



மனோன்மணியம் சுந்தரனார் பல்கலைக்கழகம்
MANONMANIAM SUNDARANAR UNIVERSITY

**SYLLABUS FOR DIPLOMA IN LOGISTICS AND SUPPLY CHAIN
MANAGEMENT PROGRAMME OFFERED THROUGH
DIRECTORATE OF VOCATIONAL EDUCATION
(COMMUNITY COLLEGES AND VOCATIONAL SKILL
DEVELOPMENT CENTRES) FROM 2024 - 2025**



DIPLOMA IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT-5283

தளவாடங்கள் மற்றும் விநியோக சங்கிலி மேலாண்மை பட்டயம்

Course Code	Title of the course	Credit	Hours	Passing Minimum
Semester I				
C24SC11/E24SC01	Introduction to Logistics and Services	6	90	40/100
C24SC12 /E24SC02	Supply Chain Management	6	90	40/100
C24SC13 /E24SC03	Custom Broking	6	90	40/100
C19CE10 /E19CE10	Communicative English	6	90	40/100
C24SC14 /E24SC04	Freight Forwarding	4	120	40/100
Semester II				
C24SC21 /E24SC05	Chartering Practice	6	90	40/100
C24SC22 /E24SC06	International Liners Trade	6	90	40/100
C19LS23 /E19LS05	Life Skills	6	90	40/100
C24SC23 /E24SC06	Port and Terminal Management	6	120	40/100
C24SCPI /E24SCPI	Essentials of Logistics / Internship	8	150	40/100

Eligibility for admission:

Pass in 12thstd Examination conducted by the Govt. of Tamil Nadu Board of Secondary Education, Government of Tamil Nadu or any other equivalent Examination.

Examination:

Passing minimum for each Course is 40%, classification will be done on the basis percentage marks of the total marks obtained in all of the Courses and given as below:

40% but less than 50% - Third Class

50% but less than 60% - Second Class

60% and above - First Class

Theory Paper:

Internal Marks-25

External Marks-75

SYLLABUS

SEMESTER I

Course I: Introduction to Logistics and Services

Course II: Supply Chain Management

Course III: Custom Broking

Course IV: Communicative English

Course V: Freight Forwarding

SEMESTER II

Course VI: Chartering Practice

Course VII: International Liners Trade

Course VIII: Life Skill

Course IX: Port and Terminal Management

Course X: Essentials of Logistics / Internship

***(Semester Pattern for Community College Only)**

Course I

(C24SC11 /E24SC01) INTRODUCTION TO LOGISTICS AND SERVICES

UNIT I

-18 Hours

Introduction to Logistics- Definition and scope of logistics, Evolution and importance of logistics in business, Role of logistics in enhancing customer value and competitiveness,

Logistics Functions- Overview of key logistics functions (warehousing, transportation, inventory management, etc.), Interrelationships between logistics functions, Integration of logistics with other business functions

Logistics Strategy- Development of logistics strategies aligned with business objectives, Strategic decision-making in logistics (e.g., network design, outsourcing), Balancing cost-efficiency and service quality in logistics strategy.

Logistics Planning and Execution- Planning processes in logistics (demand forecasting, capacity planning, route optimization, etc.), Execution of logistics plans (scheduling, monitoring, coordination), Performance measurement and continuous improvement in logistics operations

UNIT II

-18 Hours

Modes of Transportation- Overview of transportation modes (road, rail, air, sea, pipeline), Factors influencing mode selection (cost, speed, reliability, capacity), Intermodal transportation and multimodal logistics

Carrier Selection and Contracting- Criteria for selecting transportation carriers, Negotiating and managing transportation contracts, Freight rate structures and cost optimization strategies

UNIT III

-18 Hours

Inventory Planning and Control- Inventory types and classification, Inventory forecasting techniques, Inventory control methods (ABC analysis, EOQ, safety stock)

Warehouse Management- Warehouse design and layout, Storage and handling techniques, Warehouse operations (receiving, picking, packing, shipping)

UNIT IV

-18 Hours

Logistics Information Systems- Role of technology in logistics operations, Types of logistics software (WMS, TMS, ERP, etc.), Implementation and benefits of logistics technology solutions

Emerging Technologies in Logistics- Trends and developments in logistics technology (IoT, AI, blockchain, etc.), Applications of emerging technologies in improving logistics efficiency and visibility, Implications of technological advancements on future logistics practices

UNIT V

-18 Hours

Sustainable Logistics Practices- Environmental considerations in logistics operations, Green logistics initiatives and best practices, Social and ethical dimensions of sustainable logistics

Risk Management in Logistics- Identifying and assessing logistics risks (supply chain disruptions, natural disasters, geopolitical risks), Strategies for mitigating and managing logistics risks, Business continuity planning and resilience in logistics operations.

Case Studies and Assignments.

Ref. Books:

"Logistics and Supply Chain Management" by D.K. Agrawal

"Logistics Management" by Vinod V. Sople

"Logistics and Supply Chain Management": Martin Christopher

Course II

(C24SC12 /E24SC02) SUPPLY CHAIN MANAGEMENT

UNIT I

-18 Hours

Fundamentals of Supply Chain Management- Definition and scope of supply chain management, Evolution of supply chain concepts, Importance of supply chain integration and collaboration

Supply Chain Strategy- Development of supply chain strategies aligned with business objectives, Competitive advantage through supply chain excellence, Balancing cost, service, and flexibility in supply chain strategy

Forecasting Methods and Techniques- Qualitative, quantitative, and mixed methods of forecasting, Time-series analysis (moving averages, exponential smoothing, etc.), Causal forecasting methods (regression analysis, econometric models)

Forecasting Accuracy and Evaluation- Measurement and assessment of forecast accuracy, Forecast error metrics (MAPE, MAD, MSE), Continuous improvement in forecasting through feedback and adjustment

UNIT II

-18 Hours

Capacity Planning in Operations- Capacity management strategies (chase demand, level capacity), Techniques for measuring and analyzing capacity (utilization, efficiency, bottleneck identification), Capacity expansion and investment decisions

Aggregate Planning- Concept and objectives of aggregate planning, Techniques for aggregate planning (chase, level, mixed strategies), Aggregate planning in service and manufacturing industries

Economic Order Quantity (EOQ) Models- Basic EOQ model and its assumptions, Extensions of the EOQ model (quantity discounts, production order quantity), Practical considerations and limitations of EOQ models

Inventory Control Systems- Classification of inventory control systems (ABC analysis, JIT, MRP), Inventory policies (safety stock, reorder point, order quantity), Inventory performance measurement and improvement

UNIT III

-18 Hours

Facility Location Decisions- Factors influencing facility location decisions, Location analysis techniques (factor rating, centroid method, etc.), Strategic implications of facility location decisions

Supply Chain Network Optimization- Modeling supply chain networks (transportation, production, distribution), Optimization techniques (linear programming, integer programming, network flow models), Sensitivity analysis and scenario planning in network design

The Newsvendor Problem- Introduction to the newsvendor problem and its significance, Decision-making under uncertainty, Optimizing order quantities to minimize costs or maximize profits

UNIT IV

-18 Hours

Global Supply Chains- Overview of global supply chain management, Challenges and opportunities in global supply chain operations, Strategies for managing global supply chain risks and uncertainties

Cross-Cultural Management in Supply Chains- Cultural dimensions and their impact on supply chain management, Strategies for effective communication and collaboration in global supply chains, Building and managing cross-cultural teams in multinational supply chain environments

UNIT V

-18 Hours

Supply Chain Coordination- Importance of coordination in supply chain management, Coordination mechanisms (pricing, contracts, information sharing), Collaborative planning, forecasting, and replenishment (CPFR) initiatives

Distribution Strategies and Channel Design- Overview of distribution channels and their role in supply chain management, Distribution strategy formulation (intensive, selective, exclusive distribution), Designing efficient and effective distribution networks

Warehousing and Transportation Management- Role and functions of warehouses in the distribution process, Transportation modes and their selection criteria, Strategies for optimizing warehousing and transportation operations in the supply chain

Case Studies and Assignments.

Ref. Books:

"Supply Chain Management: Text and Cases" by Janat Shah

"Supply Chain Management: Strategy, Planning, and Operation" by Amit Sinha and Herbert Kotzab

"Supply Chain Management" : Sunil Chopra, Peter Meindl, Kalra (Ed.5 –Pearson)

"Supply Chain Management" : Rahul Altekar

"Operations Management Contemporary Concepts & Cases" by Roger Schroeder

Course –III
(C24SC13 /E24SC03) CUSTOM BROKING

UNIT I

-18 Hours

Customs and their Roles- Role of Customs, Appointment of Customs Ports, Airports, Warehousing Stations, Power to declare places to be Warehousing Stations, Prohibitions on Importation and Exportation of Goods, Power of Central Government to notify goods Precautions, Detection of illegally imported goods and Prevention of the disposal thereof – Sections 11C, 11E, and 11F not to apply to goods in personal use, Prevention or Detection of illegal import of Goods, Power to exempt

UNIT II

-18 Hours

Custom Broking Licensing- Custom Broking Licensing, Certification and Qualifications to become a Custom Broking Agent, Customs Power to bring a ceiling on the License, Temporary and regular license, Rule 8 -G Card, Identity to enter Custom Broking

UNIT III

-18 Hours

Custom Broking- Custom Broking agent's duties, Drawbacks and Duties Restrictions of Custom Broking Agents, Customs Power to advise fees chargeable by Custom Broking Agent, Duties and Obligations, Liabilities of Custom Broking agents Custom Broking agent and Information Technology, ICE GATE and Online filing of Bills Records to be maintained by Custom Broking Agents

UNIT IV

-18 Hours

Import & Export Clearance Procedures- Import Bill Processing and Papers for filing Bill of Entry – Apprising, Open Inspection, Payment of Duties, Out of Charge, Clearance of goods, Duty exemption, Bonding of Cargo, Ex bonding, and Export Bills, Factory Stuffing, Port, or CFS Stuffing (practicelcfs), Supervision by Customs, Sealing, and printout, Comparison of Shipping Bill with Mate's Receipt and Bills of Lading

UNIT V

-18 Hours

Duty & Conveyance- Levy of and exemption from Customs Duties, Dutiable goods-Duty on Pilfered goods, Assessment of Duty-Interest on delayed Funds, Claim for Refund of Duty, Indicating Amount of Duty in Price of Goods, Advance Rulings Provisions to Conveyances Carrying Imported or Exported Goods - Power to board Conveyances

Case Studies and Assignments.

Ref. Books:

"A Guide on Customs Broker Licensing Examination" by Raj Kumar.

"Customs Law Practice & Procedures" by R. K. Jain

"Indian Customs: A Primer on Import and Export Procedures" by G. Padmanabhan

"Customs Tariff of India" by R. K. Jain

Course –IV

(C19CE10/E19CE10) COMMUNICATIVE ENGLISH

OBJECTIVES

90 Hours

To expose students to the fundamentals of academic and professional communication in order to develop professionals who can effectively apply communication Skills, theories and best practices to meet their academic, professional and career communication need

1. Basic Grammar:

- a. Review of grammar
- b. Remedial study of grammar
- c. Simple sentence
- d. Word passive voice etc.

2. Bubbling Vocabulary:

- a. Synonyms
- b. Antonyms
- c. One – work Institution

3. Reading and Understanding English

- a. Comprehension passage
- b. Précis – writing
- c. Developing a story from hints.

4. Writing English

- a. Writing Business letters.
- b. Paragraph writing
- c. Essay writing
- d. Dialogue writing

5. Speaking English

- a. Expressions used under different circumstances
- b. Phonetics

Reference

1. V.H.Baskaran – —English Made Easy||
2. V.H.Baskaran – —English Composition Made Easy|| (Shakespeare Institute of English Studies, Chennai)
3. N.Krishnaswamy – —Teaching English Grammar|| (T.R.Publication, Chennai)
4. Life Skill|| – P.Ravi, S.Prabakar and T.TamzilChelvam, M.S.University, Tirunelveli.

Course -V
(C24SC14 /E24SC04) FREIGHT FORWARDING

UNIT I

-18 Hours

Freight Forwarding - History of forwarding, Role of freight forwarders, The technique of forwarding, Advantages of freight forwarders, Forwarding as Business

Freighting- Freight, Surcharges & Ancillary charges, Collection of demurrage & detention, Marketing strategy, Client Base, Consignee Selling

UNIT II

-18 Hours

Multimodal Transport & Cargo Management- Multimodal transport, MCB, MTD, and License and Procedures, Loading, Lashing and transporting of OOG Cargo, Precautions and Handling of Reefer Cargo, Bulk and Breakbulk, Packaging, Broken stowage, Lashing, and chocking, DG Cargo pppp, DG Cargo packaging procedures, Prevention and safety measures, Declaring, Marking, and Labelling of DG Cargo

UNIT III

-18 Hours

INCO Term- Definition of INCO Term and its importance, Responsibilities, Contractual obligations of INCO Terms, Interaction of letter of credit, Import and export arrangements

UNIT IV

-18 Hours

Consolidation- Consolidation techniques, Advantages of Consolidation, Reworking and Direct boxes, Co-loading and Consolidation techniques, Calculation and Planning

UNIT V

-18 Hours

Documents- Shipping bills and bills of entry, Cargo Manifest, Supplementary documents and delivery order, Bill of lading and its types and functions, Service contracts with liners Agency Networking

Project

-30 Hours

Ref. Books:

"Freight Forwarding and Multi Modal Transport Contracts" by David Glass
"Freight Forwarder's Intermediary Role in Multimodal Transport Chains" by Vasileios Sypriadis
"Global Logistics and Supply Chain Management" by John Mangan, Chandra Lalwani, and Tim Butcher

SEMESTER – II

Course –VI

(C24SC21 /E24SC05) CHARTERING PRACTICE

UNIT I

-18 Hours

Chartering- Role of Broker and Charter, Role of ship owners, Different types of ships and Chartering, Different types of cargo, Fixture note, Charter parties, Responsibilities of charters and ship owners

UNIT II

-18 Hours

Arrived Ship - Importance of Vessels Arrived, Importance of Vessels readiness, Importance of Cargo readiness, Loading sequence

UNIT III

-18 Hours

Vessel at port- Precautions while loading, Departure Formalities, Short Loading and dead freight, Statement of fact

Selecting the ship- Technical restrictions, Political restrictions, Ships anatomy, Details of ships

UNIT IV

-18 Hours

Documents collecting to chartering- Fixture note and charter parties, Statement of facts and importance, Lay-time statement, Demurrage and Dispatch statement

UNIT V

-18 Hours

Process of Chartering- The cargo, The ship, Broker, Ship at port, Sea passage, Legal obligations, Voyage file

Case Studies and Assignments.

Ref. Books:

"Shipbroking and Chartering Practice" by Lars Gorton, Rolf Ihre, and Arne Sandevärn

"Lay time and Demurrage" by John Schofield

"Chartering and Shipping Terms" by J.S. Noad

"Time Charters" by Terence Coghlin, Andrew Baker, Julian Kenny, and John D. Kimball

"Shipping and Chartering Practice" by K.V. Hariharan

"Chartering and Shipping Contracts" by A.K. Bansal

Course -VII

(C24SC22 /E24SC06) INTERNATIONAL LINERS TRADE

UNIT I

-18 Hours

Introduction to Liners trade- Origination of Liners, Difference between tramp and liners, Container Lines, Container Terminal, Conferences - ANERA, IPBC, TWARA, TACA, FMC - Advantages and Disadvantages of conferences

UNIT II

-18 Hours

Liner Services- Main Vessel, Mother Vessel and Feeder Vessel, Trade Routes, Types of Services, Cycles of Terminals, Windows, Terminal Equipment and Handling - Terminal Operators

UNIT III

-18 Hours

Troubleshooting Techniques- Rollovers, Missing out windows, Excessive pilling of containers, Sweeper vessels

UNIT IV

-18 Hours

Freight- Freight Tariff, Bunker adjustment factors, Currency adjustment factors, Congestions surcharges

INCO Terms- Definitions and Importance, Shipping Documents (LC, Invoice, Packing list, etc), Shipping Bill, Bill of entry, Prior Entry Manifest, Supplement Manifest, Delivery Order, Letter Of Indemnity, Mates receipts, Types Of Bills Of Lading, Functions Bills Of Lading

UNIT V

-18 Hours

Full cycle of containers- Load part document, Distransport document, Intermodal Transport, Multimodal transport, Basic legalities collected to containers

Case Studies and Assignments.

Ref. Books:

"Elements of Shipping and International Logistics" by Anil Kumar Jha

"International Trade and Shipping Management" by Dr. V.K. Agarwal

"Principles of International Trade and Shipping" by P.K. Mukherjee

Course –VIII

(C19LS23 / E19LS05) LIFE SKILLS

OBJECTIVES

90 HRS

To educate about Life skills includes on Life Coping or adjustment, Attitude, Problem solving and basic computer Knowledge with internets

I Life Coping or adjustment

- (a) External and internal influence in one's life
- (b) Process of coping or adjustment
- (c) Coping with physical change and sexuality
- (d) Coping with stress, shyness, fear, anger far live and criticism.

II Attitude

- (a) Attitude
- (b) Self-acceptance, self – esteem and self-actualization
- (c) Positive Thinking

III Problem Solving

- (a) Goal Setting
- (b) Decision Making
- (c) Time Management and stress Management;

IV Computers

- (a) Introduction to Computers
- (b) M.S Office
- (c) Power Point

V Internet

- (a) Introduction to internet
- (b) E – Mail
- (c) Browsing

Reference:

- 1) Life Skill Programme course I & II by Dr.XavierAlphona MCRDE Publications. R.K.Mutta Road, Chennai -2
- 2) Life Skill P.Ravi, S.Prabakar&T.TamilChelvam, M.S.University, Tirunelveli

Course –IX

(C24SC23 /E24SC07) PORT AND TERMINAL MANAGEMENT

UNIT I

-18 Hours

Port Operations- Ports and Harbours, Port Limits, EZ, customs frontier, Tidal variations, Natural Harbour, Artificial harbor, Warm water port, All-weather port, Breakwater, out/ anchorage, port conservancy by dredging for a deep berth, Different types of Berths, Port charges, Cargo related charges, Role of TAMP

UNIT II

-18 Hours

Container Terminals- Facilities in a terminal, Privatization of terminals, Import/export cycle of terminal, Last minute connectivity

Cargo Work- Different types of Cargo, Different types of Packaging, Broken stowage The angle of Repose and Bulk cargo, Proper and improper storage, Stowage factor and grain/bale capacity, Broken Stowage and its importance, Maintenance trim and balance

UNIT III

-18 Hours

Cargo Work- Different types of Cargo, Different types of Packaging, Broken stowage, The angle of Repose and Bulk cargo, Proper and improper storage, Stowage factor and grain/bale capacity, Broken Stowage and its importance, Maintenance trim and balance

UNIT IV

-18 Hours

The Stevedore- Importance of Stevedore, Knowledge of Stevedore, Coordination of Loading and Discharging, Selecting the right equipment, Right workforce

UNIT V

-18 Hours

Ship- Displacement, Standard displacement, DWT, GRT, NRT, Lightship, LOA, BEAM, Cargo Calculation based on the stowage factor, Broken stowage, Reason for broken stowage and financial loss

Cargo- Bulk cargo and its nature, Moisture content, maximum moisture limit, Spontaneous combustion of coal cargo and MSDA certification, Working on project cargo, Gear safety and certification

Project and Assignment

-30 Hours

Ref. Books:

- "Port Operations, Planning and Logistics" by Khalid Bichou
- "Handbook of Terminal Planning" by Jürgen W. Böse
- "Port and Terminal Management" by L. S. Rathore
- "Port Management in India" by N. G. Sahgal
- "Modern Port Management: Practices and Procedures" by Dr. Amitabh Kant
- "Port Development in India: Challenges and Strategies" by M.P. Bhandari

Course –X

(C24SCPI /E24SCPI) ESSENTIALS OF LOGISTICS / INTERNSHIP

Applications of Information Technology

Inventory Control

Decision Making

Statistics of Service

Technical aspects of Shipping

Simulation Analysis

-15 Hours

Case Studies and Assignments.

Ref. Books:

"Essentials of Logistics and Supply Chain Management" by Rajat K. Baisya

"Logistics and Supply Chain Management" by K. Shridhara Bhat

"Essentials of Supply Chain Management" by Sunil Chopra and Peter Meindl (Indian Adaptation)