

DSEM07 – Supply Chain Management and Logistics

Masters of Commerce
Semester IV
DSE – Elective Paper
Supply Chain Management and Logistics

Course Type/ Course Code	Course Title	Lectures	Tutorials	Practical	Credit	Pre-requisites
DSEM07	Supply Chain Management and Logistics	3	1	0	4	NIL

Objective: This course aims to provide a foundational understanding of Supply Chain Management and Logistics by examining their concepts, components and strategic importance. It enables students to evaluate logistics functions such as transportation, warehousing, and inventory in an integrated supply chain framework. The course also prepares learners to analyze network design, technology applications and sustainability practices in SCM.

Learning Outcomes: On completion of this course, the student should be able to:

- Explain the structure, drivers and strategic role of logistics and supply chains.
- Analyze key logistics functions including transportation, warehousing and inventory decisions.
- Evaluate supply chain network design, outsourcing models and sustainability practices.
- Apply technology, performance metrics and analytics for improving supply chain efficiency.

Contents:

Unit I

(12 Hours)

Evolution, importance, scope, concept of Supply Chain Management (SCM) and trade logistics; Supply chain management as a Management Philosophy; Function of SCM, Value chain for supply chain management; Design of SCM; Logistic activities – An overview, contribution of logistics at macro and micro levels; Logistics and competitive advantage; Logistics mix; Concept, span and process of integrated SCM; Difference between logistics and supply chain management, demand management; Forecasting-Need, quantitative and qualitative methods, Selecting the appropriate forecasting technique; Functional applications – HR, marketing, operations, finance, IT; Logistics organization - Logistics in different industries

Unit II

(11 Hours)

Logistics framework and types— inbound logistics, outbound logistics; Role of relationship marketing in SCM; Managing relationships with suppliers and customers; Captive buyers and suppliers; Strategic partnerships; Supplier-retailer collaboration and alliances.

Unit III

(10 Hours)

Product development process and SCM, purchasing cycle, types of purchases, JIT purchasing, strategic role of purchasing in the supply chain and total customer satisfaction; Purchasing vs. procurement, procurement strategies; Transportation, Warehousing, Inventory, Logistical packaging.

Unit IV

(12 Hours)

Framework of performance indicators, methods of performance measurement, and the balanced score card approach, benchmarking, supply chain metrics (KPIs), performance measurement and continuous improvement, Third party and fourth party logistic outsourcing ; Reverse logistics; Bullwhip effect; Push based and pull based systems; Green supply chain management; Sustainability and supply chain management; E-Commerce logistics ; Re-engineering the supply chain- blockchain, artificial intelligence and big data analytics in SCM.

Tutorial Exercise:

The students shall be engaged in case-based discussions to analyze real-world supply chains of selected industries, focusing on logistics decisions such as transportation mode, inventory levels and warehouse location. They will prepare supply chain mapping exercises, evaluate 3PL/4PL outsourcing scenarios and present group-based solutions to logistics challenges through presentations and reflective reports.

Suggested Readings:

- Bozarth, C.C. & Handfield, R. B. (2015). Introduction to Operations and Supply Chain Management. Pearson Education.
- Chopra, S. & Meindl, P. (2007). Supply Chain Management: Strategy, Planning and Operation, Pearson Education.
- Christopher, M. (2011). Logistics and Supply Chain Management. Prentice Hall.
- Hult, M. G., Closs, D., Frayer, D. Global (2014). Supply Chain Management: Leveraging Processes, Measurements, and Tools for Strategic Corporate Advantage. Mc Graw Hill Ltd
- Shapiro, J.F. (2007). Modelling the Supply Chain, Cengage Learning.
- Simchi-Levi, D., Kaminsky, P., Simchi-Levi, E. & Ravi, Shankar (2008). Designing and Managing the Supply Chain. Tata McGraw Hill Education Private Limited.