

COURSE NAME:	OPERATIONAL LOGISTICS
TOTAL DURATION:	45 Hrs
MODE OF DELIVERY	PHYSICAL CLASSROOM TRAINING AT RESPECTIVE COLLEGES
TRAINER TO STUDENT RATIO:	1:50
TOTAL MARKS:	75

TABLE 1	
OVERALL COURSE OBJECTIVE:	<ol style="list-style-type: none"> 1. Explore logistics management principles and practices, integrating knowledge from diverse job roles 2. Cultivate the ability to analyse operational data effectively, utilizing insights to make informed decisions and drive continuous improvement 3. Master inventory control techniques and methodologies to optimize inventory levels 4. Design and evaluate strategic supply chain planning and optimization models to enhance organizational efficiency. 5. Develop strong communication and collaboration skills to facilitate coordination among various stakeholders.
LEARNING OUTCOME:	<ol style="list-style-type: none"> 1. Evaluate logistical challenges and propose solutions to ensure timely delivery and cost-effective operations. 2. Interpret key performance indicators (KPIs) and metrics to assess the effectiveness of operational logistics processes. 3. Implement inventory control strategies and methodologies to minimize stockouts, excess inventory, and carrying costs. 4. Analyse supply chain networks and distribution channels to identify opportunities for optimization and cost reduction. 5. Evaluate facility layout, equipment utilization, and staffing requirements to optimize distribution centre performance and productivity.

TABLE 2: MODULE WISE COURSE CONTENT AND OUTCOME				
SL.NO	MODULE NAME	MODULE CONTENT	MODULE LEARNING OUTCOME	DURATION (HRS)
1	Role of Logistics operations and system concept	Fundamentals of Logistics Systems - Evolution of Logistics and Supply Chain Management - Key Components of Logistics Systems - Logistics Strategies and Planning - Technology Integration in Logistics - Role of Information Systems in Logistics - Performance Measurement in Logistics - Logistics Network Design and Optimization - Global Logistics and International Operations.	Role of logistics operations and system concepts, focusing on efficient resource management, optimization, and strategic implementation within supply chain networks.	5
2	Inventory and Warehousing operations	Basics of Inventory Management - Inventory Types and Classification - Inventory Costs and Valuation - Inventory Control Techniques - Warehouse Design and operations - Warehouse Safety and Security - Material Handling Equipment - Technology	Analyse the intricacies of inventory management and warehouse operations, gaining skills to optimize storage, streamline processes, and enhance logistical efficiency within supply chains	5

		Integration in Warehousing.		
3	Freight and Transportation operations	<p>Overview of Freight and Transportation</p> <ul style="list-style-type: none"> - Modes of Transportation (Air, Sea, Road, Rail) – Basics of Freight Forwarding and Brokering - Basics of Transportation Management Systems (TMS) – Routing and Scheduling in Transportation - Intermodal Transportation - Last-Mile Delivery Strategies - Regulatory Compliance in Transportation 	Analyse the intricacies of freight and transportation operations, mastering strategies for efficient, cost-effective, and timely movement of goods across various logistical networks	5
4	Information Technology in Logistics operations	<p>Role of IT in Supply Chain Management</p> <ul style="list-style-type: none"> - Basics of Logistics Information Systems (LIS) - Basics of Warehouse Management Systems (WMS) - Basics of Transportation Management Systems (TMS) - Inventory Management Software - Supply Chain Visibility and Tracking Technologies - 	Identifying information technology's pivotal role in logistics operations, focusing on its application to streamline processes, enhance visibility, and optimize supply chain performance	5

		Emerging Technologies in Logistics		
5	Export and Import and INCOTERMS	Introduction to Export and Import in Supply Chain - Global Trade and International Supply Chains - Export Procedures and Documentation - Import Procedures and Documentation - Role of Customs in International Trade - INCOTERMS in Logistics - Types and Application of INCOTERMS - Tariffs, Duties, and Trade Compliance - Global Logistics and INCOTERMS.	Perform export, import procedures, and INCOTERMS, enabling effective navigation of international trade regulations and logistics practices	5
6	Practical projects and case studies			20

TABLE 3: OVERALL COURSE LEARNING OUTCOME ASSESSMENT CRITERIA AND USE CASES

Learning Outcome	Assessment Criteria	Performance Criteria	Use Cases
Explain the fundamental principles of logistics operations and their significance in supply chain management.	Analyse logistics principles and their applications in supply chain efficiency.	Demonstrates understanding of logistics principles and their impact on supply chain performance.	Analyse a multinational retail corporation's distribution network and propose strategies to optimize efficiency and minimize costs.

Identify different types of inventories and their role in supply chain management.	Categorize inventory types and their importance in maintaining supply chain balance.	Identifies and evaluates inventory types; demonstrates understanding of their role in supply chain efficiency and cost management.	Optimize inventory management for diverse product lines in a retail distribution network.
Compare the various warehousing and inventory management technologies.	Evaluate modern technologies in warehousing and inventory management for operational efficiency.	Critically assesses the suitability of technologies for specific operational needs; demonstrates knowledge of automation and optimization tools.	Recommend warehousing technologies to improve efficiency for a multinational retail corporation.
Distinguish between different modes of transportation and their suitability for specific cargo types.	Compare transportation modes based on cargo characteristics, cost, and delivery timelines.	Provides detailed analysis of transportation modes; matches modes to cargo requirements effectively while balancing cost and efficiency.	Develop a transportation plan to improve last-mile delivery for a local delivery service provider in urban areas.
Demonstrate the integration of IT systems in logistics operations.	Analyse the role of IT systems in enhancing logistics visibility and coordination.	Demonstrates proficiency in evaluating IT tools for logistics integration, such as route optimization software or warehouse	Propose IT-enabled solutions to optimize last-mile delivery operations, incorporating route planning, scheduling, and customer feedback systems to

		management systems.	enhance service quality and reduce costs.
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TABLE 4: LIST OF FINAL PROJECTS THAT COMPREHENSIVELY COVER ALL THE LEARNING OUTCOME	
SL.NO	FINAL PROJECT
1	Logistics System Diagram: Task students to create a visual representation (flowchart or diagram) illustrating the logistics system concept. This documentation should showcase the flow of materials, information, and processes involved in logistics operations.
2	Warehousing Operations Checklist: Have students create a detailed checklist that covers all aspects of warehousing operations. This documentation should include procedures for receiving, storing, picking, and dispatching goods in warehouses.
3	Freight Management Documentation: Task students with compiling documentation on freight management practices. This documentation should cover transportation modes, freight rate calculations, and documentation for shipping.
4	Export-Import Handbook: Students can collaborate to create a handbook explaining export and import procedures and INCOTERMS. This handbook could cover documentation requirements, shipping terms, and trade regulations in export-import operations.
5	INCOTERMS Application Guide: Have students develop a guide that explains the application of various INCOTERMS in different trade scenarios. This documentation should provide examples and guidelines on choosing appropriate INCOTERMS for specific transactions.

TABLE 5: COURSE ASSESSMENT RUBRICS (TOTAL MARKS: 75)					
ASSESSMENT CRITERIA	Learning Outcome	Fair (1–5)	Good (6–10)	Excellent (11–15)	TOTAL MARKS
Evaluate and design logistics strategies to enhance	Explain the fundamental principles of logistics operations	Demonstrates a basic understanding of logistics	Provides a clear explanation of logistics principles;	Offers a comprehensive analysis of logistics principles	10

supply chain efficiency.	and their significance in supply chain management.	principles with limited application to supply chain management.	moderately applies them to supply chain scenarios.	and effectively applies them to enhance supply chain performance.	
Inventory Types and Role in Supply Chain	Identify different types of inventories and their role in supply chain management.	Identifies inventory types with minimal understanding of their impact on supply chain efficiency.	Explains inventory types and demonstrates moderate understanding of their role in balancing supply chain operations.	Provides a detailed evaluation of inventory types, effectively linking them to cost management and supply chain optimization.	10
Data Manipulation and Summary	Proficiency in summarizing and transforming data for effective analysis.	Basic manipulation performed; summaries lack clarity or depth.	Data effectively manipulated and summarized; some advanced techniques used	Data manipulated creatively with advanced methods; summaries highlight clear and actionable insights.	15

Warehousing and Inventory Technologies	Compare the various warehousing and inventory management technologies	Demonstrates limited understanding of warehousing technologies; lacks ability to assess their operational impact.	Evaluates warehousing technologies with some accuracy; links them moderately to operational efficiency.	Critically compares advanced technologies, offering detailed insights into their role in enhancing warehousing and inventory management.	10
Transportation Modes and Suitability	Distinguish between different modes of transportation and their suitability for specific cargo types.	Identifies transportation modes but struggles to match them effectively to cargo characteristics and cost-efficiency.	Provides a clear comparison of transportation modes; moderately aligns modes with cargo requirements and operational needs.	Offers a detailed evaluation of transportation modes, effectively matching them to cargo characteristics, timelines, and cost considerations.	15
Integration of IT Systems in Logistics Operations	Demonstrate the integration of IT systems in logistics operations.	Shows basic knowledge of IT systems in logistics with minimal understanding of their application in	Evaluates IT tools with moderate effectiveness; demonstrates their role in improving logistics visibility	Analyses and implements advanced IT solutions to enhance logistics operations, providing actionable insights for	15

		coordination.	and collaboration.	improved coordination and efficiency.	
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