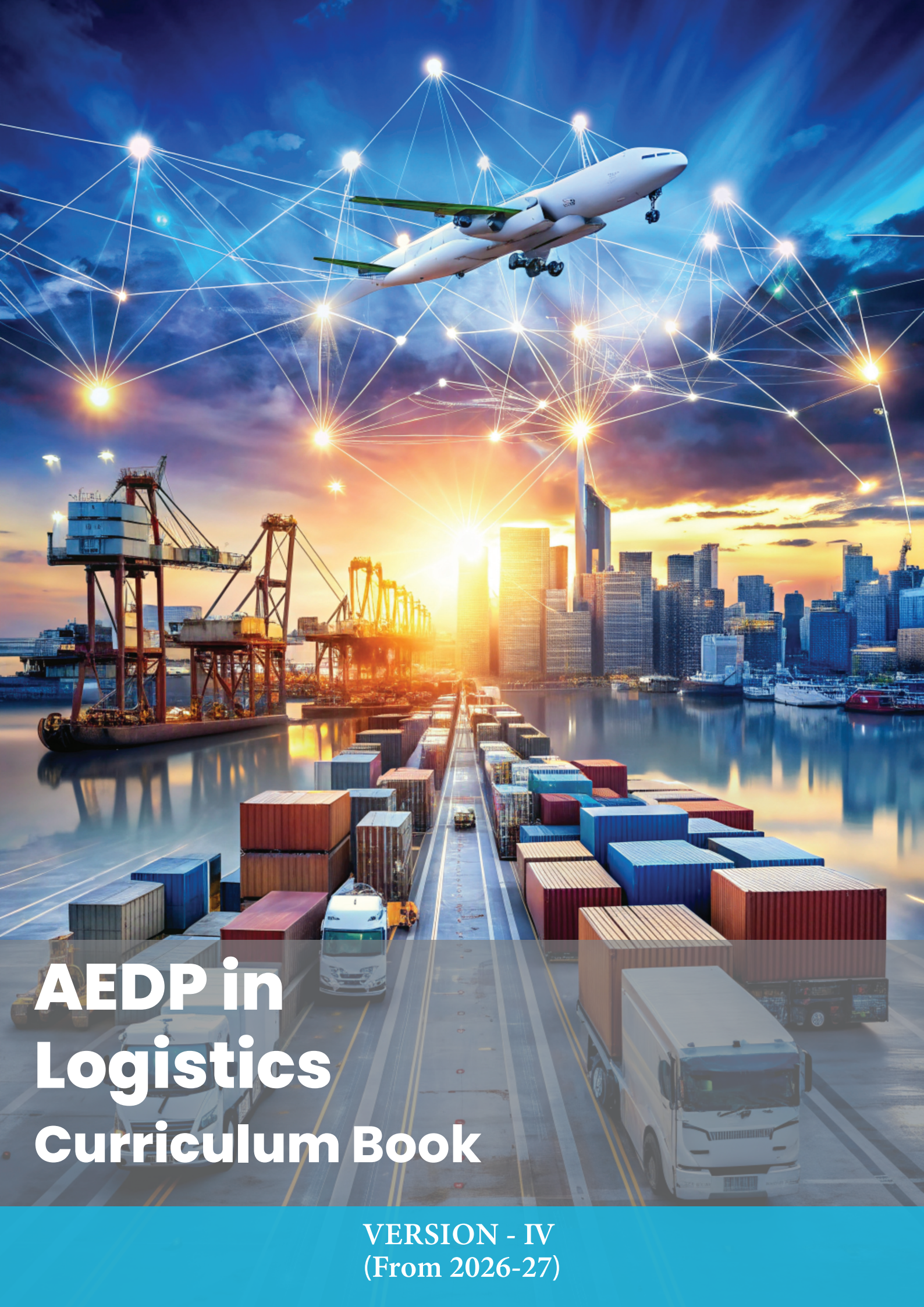

AEDP in Logistics

Curriculum Book

VERSION - IV
(From 2026-27)

APPRENTICESHIP EMBEDDED UG DEGREE PROGRAMME IN

LOGISTICS

COLLABORATIVE PROGRAMME OF LSC

REGULATION & CURRICULUM

(VERSION 2026-27)

NATIONAL SKILL QUALIFICATION FRAMEWORK LEVEL: 5.5

Apprenticeship Embedded UG Degree Programme in Logistics

COLLABORATIVE PROGRAMME OF LSC

The Programme

Apprenticeship-based UG Degree Programme in Logistics is offered by Logistics Sector Skill Council (LSC) in collaboration with Higher Education Institutions that are duly approved by the concerned authorities.

Logistics Sector Skill Council, established by the Ministry of Skill Development and Entrepreneurship (MSDE) through the National Skill Development Corporation of India (NSDC), has taken up several initiatives to create adequate skills for gainful employment at various levels in Logistics Industry. The apprenticeship - based UG Degree Programme in Logistics is one of the programmes.

The Collaborating Institution may choose either B.Com. or BBA or BMS as the nomenclature for this UG Degree Programme.LSC takes up the following responsibilities so far as BBA/BMS/B.Com. Degree is concerned.

- Curriculum Development and Continuous Improvement
- Sensitization of Students on Apprenticeship Assignment
- Create Course Materials on all Domain Courses and provide access to students through Logistics Learning Management System
- Securing Apprenticeship Training (On-the-job Training) in Logistics Companies for all students of this Programme under the provisions of Apprentices Act, 1961
- Securing a monthly stipend, as fixed by the Government from time to time, during the Apprenticeship Training period for every student.
- Assessing the performance & learning of students in Apprenticeship
- Arrange the conduct of final placement drive for the students of this Programme
- Assessment of the progress made by the Collaborating Institutions (CI) in the Programme, and offering suggestions & help achieve the objective of making the students skillful.

The Regulation and Curriculum given below shall be duly approved by the various academic bodies of the HEI/University and apply to all candidates admitted to the Programme.

1. Eligibility for Admission

Candidates for admission to this Apprenticeship-based UG Degree Programme should have passed 10+2 in any Board or possess an equivalent qualification. Any subject group in 10+2 is acceptable.

2. Admission

The Collaborating Institutions shall decide the minimum mark percentage for admission. The Reservation Policy of the State where the HEI is functioning is applicable.

3. Programme Duration

The Programme extends for three years consisting of Four teaching semesters and Two apprenticeship semesters.

4. Programme Content

- 10 Domain Courses in Semesters I, II, III, and IV
- 2 Allied Courses in the MOOC format in Semesters II and IV
- 2 Spells of Apprenticeship Training for six months each in Semesters V and VI

5. Standard of Passing & Award Division

Standard of Passing & Award Divisions shall be as per the Collaborating Institution's policies that offer this Programme.

6. Continuous Internal Assessment

The Continuous Internal Assessment System, including the assessment components, periodicity, and proportionate weightin the total score for a particular course, is as per the policies and practices of the Collaborating Institution.

7. Attendance

The mandatory minimum attendance in teaching Semesters is as per the existing policies and practices of the Collaborating Institution.

Attendance requirement during Apprenticeship Training is as per the conditions/norms of the Apprenticeship Contract, Apprentices Act 1961, and National Apprenticeship Promotion Scheme.

8. Examination

The End Semester Examination for courses scheduled in teaching Semesters will be conducted and results declared by the Collaborating Institution. The question paper pattern for these examinations is as per the format decided by the Collaborating Institution.

9. Miscellaneous

- Each student shall possess Aadhaar Card, PAN, and Bank Account, which are necessary for onboarding forApprenticeship.
- Students shall be willing to move out of their present place of residence to get onboarded in companies that mightbe located in different cities.
- Students shall take care of Boarding and Lodging arrangements in cities where the Apprenticeship providing company is located.
- The Collaborating Institution will award the Degree to students who successfully complete the Programme.

10. Fee Payment

The Programme Fee and Examination Fee are payable by students to the Collaborating Institution as per its norms.

Assessment System

The Assessment System of the apprenticeship-based Degree Programmes developed & offered by Logistics Sector Skill Council is designed to make an objective assessment of Knowledge, Skill, and Attitude development of students. In order to make the Assessment System fool-proof and inclusive, the Programme provides adequate & appropriate representation to the Industry, Sector Skill Council, and the Collaborating Institution in assessing the students. This makes the Assessment System objectively measure industry-readiness of students.

Teaching Semesters:

Semesters I, II, III, and IV are Teaching Semesters. All Courses scheduled in Teaching Semesters are assessed by the Collaborating Institution. The Assessment System (proportion of marks between the Continuous Internal Assessment & End Semester Examination, and the Question Paper Pattern) for these courses shall be as per the norms, standards and practices of the Collaborating Institution, notwithstanding the Regulations given in the Curriculum Booklet issued by LSC.

***Allied Courses*:** The Allied Courses are offered by LSC on the pattern of MOOC. LSC delivers the course online through Logistics Learning Management System (LLMS), and makes online assessment of students. End Semester Examination (online) comprising 50 multiple choice questions is conducted for a maximum mark of 50. Each question will have four choices of answers from which the candidate should choose the right answer. While each correct answer fetches 1 marks. The marks scored by students would be communicated to the Collaborating Institution by LSC. Being offered under MOOC format, the Allied Courses do not have Internal Assessment.

Apprenticeship Semesters:

Semesters V, and VI are Apprenticeship Semesters. Assessment System for the Courses scheduled in these Semesters will be as per the process described below.

***Apprenticeship*:** LSC conducts the Continuous Internal Assessment (CIA) of students during the Apprenticeship Period, in consultation with the companies where the students undergo Apprenticeship Engagement, for a maximum mark of 250 per Apprenticeship Semester. The Degree Apprenticeship Assessment (DAA), comprising an Online MCQ Test and an Online Viva, is a critical component of the CIA.

The Collaborating Institution will evaluate the Apprenticeship Report (comprising Work Diary) submitted by students, and conduct Viva for a mark of 150, which is considered as ESE. The Evaluation & Viva shall be conducted by a Panel comprising of the HoD (or Programme Coordinator), Student's Mentor, and one Executive from Logistics Sector. The Collaborating Institution may modify the proportion of marks between CIA and ESE as per its norms, standards, and practices.

Minimum Marks, Grading & Classification:

Minimum Marks required for passing courses, Pattern of Grading, and Classification of Successful Candidates between 'Distinction', 'First Class', 'Second Class', etc. shall be as per the norms, standards, and practices of Collaborating Institution.

PROGRAMME STRUCTURE

(From the Academic Year 2026-27)

The Programme Structure contains only the Domain Courses. The Collaborating Institutions may include other Courses in each Semester as per their Norms. The total Academic Credit shall be decided as per Collaborating Institutions' Norms.

Year I – NSQF 3.5								
Semester I								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Logistics & Supply Chain Management	LD2601	Domain	60	2	25	75	100
2	Materials Management	LD2602	Domain	90	3	25	75	100
	Total			150	5	50	150	200
Semester II								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Warehouse Management	LD2603	Domain	90	3	25	75	100
2	Liner Logistics	LD2604	Domain	60	2	25	75	100
3	Allied course - MOOC	LD2605A/B/C	Domain	60	2		100	100
	Total			210	7	50	250	300
Year II - NSQF 4.5								
Semester III								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Freight Forwarding (Ocean & Air Cargo)	LD2606	Domain	90	3	25	75	100
2	AI in Logistics	LD2607	Domain	60	2	25	75	100
3	Transport Planning Techniques	LD2608	Domain	60	2	25	75	100
	Total			210	7	75	225	300
Semester IV								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Forecasting and Inventory Management	LD2609	Domain	90	3	25	75	100
2	IoT & Robotic Application in Logistics	LD2610	Domain	60	2	25	75	100
3	Lean Six Sigma in Supply Chain Management	LD2611	Domain	60	2	25	75	100
4	Allied course - MOOC	LD2612A/B/C	Domain	60	2		100	100
	Total			270	9	75	325	400
Year III - NSQF 5.5								
Semester V								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Apprenticeship – I	LD2613	Domain	1008	22	250	150	400
	Total			1008	22	250	150	400
Semester VI								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Apprenticeship – II	LD2614	Domain	1008	22	250	150	400
	Total			1008	22	250	150	400

Semester II-Allied Courses - MOOC								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Logistics 4.0	A	Domain	60	2		100	100
2	Export & Import Documentation	B	Domain	60	2		100	100
3	International Logistics Management	C	Domain	60	2		100	100
Semester IV-Allied Courses - MOOC								
No.	***Course***	***Code***	***Type***	***Hours***	***Credit***	***CIA***	***ESE***	***Marks***
1	Courier, Express & Parcel Services	A	Domain	60	2		100	100
2	Port Terminal Management	B	Domain	60	2		100	100
3	Multimodal Transportation	C	Domain	60	2		100	100

Domain Credit Summary

Sem	***Courses***	***Credits***
I	2	5
II	3	7
III	3	7
IV	4	9
V	1	22
VI	1	22
Total	**14**	**72**

Semester I

Logistics & Supply Chain Management

Course Objectives:

- Introduce the basics of logistics and supply chain management.
- Understand how logistics and supply chain processes optimise business operations.
- Learn to manage the flow of goods and information in supply chain networks efficiently.

Learning Outcomes:

- Understand the fundamentals of logistics and supply chain management principles.
- Apply logistics and supply chain strategies to optimise business operations.
- Manage the flow of goods and information effectively within supply chain networks.
- Understand global logistics concepts and the challenges of supply chain management.

Unit 1:

Introduction to logistics: The importance of logistics and supply chain management in engineering, demand management in the supply chain, inventory control models, warehousing and inventory management, forecasting, and information technology in logistics. Logistics and Customer Service - Definition of Customer Service Elements of Customer Service- Phases in Customer Service- Customer Retention - Procurement and Outsourcing - Definition of Procurement/Outsourcing - Benefits of Logistics Outsourcing - Critical Issues in Logistics Outsourcing.

Unit 2:

Supply chain management and 3PL,4PL & 5PL: Meaning and importance of SCM-Supplier collaboration, supplier selection, network design and planning in the supply chain, sustainable supply chain, distribution strategies in the supply chain, supply chain contracts, supply chain risk management, strategic sourcing, reverse logistics, transportation modes, and management. Integrated Logistics - Need for Integration – Activity Centres in Integrated Logistics. Role of 3PL; 4PL.and 5PL.

Unit 3:

Global Logistics and Supply Chain Management: Introduction to Logistics in a Global context, International trade and logistics, Logistics System Design, Logistics Channels, Concept of Inventory related to logistics-Logistics information systems, Integration of all activities for effective supply chain performance, Risk management in global logistics, Customs regulations and documentation, Incoterms, and international shipping terms. Introduction to global Supply Chain Management, global network supply chain design, Strategic Importance of IT and computer Simulation in Supply Chain Management; Supply Chain Performance; Supply Chain System Slacks; Demand Management; Supply Management.

Unit 4:

Naya Bharat and Logistics: National Logistics Policy and its role in the development and optimization of logistics process-A review of India's economic transformation and the "New India" vision lean and just-in-time (JIT) and lean concepts in Indian manufacturing, Logistics and the management of food supply chains, Last-mile delivery and omnichannel logistics, Logistics for pharmaceuticals and medical devices.

Unit 5:

GoI initiatives in Logistics & SCM: The significance of logistics facilities and nodes, as well as the PM Gati Shakti-Master National Plan, Government policies and initiatives promoting logistics and supply chain productivity, environmental and social responsibility practices in logistics, Logistics innovations fueled by digitalization and technology like blockchain, and case studies about the National Logistics Policy and the PM Gati Shakti-Master National Plan.

Textbooks

1. Course Material by LSC.

2. Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies (2022), 4th Edition by David Simchi-Levi, Philip Kaminsky, Edith Simchi-Levi, Ravi Shankar.

3. Supply Chain Management (2018), 7th Edition, by Sunil Chopra, Peter Meindl, Dharam Vir Kalra. Logistics & Supply Chain Management, (Latest edition), Martin Christopher, Prentice Hall.

Semester I

Materials Management

COURSE OBJECTIVES:

- To help Students to understand basic Principles and concept of material Management
- To orient students on contemporary development in the field of material management

LEARNING OUTCOMES:

- To apply the knowledge about material management in the real-life business situation.
- Understand the contemporary practices followed in the field of Materials Management.
- To enhance their managerial ability and professional skills.

Unit 1:

Introduction: Materials Management - Evolution, Importance, Scope and Objectives- Interface with other functions. -Supply Chain Management -Objectives- Components, Trade off Customer Service & Cost. Supply Chain Analytics.

Unit 2:

Purchasing: purchasing and procurement activities under Materials management- Purchasing Methods- Purchasing and quality Assurance- Purchase Cycle – governmental purchasing practices and procedures - Negotiation & Bargaining – Vendor relations - Vendor Rating - Vendor Management - Purchase Department - Responsibility – Buyer Seller Relationship - Value Analysis.

Unit 3:

Inventory - Need of Inventory -Types of Inventory - Basic EOQ Model - EOQ with discounts – Different types of Analysis. - Forecasting –methods of forecasting-Material Requirement Planning (MRP) -Input and output of MRP system-BOM Explosion - MRP II. Materials Handling Systems and Equipment, Economic aspects of Materials handling

Unit 4:

Quality control of material: Incoming material quality control- statistical quality control (Various control charts)- Inventory control & Cost Reduction techniques. Value Analysis & Value Engineering. Standardization – need and importance. Codification - concept, benefits - Integrity Pact- Standard Operating Procedure

Unit 5:

Stores - Functions- Stores layout -documentation- Materials handling and storage systems, - Principles of MaterialsHandling system – Safety issues - Store Keeping – Stores Responsibilities - Location of Store House - Centralized Storeroom - Equipment – Security Measures - Protection And Prevention of Store

Text & Reference Books:

1. Course Material Prepared by LSC
2. Materials management: procedures, text and cases - A.K. Datta
3. Materials Management, M.M Verma, Sultan Chand Publications,2012.
4. Production and Operations Management, Chary S.N., Tata McGraw Hill Publishing Co., Ltd., New Delhi

Semester II

Warehouse Management

Course Objectives:

- To develop competencies and knowledge in students to become Warehouse professionals.
- To orient students in the field of Logistics.
- To help Students understand Warehousing and distribution centre operations.

Learning Outcomes:

- Students will be able to apply the Basic knowledge of Warehousing and distribution centre operations in the real-life situation.
- Apply tools and techniques to improve the warehouse operations.
- This subject will enable them to enhance their ability and professional skills.

Unit 1:

Introduction to Warehouse (Storage and Packaging) Background – Need for Warehouse – Importance of Warehouse - Types of Warehouses - Broad functions in a warehouse - Warehouse layouts and layout related to functions. Understanding Warehouse Management Function and Operations - Role of a Warehouse and a Warehouse Manager, Major warehouse processes and End-to-End Warehouse Operations, Automation in warehouses. Warehouse Layout and Material Handling.

Unit 2:

Receiving and Dispatch of Goods in warehouse Various stages involved in receiving goods – Stages involved receipt of goods- Advanced shipment notice (ASN) or invoice items list- Procedure for Arranging of goods on dock for counting and Visual inspection of goods unloaded- Formats for recording of goods unloaded from carriers- Generation of goods receipt note using computer- Put away of Goods- Put away list and its need-Put away of goods into storage locations - storage location codes and its application- Process of put away activity- Procedure to Prepare Warehouse dispatches. Warehouse Activities -receiving, sorting, loading, unloading, Picking Packing and dispatch - Procedure to develop Packing list / Dispatch note-Cross docking method - Situations suited for application of cross docking -Information required for coordinating cross docking.

Unit 3:

Warehouse Management: Warehouse Utilization Management - Study on emerging trends in warehousing sector - DG handling -use of Material Handling Equipment’s in a warehouse - Inventory Management of a warehouse - Inbound & Outbound operations of a warehouse and handling of Inbound & Outbound operations. Distribution – Definition – Need for physical distribution – functions of distribution – marketing forces affecting distribution. The distribution concept – system perspective. Channels of distribution: role of marketing channels – channel functions – channel structure –designing distribution channel – choice of distribution channels.

Unit 4:

Warehouse Automation - Warehouse Automation Analysis, Warehouse design - RFID leveraged warehouse systems, Application areas and technological advancements in Warehouse automation, Latest trends in Warehouse Automation. Use of Analytics and Optimization in Warehouse Management - Optimizing order picking, Data Analytics in different functions – Inventory, Order fulfilment, Procurement and storage.

Unit 5:

Warehouse Safety Rules and Procedures: The safety rules and‘ Procedures to be observed in a Warehouse - Hazardous cargo – Procedure for Identification of Hazardous Cargo - safety data sheet- Instructions to handle hazardous cargo - Familiarization with the industry. Health, Safety & Environment - safety Equipment’s and their uses - 5S Concept on shop floor. Personal protective Equipment’s (PPE) and their uses.

Text & Reference Books:

1. Course Material Prepared by LSC

2. Basics of Warehouse and Inventory Management: (The pillars of business Logistics) INDIA SPECIFIC EDITION 2022: Villivalam Rangachari Rangarajan.

3. Warehouse Management: The Definitive Guide to Improving Efficiency and Minimising Costs in the Modern Warehouse by Gwynne Richards | 30 November 2021

4. Kapoor Satish K., and Kansal Purva, ‘Basics of Distribution Management: A Logistical Approach’, Prentice HALL of India

Semester II

Liner Logistics

COURSE OBJECTIVES:

- To develop competencies and knowledge of students to Liner logistics professionals
- To orient students in the field of Logistics
- To help Students to understand Liner logistics

LEARNING OUTCOMES:

- Students will be able to apply the Basic knowledge of Liner Logistics in the real-life situation.
- This subject will enable them to enhance their ability and professional skills in Logistics.

Unit 1:

Definitions of liner trades; tramp trades; containerization- Unitization - containerization, liner operations, port organization – Vessel loading and discharging, liner trade routes, The major ports, liner service options - Liner trade – ship types – Tonnages; basic ship layout, types of container ships, Ro-Ro barge carrying vessels, The refrigerated cargo ship conventional (Break bulk) vessels future vessel developments, economy of scale, shipboard handling equipment.

Unit 2:

Cargoes & cargo equipment – Dangerous goods IMO special goods, cargo handlings other methods of lifting cargo port handling equipment, port terminals; port and terminal management; the role of ships officers - agent. Liner Shipping operations - Management and policy, ship management and operations, independent ship management, insurance, trade of commercial department, accounting, budgeting, freight collection and port disbursements agency duties.

Unit 3:

Containerization unitization and inter-modalism - Growth in world trade unitization; container dimensions, types of container other container expressions container inventory, owning, leasing meeting the demand for containers tracking the container fleet, container control, FCLS LCLS & ICDS, legal & insurance implications in the container trade.

Unit 4:

The Bill of Lading and other Documentation - The Bill of Lading UK bill of lading Act 1855 and UK carriage of goods by sea Act 1992, The use of Bill of Lading in liner trades, Bill of Lading documentary credits, Bill of Lading clauses The printed clauses – The evidence of the contract, other forms of Bill of Lading other liner documents, Intl conventions relating to Bill of Lading, paperless trading.

Unit 5:

The Exchange of goods transfer - Transfer of funds from country to country, methods of payments in International trade who are the merchants, International contracts of sale INCO terms; Legal aspects of the liner trades - The carrier insurance the carrier’s liability for the cargo the liabilities of the agent, legal aspects of the Bill of Lading, cargo claims general average (GA), security, ISPS code.

Text & Reference Books:

1. Course Material Prepared by LSC
2. Ship Operation Management, Fujita, N.H. Publisher, 1974.
3. Ship Operation Management, Bertrams Publication, 2010.
4. Handbook of Ship Calculations, Construction and Operation, Charles H. Hughes, Wexford College Press, 2008.
5. Ocean Shipping - Elements of Practical Steamship Operation, Robert Edwards Annin, Thompson Press, 2010.

Semester II

Allied course – MOOC (A)

Logistics 4.0

COURSE OBJECTIVES:

- To develop competencies and knowledge of students to understand the revolution in Logistics Industry
- To orient students in the field of Logistics
- To help students to learn the recent technology changes and challenges in Logistics Industry

LEARNING OUTCOMES:

- Students will be able to apply the basic knowledge of technology and ITC development.
- This subject will enable them to enhance their ability and professional skills in Logistic.

Unit 1:

First Three Industrial Revolutions: Industry 1.0–3.0 - Introduction to Industry 4.0 - Digitalization and the Connected Economy - Drivers, Enablers, Compelling Forces and Challenges for Industry 4.0 - The Journey so far: Developments in USA, Europe, China, and other countries - Comparison of Industry 4.0 Factory and Today's SMART Factory - Trends of Big Data (Evolution) along with the Maturity framework and Predictive Analytics for Smart BusinessTransformation.

Unit 2:

Evolution of Logistics - Introduction to Logistics 4.0 - Digital Transformation of Supply Chain Management - Advanced robots, Augmented Reality, Digital Twins - Simulation — Network simulation and optimization - The Industrial Internet of Things - Cloud Computing - Cyber Security.

Unit 3:

Big data and analytics – Data Warehouse v/s Data Mart - Digitalization of Logistics and Challenges in Logistics 4.0 - Inventory Control Systems (ICS)-MRP-1-MRP-2-ERP-1 3.3 The Internet of Things - Challenges of The Internet of Things - Changes in Business Models and Production Processes - Telematics Technology – Application in Logistics.

Unit 4:

Technology in Procurement 4.0 (Consignor Inventory Model) - Technology in Inventory Management 4.0 (Impact of Digital Technologies on the Inventory Management Techniques) - Technology in Logistics and Warehousing 4.0 - Logistics and Supply Chain Analytics.

Unit 5:

Business issues in Logistics 4.0 - Opportunities and Challenges - Future of Works and Skills for Workers in the Logistics 4.0 Era - Advantages and disadvantages of Logistics 4.0 - Strategies for competing in a Logistics 4.0 world.

Semester II

Allied course – MOOC (B)

Export & Import Documentation

COURSE OBJECTIVES:

• To familiarize the student with the basic concept of formalities for export trade, and the documentation process required for import and export.

LEARNING OUTCOMES:

• Recognize the impact of information and communication technologies, especially of the internet in business operations.
• Recognize the fundamental principles of eBusiness and eCommerce.
• Explain the security protocols and the issues in internet security.

Unit 1:

Introduction to Export and Import 12 Hrs Basics of Exports - Classification of goods - Preparation for Exports - Methods of Exporting - Export Marketing Organizations - Functions - Registration formalities IEC Number - Procedure of obtaining IEC Number - RCMC (Registration Cum Membership Certificate) –Export Credit Guarantee Council (ECGC) - Application for import and export of restricted items.

Unit 2:

Documentation Framework and Contracts 15 Hrs Aligned Documentation System: Commercial Documents - Auxiliary Commercial Documents - Regulatory Documents - Documents related to goods - Documents related toShipment - Documents related to Payments - Documents related to Inspection - Documents related to ExcisableGoods - Types of Contracts - Export Contracts.

Unit 3:

Payments and Finance 15 Hrs Factors - Methods of receiving Payment - Instruments of Payments-Letter of Credit Pre-shipment Finance - Post-shipment Finance - Post-shipment Credit in Foreign Currency - Negotiation ofdocuments with bank - CENVAT - Duty Draw back.

Unit 4:

Quality Control and Clearance of Cargo 15Hrs Objective of Quality Control - Methods - Procedure for Pre-shipment Inspection - Role of Clearing and Forwarding Agents – Role of Inspection Agents-Clearance of Cargo Central ExciseClearance Procedure - Central Excise Clearance Option - Shipment of Export Cargo.

Unit 5:

Customs Clearance, Risk and Insurance Policy 15 Hrs Customs Clearance of Export Cargo - Customs Clearance of Import Cargo - Risk: Types - Types of cover issued by ECGC - Cargo Insurance. Processing of an export order - Majorlaws governing export contract.

Text & Reference Books:

1. RAMA, GOPAL C. (2008) Export Import Procedures Documentation and Logistics. New Age International Publishers: New Delhi.
2. KHUSHPAT, S. J. (2013) Export Import Procedures and Documentation. Himalaya Publishing House: New Delhi.
3. PAWAN, KUMAR (2001) Export of India's Major Products Problems and Prospects. New Century Publications: New Delhi.
4. KAPOOR, D. C. (2002) Export Management. Vikas Publications: New Delhi.
5. CHERUNILAM, F. (2004) International Trade and Export Management. Himalaya Publications: New Delhi.

Websites:

1. www.cbec.gov.in/customs/cs-act/cs-act-idx.htm (Central Board of Excise and Customs - Customs Act, 1962, Customs Tariff Act – 1975, Other Acts)
2. www.epckenya.org/(Export Promotion Council)
3. commerce.nic.in/MOC/index.asp (Ministry of Commerce and Industry)
4. www.dgft.gov.in/ (Directorate General of Foreign Trade)

Semester II

Allied course – MOOC (C)

International Logistics Management

COURSE OBJECTIVES:

• To develop competencies and knowledge of students to become International logistics management professionals

• To orient students in the field of Logistics

• To help Students to understand international Logistics management

LEARNING OUTCOMES:

• Students will be able to apply the Basic knowledge of International Logistics management in the real-life situation.

• This subject will enable them to enhance their ability and professional skills in Logistics.

Unit 1:

International Logistics: Definition, Evolution, Concept, Components, Importance, Objectives; Logistic Subsectors;The work of Logistics; Integrated Logistics; Barrier to Internal Integration.

Unit 2:

Customer Focused Marketing; International Marketing: Introduction, Definition, Basis for International Trade, Process, Importance; International Marketing Channel: Role of Clearing Agent, Various Modes of Transport, Choice and Issues for Each Mode, Transport Cost etc.

Unit 3:

Transportation Functionality and Principles; Multimodal Transport: Modal Characteristics; Modal Comparisons; Legal Classifications; International Air Transport; Air Cargo Tariff Structure; Freight: Definition, Rate; Freight Structure and Practice.

Unit 4:

Containerization: Genesis, Concept, Classification, Benefits and Constraints; Inland Container Depot (ICD): Roles and Functions, CFS, Export Clearance at ICD; CONCOR; ICDs under CONCOR; Chartering: Kinds of Charter, CharterParty, and Arbitration.

Unit 5:

International commercial documents - International contracts, terms of payments, international insurance, packaging for export, custom clearance and infrastructure: transportation, communication and utilities – Brokerage.

Text & Reference Books:

1. Course Material Prepared by LSC
2. International Marketing by Gupta and Varshing, Publisher: Sultan Chand and Sons
3. International logistics by Pierre David, Publisher: Biztantra
4. Logistic Management and World Sea Borne Trade by Multiah Krishnaveni, Publisher: Himalaya Publication
5. Logistic and Supply Chain Management by Donald J. Bowerson, Publisher: Prentice Hall of India

Semester III

Freight Forwarding (Ocean & Air Cargo)

Course Objectives:

- To develop competencies in documentation procedures
- To help students understand freight forwarding
- To give an insight into Freight and Cargo management in various industries

Learning Outcomes:

- Procedure for loading and unloading in various containers.
- Knowledge of transit loading and unloading.
- Students will be able to demonstrate their skills in documentation in their profession.

Unit 1:

Introduction to EXIM, Freight forwarding and custom clearance – types of custom clearances – Importance of custom clearance – certificate of origin, ICEGATE and insurance – Custom Act – Regulations pertaining to custom clearance – different modes of freight forwarding– process of freight forwarding. Cargo handling, INCO terms and terminologies used in Cargoes - Different Types of Cargoes for transportation– Importer and exporter Code (IEC), The registered PAN-based Business Identification Number received from the Directorate General of Foreign Trade.

Unit 2:

Loading and Unloading- Stevedoring, Lighterage Services and Security - Port trusts -operational unit - services – Seaports – Vessel Operations – pilotage - Stevedoring - Dock Labour Boards - charges – Automated Container Handling - security at ports and harbours. Role of security agencies - logistics services-- Letters of Credit and payment Terms. Etc. - Computer and its application in internal systems of documentation.

Unit 3:

Shipping Lines Hub & Spoke - Process flow - Advices – Booking - Containerization – Containers – Container numbering - Process flow - Shipping Sales – Leads – Quotations – Customer Service- Documentation of Freight Forwarding process as per customer timelines and requirements - Carting, unloading, Stacking, Loading, and Stuffing - Procedure for dealing with loss or damage to goods - Different P.G.A and their roles. -Containers; Pallets; Palletization; Fumigation.

Unit 4:

History of Air Cargo- History of Air Cargo& Mail, Air Freight, Air Express, Overnight Air Express & Air Mail Other Multi-Modal forms of Transport- Rail, Sea & Surface Transport- Key Concepts-Key Organizations Facilitating Air Cargo International Air Transport Association (IATA), International Civil Aviation Organization (ICAO), International Federation of Freight Forwarders Association (FIATA), The International Air Cargo Association (TIACA).

Unit 5:

Air Freight Forwarding-Air freight Exports and Imports - Special Cargoes - Consolidation - Documentation – Air Way Bill (AWB) – Communication – Handling COD shipments – POD –Conditions of contract - Dangerous (DGR) or Hazardous goods.

Text & Reference Books:

1. Course Material Prepared by LSC
2. Air Cargo Management: Air Freight and the Global Supply Chain, Routledge, Michael Sales
3. Swapna Pillai, Export Import Procedures & Documentation, Sahitya Bhawan Publication, 2020.

Semester III

AI in Logistics

Course Objectives:

- Introduce fundamental AI and machine learning concepts and applications in logistics.
- Investigate the use of AI and machine learning technologies to optimise logistical operations.

Learning Outcomes:

- Describe the underlying concepts and uses of artificial intelligence and machine learning in logistics.
- Use artificial intelligence and machine learning to optimise logistics operations.
- Use AI and machine learning in logistics and supply chain management to do predictive analytics.

Unit 1:
Introduction of Logistics & AI:
Origin & Definition of AI-Three Components of AI-Trends Accelerating AI-Challenges & Risks-Detail the trends Accelerating AI-IoT and Big Data-Challenges & risks associated with the usage of AI-Consumer AI-Ambient Assistance works in devices. Foundations of AI, Intelligent Agents – Agents and Environments – Good Behaviour –Nature of Environments – Structure of Agents.

Unit 2:
AI in Logistics: AI is used to augment core business activities (Enterprise AI). Detail how AI enables personalisation in logistics and its 12 sub-sectors, and their activities are essential in Logistics and Supply Chain.

Unit 3:
Predictive Logistics
Predictive Logistics RPA is and how it can support back-office processes. AI-powered customer Experience with examples like drone-operated last-mile deliveries, etc. List the major aspects of AI and explain the ones mainly used in Logistics.- Technologies integrated with AI and widely used in Indian Logistics-Current Impact of AI in Logistics in terms of automation of processes.

Unit 4:
Artificial Intelligence and Problem Solving:
Regression Algorithms: Linear Regression, Decision Tree Regression, Comparison of Regression Algorithms – Regularisation Techniques, Additional Techniques for Improving Accuracy in Challenging Scenarios through Smart Feature Engineering and Modelling Methodologies. Supervised Learning, unsupervised, reinforcement learning- Logistic regression, Linear regression, Decision trees and random forests, Linear Discriminant Analysis, Clustering algorithms (K-means, hierarchical clustering).

Unit 5:
Introduction to AI Ethics
Introduction – Introduction to Artificial Intelligence – Overview for Law and Regulations – Impacts of AI – Ethics of AI – Approaches in AI Ethics. 9 Unit II Rise of AI Ethics AI Ethics – Common Themes and Varieties of Questions – Ethical Questions in AI – AI Ethics Now – AI Ethics Law – Case study: An Indigenous AI Report.

Text & Reference Books:

1. Course Material from LSC

2. George Luger (2017). Artificial Intelligence: Structures and Strategies for Complex Problem-Solving, 6th edition, Pearson Education.

3. Giuseppe Bonaccorso (2017). Machine Learning Algorithms, Packt Publishing.

4. Géron, Aurélien. Hands-on machine learning with Scikit-Learn, Keras, and TensorFlow. " O'Reilly Media, Inc..", 2022.

5. Stuart J Russell and Peter Norvig, Artificial Intelligence – A Modern Approach, PHI Learning, Fourth Edition, 2022.

Semester III

Transport Planning Techniques

Course Objectives:

• To ensure that students can apply the underlying operating and economic principles to develop solutions to various problems, such as forecasting, scheduling, and network design.

• To understand the route mapping and use of TMS

Learning Outcomes:

• Design and administer surveys to obtain the data required for transportation planning.

• Estimate travel demand generation at aggregate and disaggregate levels.

• Determine travel demand distribution using growth factor methods and gravity models.

• Develop land use integrated travel demand models.

Unit 1:

Introduction:-Transport and Socioeconomic-Activities;-Historical Development of Transport;-Transportation in the Cities-Freight Transportation-Future Developments.

Unit 2:

Introduction, Transportation and development of Map:

Transportation Planning Process and Concepts: Role of Transportation and Changing Concerns of Society in Transportation Planning; Transportation Problems and Problem Domain; Objectives and Constraints; Flow Chart for Transportation Planning Process-Preparation of Map Basic Terminology; Base Map Preparation: Representation of Spatial Data; Choice of Appropriate Scales; Notations – Basic Disciplines of Maps.

Unit 3:

Assignment:- Description of Transport Network- Route Choice Behaviour- Minimum Path, Minimum Path Algorithm- Route Assignment Techniques- Multipath Traffic Assignment- Capacity-Restrained Traffic Assignment.

Unit 4:

Land use-Transportation Models: Location models – Opportunity Models, Lowry-based Land use-Transportation Models – Allocation Function, Constraints, Travel Demand Estimation – Iterative Solutions, Matrix Formulation, Dynamic and Disaggregated extensions; Urban Forms and Urban Structures.

Unit 5:

Introduction to Intelligent Transport Systems (ITS) Functioning and Utility of ITS; Historical Background of ITS Development; Technology Building Blocks: Data Acquisition, Communication Tools, Data Analysis, Passenger and Cargo Information; Detection, Identification and Collection Methods: Roadway Sensors, Environmental Sensors, Probe-Based Sensors, Bluetooth, RFID, Mobile Reports, Real Time Traffic Monitoring Using Cellular Network and GPS Probe, Smart Cards.

Text & Reference Books:

1. Meyer M.D. and Miller E.J., Urban Transportation Planning, McGraw-Hill International.
2. Khisty, C J., Transportation Engineering – An Introduction, Prentice-Hall, NJ, 2007
3. Meyer, M. D, ITE Transportation Planning Handbook, John Wiley and Sons 2016
4. Intelligent Transport Systems, by P. K. Sarkar and A.K. Jain, PHI Learning Pvt. Ltd., 2018

Semester IV

Forecasting and Inventory Management

Course Objectives:

• To develop competencies and knowledge in students to become Forecasting and inventory management professionals

• To orient students in the field of Forecasting and inventory management

• To help Students to understand forecasting and inventory management

Learning Outcomes:

• Students will be able to apply the Basic knowledge of forecasting and inventory management in the real-life situation.

• It will enable them to enhance their ability and professional skills in inventory management.

Unit 1:

Forecasting: Meaning –Need -Types of forecasts –Demand Forecasting- Types of Demand Forecasting- Importance - Demand planning v/s Forecasting- Sources of Demand- Process of predicting future demand for products or services by analysing historical data, trends, and other relevant factors. Types of Forecasting- Qualitative- Based on expert opinions or market research- Delphi method, focus groups- Quantitative- Based on numerical data and statistical methods- Time series, regression model- Supply chain dynamics - Include simple problems on Calculation of Demand Forecasting.

Unit 2:

Inventory Management Concepts- a process of ordering, storing, tracking, and controlling inventory to ensure the right quantity is available at the right time. Types of Inventory- Raw Materials-Work-in-Progress (WIP)-Finished Goods-Maintenance, Repair, and Operations (MRO)-Inventory Control Techniques- EOQ (Economic Order - Safety Stock Quantity)- ABC Analysis- JIT (Just-in-Time)- VMI (Vendor-Managed Inventory).

Unit 3:

Inventory costs and their relevance for decision making – Inventory policies and control - Push Pull inventory methods - Risk pooling - Inventory management process - Inventory control system - Performance measurement in inventory management- Strategic Sourcing - Strategic sourcing process - Supplier Evaluation - Selection- Key factors for supplier selection - Standards for supplier selection - Standards and certification - Quality Characteristics - Supplier Quality Management, Rating measurement criteria - Replace the Use of Computers in Inventory Mgmt by Use of a Technology in Inventory Mgmt.

Unit 4:

Inventory Management with Advanced Tech--Futuristic Technologies -IoT (Internet of Things)-Smart sensors for tracking inventory levels, temperature (cold chain), location, and shelf life.- Blockchain-inventory and supplier records, traceability, and tamper-proof audit trails.- RFID & Drones- Automated inventory counting, warehouse navigation, and real-time stock updates.

Unit 5:

Integration of Forecasting & Inventory Management-Demand-Driven MRP (DDMRP): Combines forecasts and real-time signals to drive inventory planning.- AI-Powered Inventory Optimization: Balances service levels and carrying costs dynamically.- Predictive Replenishment: Systems auto-order stock based on consumption trends and external factors - Along with periodical inventory systems also include perpetual inventory systems.

Text & Reference Books:

1. Course Material Prepared by LSC

2. Operations Research – Concepts, Problems & Solutions- Kapoor V.K.-Sultan Chand & Sons/2017- 978-81-8054-854-3 (TC-532)

3. Inventory and Production Management in Supply Chains by Edward A. Silver, David F. Pyke, & Douglas J. Thomas Edition: 4th Edition (2021): Taylor & Francis Group: ISBN: 978-1032179322

4. Achieving Effective Inventory Management by John Toomey-6th Edition (2017)- Effective Inventory Management, Inc.-ISBN: 978-0967820071

5. Business Forecasting and Modelling by J. Holton Wilson & Barry Keating-6th Edition (2014)-McGraw Hill/Europe, Middle East & Africa-978-0077172022.

Semester IV

IoT & Robotic Application in Logistics

Course Objectives:

- Introduce fundamental IoT and Robotic Applications in Logistics concepts and applications in logistics.
- Investigate using AI and machine learning technologies to optimise logistical operations.

Learning Outcome:

- Understand the role of Robotic Process Automation (RAP) in general.
- Analyse applications of RPA in enterprises.
- Mark the scalability opportunities of RPA in LSCM.
- Recognise the foundations of Machine Learning.

Unit 1:

Basics of IoT

Evolution of Internet of Things, Enabling Technologies, M2M Communication, IoT World Forum (IoTWF) standardised architecture, Simplified IoT Architecture, Core IoT Functional Stack, Fog, Edge and Cloud in IoT, Functional blocks of an IoT ecosystem, Sensors, Actuators, Smart Objects and Connecting Smart Objects.

Unit 2:

Robotic Processes

Introduction to Robotic Process Automation & Bot Creation Introduction to RPA and Use cases – Automation Anywhere Enterprise Platform – RPA Development and Implementation. Advanced Features and Capabilities – Ways to Create Bots.

Unit 3:

Advances in Robotic Processes

Advanced RPA Techniques; RPA Deployment and Management. Emergence, Evolution,
Future of RPA, Differentiating RPA from Automation, Defining RPA and its Benefits, Types of Bots, Application areas of RPA, List of RPA tools.

Unit 4:

Integration of Robotic Processes

RPA Integration with Enterprise Systems; Future Trends in RPA: Intelligent Automation,
Hyper automation, and beyond.

Unit 5:

Artificial Intelligence and Machine Learning

Overview of AI and ML, Types of machine learning: supervised, unsupervised,
reinforcement learning. Logistic regression, Linear regression, Decision trees and random forests, Linear Discriminant Analysis, Clustering algorithms (K-means, hierarchical clustering).

Text & Reference Books:

1. M.C. Trivedi (2013). A Classical Approach to Artificial Intelligence. Khanna Book Publishing.

2. Jeeva Jose. (2023). Introduction to Machine Learning. Khanna Book Publishing Company Private Limited, New Delhi.

Semester IV

Lean Six Sigma in Supply chain Management

Course Objective:

• To provide students with a comprehensive understanding of Lean Six Sigma methodologies and their application in optimising logistics and supply chain processes.

• Design of experiments, solutions implementation and validation, change management, control charts, advanced Lean Six Sigma tools, and real-world case studies.

Learning Outcome:

• To possess the knowledge and skills needed to apply Lean Six Sigma methodologies to improve efficiency, reduce waste, and optimise logistics and supply chain processes.

• To lead and contribute to continuous improvement initiatives in various industry settings.

Unit 1:

Historical Overview – Definition of quality – What is six sigma -TQM and Six sigma - lean manufacturing and six sigma- six sigma and process tolerance – Six sigma and cultural changes – six sigma capability – six sigma need assessments - implications of quality levels, Cost of Poor Quality (COPQ), Cost of Doing Nothing.

Unit 2:

Tools for definition – IPO diagram, SIPOC diagram, Flow diagram, CTQ Tree, Project Charter – Tools for measurement – Check sheets, Histograms, Run Charts, Scatter Diagrams, Cause and effect diagram, Pareto charts, Control charts, Flow process charts, Process Capability Measurement, Tools for analysis – Process Mapping, SWOT, PESTLE, Five Whys, interrelationship diagram, overall equipment effectiveness, TRIZ innovative problem solving – Tools for improvement – forced field analysis – Tools for control – Gantt chart, Activity network diagram, Radar chart, PDCA cycle, Milestone tracker diagram, Earned value management.

Unit 3:

Design For Six Sigma (DFSS), Design For Six Sigma Method - Failure Mode Effect Analysis (FMEA), FMEA process - Risk Priority Number (RPN)- Six Sigma and Leadership, committed leadership – Change Acceleration Process (CAP)- Developing communication plan – Stakeholder.

Unit 4:

Lean Six Sigma in Logistics; Data Collection and Analysis; Cause and Effect Analysis (Fishbone Diagram); Failure Mode and Effects Analysis (FMEA); Regression Analyses and Correlation; Hypothesis Testing: t-tests, ANOVA, Chi-Square Tests; Lean Tools for Waste Reduction: Kanban, Poka-Yoke, SMED; Design of Experiments (DOE); Solutions Implementation and Validation; Change Management in Lean Six Sigma.

Unit 5:

Measure Phase Tools: CTQ Tree, Detailed process map, Data collection planning sheet, data collection forms, process capability calculation, measurement system analysis, Gauge R&R Study.

Text & Reference Books:

1. Course Material from LSC

2. Baker, B. (2003). Lean Six Sigma: Combining Six Sigma Quality With Lean Speed. Quality Progress, 36(10)

3. Antony, J. (2023). Design of experiments for engineers and scientists. Elsevier.

4. N. Gopalakrishnan, Simplified Six Sigma – Methodology, Tools and Implementation, PHI.

5. Textbooks 4 Montgomery, D. C. (2017). Design and analysis of experiments. John Wiley & sons.

Semester IV

Allied course – MOOC (A)

Courier, Express & Parcel Services

COURSE OBJECTIVES:

- To develop competencies and knowledge of students to become Courier and Express Professionals
- To orient students in the field of Courier and Express
- To help Students to understand Courier and Express

LEARNING OUTCOMES:

- Students will be able to apply the Basic knowledge of Courier and Express in the real-life situation.
- This subject will enable them to enhance their ability and professional skills.

Unit 1:

Types of consignments for shipment - Information on labels and handling instructions - consignee locations- consignments and destinations- consignment shipment operations – (loading, handling, scheduling and documentation) - Special instructions for safe handling of fragile consignments.

Unit 2:

Customer declarations – verification of customer declarations and consignment package - Clarification procedurein case of discrepancies noticed - Generation of bill of lading / shipping bill for export consignments – Coordination for import/export consignments clearance.

Unit 3:

Hub-Spoke Operations & Inbound and Outbound activities: Introduction – Hub spoke activities inbound and outbound activities. Types of consignments coming in the hub-spoke - layout of the hub-spoke - Areas to receive,sort and inspect - Documentation activities in hub-spoke - Inspection process of inbound sorted and outbound consignments.

Unit 4:

Tracking and tracing; AWB –essential time of arrival delivery - Last mile delivery – LMD -First mile delivery.

Unit 5:

Customer satisfaction- quality, delivery time, costs (shortest cost, loss prevention) - Weighment rate, cube scan–diversions/LBW/Volumetric density of cargo.

Text & Reference Books:

1. Course Material Prepared by LSC
2. Logistics and Supply chain management – Martin Christopher
3. Basics of Distribution Management; A Logistical Approach Prentice HALL of India - Kapoor Sathish

Warehouse management and Inventory control - Vikas Publication House

Semester IV

Allied course – MOOC (B)

Port Terminal Management

Course Objectives:

- To provide basic knowledge on the functioning of the Port.
- To develop knowledge in good management practices in Port.
- To Orient the student to leverage port efficiency to improve logistics.

Learning Outcomes:

- Student will develop understanding of Port infrastructure facilities and functioning.
- Student will understand how the functioning of port contributes to overall logistics efficiency.

Unit 1:
Economic impact of ports on the regional economy – Location Characteristics – Organization structure in Ports -Port-Main functions of a Port-Types of Port -Port Infrastructure- Port Equipment-Cargo types – container- Liquid- Bulk- Break bulk- Port Channel – Draft-mooring- Anchorage.

Unit 2:
Port Operations- Berths and terminals- Services rendered in a Port – pre-shipment planning- stowage plan and on-board stowage- yard planning- Transport movement planning- developments in container/cargo handling- safety- security. Environmental issues connected with Ports & Terminals - Health and safety issues – International Ships and Port facility security (ISPS) code.

Unit 3:
Green field projects for development of minor ports – Comparative analysis coastal shipping vs inland movement Storage yards- Rail sidings- Rail operations – Stevedoring- Layout and working of container terminals. Port system and sub systems, Value added service- bunkering- Ballast water management.

Unit 4:
Factors affecting choice of a port – Productivity parameters and factors determining productivity. Measuring and evaluating – performance and productivity – Ease of Doing Business initiatives in India.

Unit 5:
Port Organisation-Service Port- Tool Port-Land lord Port- Captive berths- Introduction to Public Private Partnerships in Ports –Port ownership in Indian scenario- Acts regulating ports in India. Responsibilities of port trusts, growth and status of ports in India- Pricing of Port services- TAMP guidelines- cost plus method- normative method.

Text & Reference Book:

1. Port Management and Operations – Patrick Alderton,4th edition
2. Port Development : A Handbook for Planners in developing countries – UNCTAD
3. Port Management and Operations, Maria G.Burns, CRC Press, 2014.

Semester IV

Allied course – MOOC (C)

Multimodal Transportation

COURSE OBJECTIVES:

- Introduce Multi-modal and Intermodal Transport concepts.
- Explain Regulatory framework and policies for Multi-modal transportation.
- Describe Indian Railways' initiatives to promote Multimodal Logistics in India.
- Overview evolution of infrastructure facilitating Multi-modal Logistics in India.

LEARNING OUTCOMES:

After completing this Course, the student will have the following learnings:

- The importance and role played by Multi-modal transport in the efficient and cost-effective movement of cargo.
- Types of multi-modal movement and the role of containerisation for security and speed.
- The provisions and procedures for Exim trade and INCOTERMS.
- Indian Government's policies and vision R for development of seamless multi-modal transport.

Unit 1:

Transportation Systems & Multi modal Transport –Concept of Multi modal & Intermodal Transport – introduction to Multi modal transport, the difference between Multi modal and Intermodal transport-Type of transport Modes – detail and characteristics of air, road, rail, water, pipelines, package carriers-Need, Aim and Key Issues of Multimodal transport.

Unit 2:

How to organise Multi modal transport-Role of Containerisation in MMT- history, utility, types, ease of handling, cost saving-Types of Multi modal transport – combined container transport, rolling Road & forwarding of trailers, RORO & LASH transportation-National Multi modal Transport Committee (NMTC) and Logistics Policy of India – key features and importance.

Unit 3:

Multi modal Transportation Act & Procedures-MMTG Act of 1993-Custom procedures for Export & Import – Bill of Lading – Hague Rules, Visby Rules, Hamburg Rules, Voyage by Sea-INCOTERMS – meaning, explanation, list, and types.

Unit 4:

MMT and Indian Railways-PFT Policy – maintenance of rolling stock, cargo handling, customs, etc-Warehousing Policy – stuffing, de-stuffing, stacking, use of MHE, etc-Layout and design of Multi modal Logistics parks.

Unit 5:

Multi modal transport & Practice Today-India's growing conflict between Trade & transport – issues, policy, problems & pricing-Integrated Transport – Bharatmala, Sagarmala, IWT, DFC, the concept of ICP (International Check Posts-Scenario in India and neighbouring countries with a case study).

Text & Reference Books:

1 Course Material Prepared by LSC

Apprenticeship – I

The students would be onboarded in Logistics Processes of companies by the Logistics Sector Skill Council for Apprenticeship Training. The duration of Apprenticeship Training is 6 months. During Apprenticeship Training students would be assigned on-the-job-training by companies. Being a legal engagement, students would receive a monthly stipend during Apprenticeship Training as per the existing norms.

On completion of the Apprenticeship Training, students shall submit Apprenticeship Report in the form of Work Diary to the Collaborating Institutions. The Report would be evaluated and Viva conducted by the Collaborating Institution.

Apprenticeship – II

The students would be onboarded in Logistics Processes of companies by the Logistics Sector Skill Council for Apprenticeship Training. The duration of Apprenticeship Training is 6 months. During Apprenticeship Training students would be assigned on-the-job-training by companies. Being a legal engagement, students would receive a monthly stipend during Apprenticeship Training as per the existing norms.

On completion of the Apprenticeship Training, students shall submit Apprenticeship Report in the form of Work Diary to the Collaborating Institutions. The Report would be evaluated and Viva conducted by the Collaborating Institution.

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