

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS) HYDERABAD

DEPARTMENT OF HUMANITIES & SOCIAL SCIENCES

COURSE NAME- LOGISTICS AND SUPPLY CHAIN MANAGEMENT

SYLLABUS FOR B.E. VI SEMESTER

W.E.F-2025-2026(Common to all branches)

Instruction: 3 Hours	SEE: 60	Course code: U23OE611EH
Credits: 3	CIE: 40	Duration of SEE: 3 Hours

Unit 1 Introduction to Supply Chain Management-

Supply chain – objectives – importance – decision phases – process view – competitive and supply chain strategies – achieving strategic fit – supply chain drivers – obstacles – framework – facilities – inventory – transportation – information – sourcing – pricing.

Unit 2 Inventory and Logistics Management Planning Demand and Supply-

Demand forecasting –Planning and Managing Inventories- Safety inventory and its appropriate level – impact of supply uncertainty, aggregation and replenishment policies. Lab (Excel) : Demand Forecasting: Use historical data with functions like FORECAST.LINEAR to predict future needs, preventing stockouts or overstocking, filters to see current stock levels and trigger reorders ABC Analysis: Classify items by value (A, B, C) and demand volatility (X, Y, Z) to optimize safety stock. Trigger Alerts for ABC using Conditional IF.

Unit 3 Global Supply Chain Introduction, Forces of Global Supply Chain-

Global market force, Technology force, Global cost force, Political force - Issues in international Supply Chain Management –International Versus Regional Product, Local autonomy versus control logistics –Importing & Exporting, Main forces, Barriers. Metrics What are SCM Metrics – SCOR Model.

Unit 4 Supply Chain & Global Logistics (Transportation): -

Meaning and Significance of International Transportation- Role of transportation in the integrated logistics process, Basic principles of international transportation, Parties involved in international transportation, Significance of Transportation, Modes of International Transportation – Air, Sea and Road - Criteria for Selection of different modes of transportation.

Unit 5 IT and AI in Supply Chain Management Supply Chain IT framework –

Automation- Predictive Analytics in Supply Chain- AI applications in demand forecasting, inventory management, and logistics. Real-time data analytics and decision making in supply chains, Exploring AI's role in enhancing supply chain agility and resilience- Successful AI implementations in SCM (e.g., Amazon, Walmart).

Case study may be given for Unit 2

Books suggested:

- Ewan Roy, what is global supply chain management? by Trade Ready,2017
- Altekar, supply chain management, and concepts PHI 2013.
- Logistics and Supply Chain management, Third Edition By AILAWADI, SATISH C., SINGH, P. RAKESH - PHINDIA.com.

Reference books:

- R.B. Handfield and E.L. Nochols, Jr. Introduction Supply Chain Management. Prentice Hall, 2nd edition (November 30, 2014)
- Sunil Chopra and Peter Meindl. Supply Chain Management: Strategy, Planning, and Operation, Prentice Hall of India, 6th Edition 2013.
- International Logistics Pierre A. David, 2021

The break-up of CIE: Internal Tests + Assignments + Quizzes

1	No. of Internal tests	:	2	Max.Marks	:	30
2	No. of assignments	:	3	Max. Marks	:	5
3	No. of Quizzes	:	3	Max. Marks	:	5

Duration of Internal Tests : 90 Minutes

Duration for SEE : 180 Minutes