

CII – IL FUNCTIONAL EXCELLENCE COURSE COMPONENTS

LM-11: LOGISTICS CONCEPTS AND PLANNING

BLOCK	UNIT NOs	UNIT TITLE
I		CONCEPTS OF LOGISTICS
	1	Integrated Logistics <ul style="list-style-type: none">• Logistics evolution• Logistics operations integration• Supply chain relationships
	2	Logistics system design <ul style="list-style-type: none">• Logistics positioning• Integration theory
	3	Transportation decisions
II		LOGISTICS STRATEGY AND PLANNING
	4	Logistics strategy <ul style="list-style-type: none">• Logistics planning triangle• Logistics functional strategies and applications (Customer service, inventory, transport and location)
	5	Purchasing, storage, inventory and location decisions <ul style="list-style-type: none">• Inventory decisions• Purchasing decisions• Location decisions
	6	Logistics planning and design <ul style="list-style-type: none">• Methodology• Techniques

CII – IL FUNCTIONAL EXCELLENCE COURSE COMPONENTS

**LM-12: WAREHOUSE AND DISTRIBUTION FACILITIES
MANAGEMENT**

BLOCK	UNIT NOs	UNIT TITLE
I		ISSUES, EQUIPMENT, PROCESSES

- 1 Warehouse rationale and material flow
 - Why have a warehouse?
 - Types of a warehouse
 - The fluid model of product flow
 - Storage: Dedicated versus shared
 - The warehouse as a queuing system
- 2 Warehouse operations, systems
 - Functions
 - Systems
 - Storage and handling equipment
- 3 Layout
 - Material flow and warehouse layout
 - Pallets
 - Cartons
 - Pieces: Design of a fast pick area
 - Pieces: Geometry of slotting

II

MANAGING WAREHOUSE EFFICIENCY

- 4 Order picking
 - Piece – picking by “bucket brigade”
 - Pick paths
 - Cross docking
- 5 Measuring warehouse efficiency
 - Activity profiling
 - Benchmarking
 - Warehousing around the world

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- 6 Warehouse workforce design and development
 - Safety and ergonomic training
 - Time standards, incentives, and personnel scheduling
 - Optimal management – Operator ratios
 - Cross training
 - Soko Circles
 - $\frac{1}{2} \times 2 \times 3$

III

UNITIZATION, SHIPPING AND PACKAGING

- 7 Unitizing and shipping

- Container optimization
- Container loading and void fill
- Weigh checking
- Automated, Direct loading
- Dock management

8 Packaging

- Labeling function, forms of labels, labels and preferences for colors, numbers and shapes
- Functions of packaging
- Packaging design
- Packaging materials and kinds of packaging
- Preparing for packaging

9 Packaging for transportation

- Types of packing boxes
- Containers for transportation of export cargo
- Procedure for packing the goods
- Cost of packing
- Marking on the export boxes
- Types of marking, features of marking
- Packaging of hazardous goods

IV

**DISTRIBUTION FACILITIES
MANAGEMENT**

10 Materials handling system design

- Design cycle
- Process constraints
- Information systems considerations
- Equipment selection
- Evaluation of options

11 Material handling technologies

- Pallet storage / retrieval systems
- Case picking systems
- Broken case picking systems
- Sorting systems
- Material transport systems
- Automatic identification and communication systems

12 Site selection

- Macro analysis
- Micro analysis

CII – IL FUNCTIONAL EXCELLENCE COURSE COMPONENTS

LM-13: FREIGHT TRANSPORT MANAGEMENT

BLOCK	UNIT NOS	UNIT TITLE
I		TRANSPORT FUNDAMENTALS
	1	Introduction to system, choices and characteristics <ul style="list-style-type: none"> • Importance of an effective transportation system • Service choices and their characteristics • Motor carriers <ul style="list-style-type: none"> a. Industry overview b. Operating and service characteristics c. Cost structure • Railways <ul style="list-style-type: none"> a. Industry overview b. Operating and service characteristics c. Cost structure
	2	Types of services <ul style="list-style-type: none"> • Single – Service choices • Intermodal services • Agencies and small shipment services • Company-controlled transportation
	3	Freight costing and pricing <ul style="list-style-type: none"> • Transport cost characteristics • Rate profiles • Line-Haul rates • Special service rates • Private carrier costing
II		DOCUMENTATION, REGULATION AND POLICY
	4	Documentation <ul style="list-style-type: none"> • Bill of lading • Freight bill • Freight claims

5	Transportation regulation and public policy
	<ul style="list-style-type: none">• Transportation regulation<ul style="list-style-type: none">a. Nature of regulationb. Common lawc. Role of the Courtsd. Safety regulationse. State regulations• Transportation policy<ul style="list-style-type: none">a. Highwaysb. Railwaysc. Freight corridors• Associations<ul style="list-style-type: none">a. Road transportb. Railway unions

III

TRANSPORT DECISIONS

6	Transport service selection
	<ul style="list-style-type: none">• Market considerations• Cost of service pricing• Value of service pricing• Rate making in practice• Special rates• Pricing in transportation management• Cost concepts• Basic cost trade offs• Competitive considerations• Appraisal of selection methods
7	Vehicle routing and scheduling
	<ul style="list-style-type: none">• Separate and single origin and destination points• Multiple origin and destination points• Coincident origin and destination points• Principles for good routing and scheduling• Methods for routing and scheduling• Route sequencing• Implementation of vehicle routing and scheduling methods

LM-14: INTERNATIONAL LOGISTICS

BLOCK	UNIT NOS	UNIT TITLE
I		DEFINITION, CONCEPT AND IMPORTANCE
	1	Meaning and Significance of International Transportation <ul style="list-style-type: none">• Role of transportation in integrated logistics process• Basic principles of international transportation• Parties involved in international transportation• Significance of Transportation
	2	Modes of International Transportation <ul style="list-style-type: none">• Aspects of Transportation• Legal Classification of Carrier• Modes of international Transportation• Criteria for Selection of different modes of transportation• Multi Modal Transportation
	3	Freight costing and pricing Classification of Costs associated with Transportation process <ul style="list-style-type: none">• Cost Strategies• Factors affecting Transportation rate• Costing Principles• Rates prevalent in International Transportation
II		OCEAN AND AIR MODE OF TRANSPORTATION
	4	Ocean Mode of Transportation: Features, Types and Terminology <ul style="list-style-type: none">• Features, Advantages and Disadvantages of using sea mode• Classification of ships• Shipping Methods• Stowage in Ship• Major Sea-routes around the world• Important Terminology
	5	Freight, Parties and Perils Associated with Sea Mode <ul style="list-style-type: none">• Parties involved in sea mode of transportation• Ocean Freight<ul style="list-style-type: none">○ Types of Sea Freight○ Calculation of Freight• Perils at Sea

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- Maritime Risks
 - Marine Insurance
- 6 Air Mode of Transportation: Features, Types and Terminology
- Significant Features
 - Advantages and Constraints of Air transportation
 - Types of Carriers
 - Air Cargo Chain Operators
 - Legal Aspect of Carriage of Goods by Air
- 7 Air Mode of Transportation: Freight Structure and \ organizational set up
- ULD Concept
 - Air Cargo Tariff Structure
 - Air Freight Classification
 - Air Freight Calculation
 - Factors Affecting Air Freight Rates
 - Air Freight Consolidation
 - Role of IATA and TIACA in Air Cargo Industry

III

CONCEPT OF LAND MODE, INTERMODALISM AND CONTAINERIZATION

- 8 Land Mode: Transportation by Rail and Road
- Meaning of Land mode of transportation
 - International Road Transportation
 - International Road Network
 - Advantages and Constraints of International Road Transport
 - International Rail Transportation
 - Advantages and Constraints of International Rail Transport
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- 9 Pipeline as a Mode of Transportation and Concept of Multi-modalism
- Pipeline Mode of Transportation
 - Other modes of International Transportation
 - Multimodal Transportation- Meaning and Need
- 10 Concept of Containerization
- Containerization- Meaning and Concept
 - Types of Containers
 - Advantages of Containerization
 - Container Cycle
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IV**PROCEDURAL & DOCUMENTATION**

- 11 EXIM Procedure and Documentation
- Export procedure in India
 - Import Procedure in India
 - Transport Documents
 - Mate Receipt
 - Bill of Lading – features and types
 - Air-way Bill
 - Lorry Receipt
 - Rail Receipt
- 12 INCOTERMS 2010
- Concept of INCOTERMS
 - INCOTERMS 2010
 - INCOTERMS 2000 vs INCOTERMS 2010
- 13 Packaging and Labeling for Exports
- What is packaging?
 - Functions of Packaging
 - Labeling the export packages
 - Packaging for different modes of transportation
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