT framework; Role of IT in network design; role of IT in risk management; Role of IT in coordinating supply chain functions; Future of IT in supply chain.

(06 Hours)

Unit - VI

Supply Chain Outbound Logistics: Types of warehouses; Design criteria for warehouses; Packaging and packing; Material handling equipments. **(06 Hours)**

Recommended Books:

1. Supply Chain Management; Sunil Chopra; Peter Meindl and D. V. Kalra; Pearson Education.
2. Supply Chain Management; Janat Shah; Pearson Education.
3. Essentials of Supply Chain Management; Michael Hugos; John Wiley & Sons.
4. Operations Management; Russel and Taylor; Prentice Hall India.
5. Modeling the Supply Chain; J. F. Shapiro; Duxbury Thomson Learning.