

BANGALORE UNIVERSITY Jnanabharathi, Bengaluru- 560056

(According to NEP - 2020 Regulations)
Syllabus of 3rd and 4th Semesters
Bachelor of Commerce (Logistics & Supply Chain Management)

2021-22 Onwards

DEPARTMENT OF COMMERCE Jnanabharathi Campus, Bangalore University, Bengaluru- 560056 www.bangaloreuniversity.ac.in

B. Com (Logistics & Supply Chain Management) Programme Structure

SEMESTER III

SI No.	Course Code	Title of the Course	Category of courses	Teaching hours per week (L+T+P)	SEE	CIE	Total Marks	Credits
1	Lang.3.1	Language – I	AECC	3+1+0	60	40	100	3
2	Lang.3.2	Language – II	AECC	3+1+0	60	40	100	3
3	B.Com. (LSCM) 3.1	Corporate Accounting	DSC	4+0+0	60	40	100	4
4	B.Com. (LSCM) 3.2	Warehouse & Inventory Management	DSC	3+0+2	60	40	100	4
5	B.Com. (LSCM) 3.3	Introduction to Customs And EXIM Policies	DSC	4+0+0	60	40	100	4
6	B.Com. (LSCM) 3.4	Constitution of India	AECC	2+0+0	30	20	50	2
7	B.Com. (LSCM) 3.5.1	Sports	SEC-VB	0+0+2	-	25	25	1
8	B.Com. (LSCM) 3.5.2	NCC/NSS/others (if any)	SEC-VB	0+0+2	-	25	25	1
9	B.Com. (LSCM) 3.6	Digital Logistics	OEC	3+0+0	60	40	100	3
Sub	- Total (C)	•	•		390	310	700	25

SEMESTER IV

SI No.	Course Code	Title of the Course	Category of courses	Teaching hours per week (L+T+P)	SEE	CIE	Total Marks	Credits
1	Lang.4.1	Language – I	AECC	3+1+0	60	40	100	3
2	Lang.4.2	Language - II	AECC	3+1+0	60	40	100	3
3	B.Com. (LSCM) 4.1	Elements of cost accounting	DSC	4+0+0	60	40	100	4
4	B.Com. (LSCM) 4.2	Port Management	DSC	3+0+2	60	40	100	4
5	B.Com. (LSCM) 4.3	Retail Management	DSC	4+0+0	60	40	100	4
6	B.Com. (LSCM) 4.4	Artificial Intelligence	SEC	2+0+0	30	20	50	2
7	B.Com. (LSCM) 4.5.1	Sports	SEC-SB	0+0+2	30	20	50	2
8	B.Com. (LSCM) 4.5.2	NCC/NSS/others (if any)	SEC-VB	0+0+2	-	25	25	1
9	B.Com. (LSCM) 4.6	Cold Chain Logistics	OEC	3+0+0	60	40	100	3
Sub	- Total (D)				390	310	700	25

Notes:

- One Hour of Lecture is equal to 1 Credit.
- One Hour of Tutorial is equal to 1 Credit (Except Languages).
- Two Hours of Practical is equal to 1 Credit

Acronyms Expanded

AECC : Ability Enhancement Compulsory Course

DSC © : Discipline Specific Core (Course)

SEC-SB/VB : Skill Enhancement Course-Skill Based/Value Based

OEC : Open Elective Course

DSE : Discipline Specific Elective

SEE : Semester End Examination

Ø CIE : Continuous Internal Evaluation

Ø L+T+P : Lecture+Tutorial+Practical(s)

Note: Practical Classes may be conducted in the Business Lab or in Computer Lab or in Class room depending on the requirement. One batch of students should not exceed half (i.e., 50 or less than 50 students) of the number of students in each class/section. 2 Hours of Practical Class is equal to 1 Hour of Teaching, however, whenever it is conducted for the entire class (i.e., more than 50 students) 2 Hours of Practical Class is equal to 2 Hours of Teaching

Course Code: B.Com (LSCM) 3.1 (DSC)

Name of the Course: Corporate accounting

Course	No. of Hours per	Total No. of Teaching Hours
Credits	Week	
4 Credits 3+0+2 Hrs		56
		Hrs

Pedagogy: Classrooms lecture, Tutorials, Group discussion, Seminar, Case studies, Field work etc.,

Course Outcomes: On successful completion of the course, the Students will be able to

- Understand about various underwriters and underwriting
- Learn various procedures involved in redemption
- Acquire knowledge about various methods of valuation of goodwill
- Acquire knowledge about various methods of valuation of shares
- Learn the preparation of final statement of companies

Syllabus:	Hou
	rs
Module No. 1: UNDERWRITING OF SHARES	8

Meaning - Underwriting Commission - Underwriter - functions - Advantages of Underwriting, Types of Underwriting – Marked and Unmarked Applications – Problems (Excluding Journal entries)

Module No. 2: REDEMPTION OF DEBENTURES

10

Meaning of Debentures, Distinction between Shares and Debentures, Types of Debentures, Issue of Debentures, Over Subscription, Issue of Debentures for, Consideration other than Cash, Issue of Debentures as a Collateral Security, Terms of Issue of Debentures, Interest on Debentures, Writing off Discount/Loss on Issue of Debentures, Redemption of Debentures, Redemption by Payment in Lump Sum, Redemption by Purchase in Open Market, Redemption by Conversion, Sinking Fund Method

Module No. 3: VALUATION OF GOODWILL

10

Meaning – Circumstances of Valuation of Goodwill – Factors influencing the value of Goodwill – Methods of Valuation of Goodwill - Average Profit Method - Super Profit Method - Capitalization of Super Profit Method – Annuity Method – Capitalization of Profit Method

Module No. 4: VALUATION OF SHARES

8

Meaning - Need for Valuation - Factors Affecting Valuation - Methods of Valuation - Asset Backing or Intrinsic Value Method - Yield Method - Earning Capacity Method - Fair Value Method - Rights Issue and Valuation of Rights Issue

Module No. 5: COMPANY FINAL ACCOUNTS

20

Statutory Provisions regarding preparation of Company Final Accounts – Treatment of Special Items

- Managerial Remuneration Tax deducted at source Advance payment of Tax Provision for Tax
- Depreciation Interest on debentures Dividends Rules regarding payment of dividends (Theory

only) – Transfer to Reserves – Preparation of Profit and Loss Account and Balance Sheet as per Section 129of companies act 2013

Skill Developments Activities:

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- M.A.Arunachalam & K.S.Raman: Corporate Accounting II, HPH.
- Dr. S.N. Maheswari, Financial Accounting, Jain Book Depot
- Soundrarajan A & K. Venkataramana, Corporate Accounting, SHBP.
- S. P. Jain and K. L. Narang Corporate Accounting, Kalyani Publishers.
- SP Iyengar, Advanced Accountancy, Sultan Chand and Sons, New Delhi.
- R L Gupta, Advanced Accountancy, Sultan Chand and Sons, New Delhi..
- Anil Kumar Marriappa Corporate Accounting, HPH

Course Code: B.Com (LSCM) 3.2 (DSC)

Name of the Course: Warehouse & Inventory Management

Course Credits	No. of Hours per week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs

Pedagogy: Classroom lecture, Tutorials, Group discussion, Seminar, Case studies, Fieldwork etc.,

Course Outcomes: On successful completion of the course, the students will be able to

- To gain a operation knowledge & understanding Business of warehouse.
- Understand warehouse-space-infrastructure
- Learn the Layout plan and Inventory Management
- Understand Warehouse Safety

Syllabus

Module No. 1:Introduction to Warehouse Concepts Decisions and Operations (12 Hrs)

Introduction – Definition of Warehouse- Need for Warehousing-Selection of Warehouse-Sequence of Warehousing Decisions- Objectives of efficient warehouse operation-Types of Warehouses-Factors determining location of Warehouse-Characteristics of Ideal Warehouse- Need of Warehouse Management System

Module No. 2: Warehouse Operations (14 Hrs)

Warehouse Operations-Receipts of Goods GRN-Function of Warehouse-Functions of Customs bonded warehouse-difference between general warehouse Vs Bonded warehouse. Location Management-labelling, packing, binning, loading and unloading procedures-Transportation consolidation, shipping preparation. Pick and packing process -Warehouse order picking layout designs, stages in logistics packing, vertical storage, benefits of warehouse management.

Module No. 3: Materials Handling (12 Hrs)

Scopes of Materials Handling-Classification of Materials Handling-Materials Handling-Importance-Principles-Criteria for selection of material handling equipment's, Maintenance Automated storage and Retrieval Systems -ARS-Types of Material handling equipment- types of Fork lift- types of hand palate-types of staggers- types of Automotive doors-types of dock levelers- types of scanners-types of palates-physical control of stock and security-principles of materials handling system.

Module No. 4: Function of Inventory (14 Hrs)

Definition-Need of Inventory Management-types of inventory management, Function of Inventory – Importance – Tools – ABC, VED, FSN- Analysis of inventory – Economic Order Quality -EOQ – Reorder point – Safety Stock – Lead time Analysis Store keeping – Objectives-Functions – Store keeper – Duties – Responsibilities – Location of store – Stores Ledge – Bin card- Inventory control methods- Just in time JIT-Kanban-group technology -GT – SMED-JIDOKA-TPM-POKA YOKE-vendor inventory management systems-order processing cycle.

Module No. 5: Warehouse Documentations (8 Hrs)

Introduction, Invoice, Delivery Challan, stock transfer Procedure, Reverse Logistic, Scrap management, 10 Commandments of Warehouse. procedure, Regulations, Customer, Insurance, Importance of Insurance, Types of Insurance, Risk management. Safety measure activities,

Skill Developments Activities:

- Visit to warehouse
- Make a study report of Inventory Management
- Prepare a chart of different types of material handling equipments
- Visit to bonded warehouse
- Make a chart of location management and process of bonded warehouse operations.
- Any other activities, which are relevant to the course.

Reference Books:

- Warehouse Management Gwynne Richards
- Nextstep Institute of Logistics and Aviation Guide -Paniraj Murthy & Shobha K.V
- Basic warehouse & Inventory Management V.R. Rangarajan

Note: Latest edition of textbooks and reference Books may be used

Course Code: B.Com (LSCM) 3.3 (DSC)

Name of the Course: Introduction to Customs And EXIM Policies

Course	No. of Hours per	Total No. of Teaching Hours
Credits	Week	
4 Credits	4 Hrs	56
		Hrs

Pedagogy: Classrooms lecture, Tutorials, Group discussion, Seminar, Case studies, Field work etc.,

Course Outcomes: On successful completion of the course, the Students will be able to

- Gain knowledge of Exim policy in India
- Gain knowledge of customs procedures
- Understand the documentation of customs and Exim
- Gain knowledge of foreign trade policy.
- Understand the challenges faced by Exporters and Importers

Syllabus:	Hou
	rs
Module No. 1: Introduction of Customs	12

Importance of customs, organization chart of customs, functions and powers of customs officers, Prohibited goods, notified goods, specified goods. Restricted imports. Provisions relating to Baggage Strategy Provisions for Levi of Customs duty, Role of Custodian, Obligations of Carrier, Customs Preventive Control, Refunds and Recoveries.

Module No. 2: Introduction to Exim Policies

12

Special Economic Zones Scheme. ...EOU Scheme. ...EPCG Scheme, FTZ, Exim trade facility bodies, DGFT Functions, Exim Glossary, SVB SCHEME, Prohibited goods, EXIM BANK.

Customs Clearance of Cargo, smuggling and other violation and penal provisions, IGM/EGM – Amendments of IGM & EGM 2018, Procedure for Filing IGM & EGM at Customs House.

Module No. 3: Documentation

14

Bill of Lading, Types of Bills of Ladings, Importance of Bill of Lading, Switch Bill of Lading Hague/Hague-Visby & Hamburg Rules, Rotterdam Rules and the differences between them. BOE (Bill of Entry), Assessment process EDI (Electronic data interchange, SWIFT – Single Window Interface for Facilitating Trade, AEO – Authorized Economic Operators. Import procedure, -Introduction of Import/Export procedures, Bill of entry, self- assessment of Import & Export Goods, Examination of Goods, Execution of Bonds, Payment duty, Risk Management System in Import and drawback clients, electronic declaration for Bill of entry and shipping, Electronic selling facilities, Classification of Goods.

Process to get License for Rule 6, process procedure, G card and H Card process Importance of CHA activities, Renewal of License, Audit system, Difference between CHA and Freight forwarder activities High sea sales Procedure.

Module No. 5: Classification/Assessment of Projects Imports

08

Introduction, Project Report, Registration of contract Clearance of goods after registration, finalization of Contract, Traffic value, valuation of Imported and exported goods in general methods of valuation of imported goods, Provisional clearance of Imported goods, methods of valuation of exports goods, Right to appeal.

Skill Developments Activities:

- Visit Customs Office at Airport/Seaport/ICD to understand digital courses import & export
- Visit any CHA or Freight forwarding companies to understand the process of customs clearance and documentation.
- Make a flow chart of end to end of a consignment.
- Visit to SEZ Zones
- Any other activities, which are relevant to the course.

- 1. Exim Policy (MHRD)
- 2. Nextstep Institute of Logistics and Aviation Guide -Paniraj Murthy & Shobha K.V
 - 3. Customs Law Manual R.K. Jain
 - 4. Export procedures and Documentation by Sudhir Kochaar
 - 5. Customs manual 2018

Course Code: B.Com (LSCM) 3.4 Open Elective Course (OEC)

Name of the Course: Digital Logistics

Course	No. of Hours per	Total No. of Teaching Hours
Credits	Week	
3 Credits	3 Hrs	42
		Hrs

Pedagogy: Classrooms lecture, Tutorials, Group discussion, Seminar, Case studies, Field work etc.,

Course Outcomes: On successful completion of the course, the Students will be able to

- Demonstrate the Digital Process in Logistics domain.
- Student will be able to describe the New Trends in cold chain Logistics Industry

Syllabus:	Hou
	rs
Module No. 1: Introduction to Digital Logistics	10

Digital Logistics, History of Digitalization in Logistics Industry, Transport, Shipping, Airline, CHA Activates. Introduction and review of Industry 4.0 – Logistics 4.0 digitalization transformation, Globalization & Liberalization and their impact on Logistics.

Module No 2: Logistics Technology 12

Block chain, Logistics Analytics, Robotic warehousing, E Procurement transport and delivery Management, Customer Relationship Management, Digitalization of logistics and challenges in logistics, Inventory control system (ICS) Material requirement planning MRP-Manufacturing resources planning MRP 2-Enterprise resources planning (ERP), Development of logistics-Logistics -1.0, 2.0, 3.0, 4.0, future direction of digitalization Logistics. New Technologies in Digitalization Logistics, [IoT] Introduction of [IoT], Challenges of Internet of things, Changes in Logistics business module, Digitalization transformation of Logistics and SEM, Block Chain, VTS and its applications, benefits of VTS, Block Chain-Robotic Operations at Warehouse, Difference between Digital and Traditional Logistics.

Module No. 3: E Logistics 10

E Logistics Method of documents, Entrepreneur resource planning system, ASN Tracking System, Satellite Global Positioning System-GPS, Geographic Information System - GIS, Bar coding and Scanning, Radio frequency Identification Devices-RIFD, Electronic signature digitalization technology. Benefits E logistics, Reverse logistics, Challenges of Digital Logistics. Data Analytics, Difference between Digital and Traditional logistics' IOT internet of things and supply chain visibility.

Module No. 4: Logistics Analytics	6
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Introduction, Types of Logistics analytics - , Descriptive Analytics , Predictive Analytics , Prescriptive Analytics , Diagnostic Analytics Major Challenges and SIX – "C " Effective Logistics management In Supply chain, Regular Planning, Adaptation of Automation, Value Relations, Measurement and Improvisation.

Skill Developments Activities:

- Make a Study Report on vehicle Tracking System
- Visit Logistics companies to understand the various Digitalization courses.

- Logistics-.0 by Tharun Pakson
- Nextstep Institute of Logistics and Aviation Guide -Paniraj Murthy & Shobha K.V
- Digitalization Transformation of Logistics Johannes Keran

Course Code: B.Com (LSCM) 4.1 (DSC)

Name of the Course: Elements of cost accounting

Course No. of Hours per		Total No. of Teaching Hours
Credits	Week	
4 Credits	3+0+2Hrs	56
		Hrs

Pedagogy: Classrooms lecture, Tutorials, Group discussion, Seminar, Case studies, Field work etc.,

Course Outcomes: On successful completion of the course, the Students will be able to

- Learn to prepare Cost sheet
- Learn about various techniques of material handling.
- Acquire knowledge about wage payment system
- Learn the techniques of reconciliation.

Syllabus:	Hours
Module No. 1: INTRODUCTION TO COST ACCOUNTING	10

Introduction – Meaning& Definition of Cost, Costing and Cost Accounting – Objectives of Costing - Comparison between Financial Accounting and Cost Accounting –Designing and Installing a Cost Accounting System – Cost Concepts - Classification of Costs – Cost Unit – Cost Centre – Elements of Cost – Preparation of Cost Sheet – Tenders and Quotations

Module No. 2: MATERIAL COST CONTROL

Meaning – Types: Direct Material, Indirect Material. Material Control – Purchasing Procedure – Store Keeping – Techniques of Inventory Control –Levels settings– EOQ – ABC Analysis – VED Analysis – Just In-Time – Perpetual Inventory System – Documents used in Material Accounting - Methods of Pricing Material Issues: FIFO, LIFO, Weighted Average Price Method and Simple Average Price Method - Problems.

Module No. 3: LABOUR COST CONTROL

Meaning – Types: Direct Labour, Indirect Labour - Timekeeping – Time booking – Idle Time – Overtime – Labour Turnover. Methods of Labour Remuneration: Time Rate System, Piece Rate System, Incentive Systems (Halsey plan, Rowan Plan & Taylor's differential Piece Rate System) – Problems

Module No. 4: OVERHEAD COST CONTROL 14

Meaning and Definition – Classification of Overheads – Procedure for Accounting and Control of Overheads – Allocation of Overheads – Apportionment of Overheads – Primary Overhead Distribution Summary – Secondary Overhead Distribution Summary – Repeated Distribution Method and Simultaneous Equations Method – Absorption of Factory Overheads – Methods of Absorption (Theory Only) – Machine Hour Rate –

Problems on Machine Hour Rate.		
Module No. 5:RECONCILIATION OF COST AND FINANCIAL ACCOUNTS	8	
Need for Reconciliation – Reasons for differences in Profit or Loss shown by Cost Accounts and Profit or Loss shown by Financial Accounts – Preparation of Reconciliation Statement and Memorandum Reconciliation Account		
Skill Developments Activities:		
Reference Books: 1. J. Made Gowda – Cost and Management Accounting, HPH		
Reference Books: 1. J. Made Gowda – Cost and Management Accounting, HPH 2. M.V. Skukla – Cost and Management Accounting		
1. J. Made Gowda – Cost and Management Accounting, HPH		
 J. Made Gowda – Cost and Management Accounting, HPH M.V. Skukla – Cost and Management Accounting 		

Course Code: B.Com (LSCM) 4.2 (DSC)
Name of the Course: Port Management

Course Credits	No. of Hours per week	Total No. of Teaching Hours
4 Credits	4 Hrs	56 Hrs

Pedagogy: Classroom lecture, Tutorials, Group discussion, Seminar, Case studies, Fieldwork etc.,

Course Outcomes: On successful completion of the course, the students will be able to

- The Course analyses how ports are organized, managed and planned and how ports interface with the logistics chain.
- The course provides knowledge and analysis of the principles and evolution of container terminal management, port indicators and supply chain management.

Syllabus

Module No. 1: Port Structure and Functions (10 Hrs)

Organization structure and port privatization, Role and function of seaports, Port details and definitions, Ship influence on Port details, Selection of Port location. Definition-Types and Layout of the Ports-Organizational structure, Fundamental observations. Main functions and features of Ports: Infrastructure and connectivity, administrative functions-Operational functions. Main Services: Services and facilities for ships, administrative formalities-Cargo transfer- Services and facilities for cargo-Additional "added value" service, Ports and their stakeholders like PHO, Immigration, Ship Agents, Stevedores, CHA.

Module No. 2: : Port Operations (14 Hrs)

Navigational and Operational parameter, -Channel Cross section, -Cargo Handling system, Lash roll on and roll off vessels, Range of containers handling equipments, Harbour-masters department and functions, -Berth Facilities and equipments. Berths and Terminals – Berth Facilities and Equipment-Ship Operation- Pre-Shipment planning, the Stowage plan and on-Board stowage – Cargo positioning and stowage on the terminal-Developments in cargo/Container Handling and terminal operation-Safety of cargo operations – Cargo security: Measuring and evaluating performance and productivity.

Module No. 3: Port Development (12 Hrs)

Phases of Port development – Growth in word trade – Changes in growth-Development in terminal operation. Shipping technology and port: Ship knowledge, Ship Development and port development, Port time and ship speed – other technical development affecting port.

Module No. 4: Port Traffic Controls (10 Hrs)

Port Traffic Controls, Port Operations and communication Centre, Port Traffic management Ship turn-around time import, Port Operation Planning, Theory of Port tariff, Market pricing Customs entries charges, miscellaneous charges, Authority rates and charges policies

Module No. 5: Port Administration Ownership Management (10 Hrs)

Port Ownership Structure, Types of Port Ownership and administration, Organizations concerning ports, Boards governing the ports, Port Management development, Rise and fall of Ports, Information

Technology in ports. Port ownership in Indian context: Acts Governing the Ports in India, Port ownership structure in India. Port reform: Framework for port reform evolution of ports in a competitive world, Alternative Port Management structure and Ownership Models.

Skill Developments Activities:

- Visit Sea Port and make a report on Port traffic control and port tariff management.
- Make an activity flow chart of container berthing and de-berthing
- Any other activities, which are relevant to the course.

Reference Books:

- 1. Elements of Port Operation any Branch
- 2. Nextstep Institute of Logistics and Aviation Guide -Paniraj Murthy & Shobha K.V
- 3. Handbook of Port and Harbour Engineering Gregory P Tsinker

Note: Latest edition of textbooks and reference Books may be used

Course Code: B.Com (LSCM) 4.3 (DSC)
Name of the Course: Retail Management

Course	No. of Hours per	Total No. of Teaching Hours
Credits	Week	
4 Credits	4 Hrs	56
		Hrs

Pedagogy: Classrooms lecture, Tutorials, Group discussion, Seminar, Case studies, Field work etc.,

Course Outcomes: On successful completion of the course, the Students will be able to

- To Demonstrate the importance of SCM operations and its competitive edge for retailers.
- To impart the knowledge on the procurement and vendor management for regular supply of goods.
- To study the import of retail business and its functions. Students are able to come out with competitive knowledge about retail business.
- Students will able to demonstrate the retail functions and role of logistics retail management

Syllabus:	Hou
	rs
Module No. 1:Retail Management	12

Introduction of Retail Management-History of Retail Management, The importance and development of retail strategy-Retailing in India-Traditional retail formats Vs Modern retail formats in India, Vertical Marketing system in Indian Retailing, Business-Importance of customer segments-value chain-types or retail chain business-comparative.

Module No. 2: Retail Event & Human Resources Management 14

Innovative and functional product-Retail Market segments, Growth options & organic option/Franchising/global growth opportunities, Human resources planning recruitment/selection/training and development of employees, Managing demand capacity and service assets. Display Management/Crowd Management consumer behaviour, Sales promotion and salesmanship.

Module No. 3: Retail Supply Chain Process Improvement 14

Improvement approaches: PDCA, DMAIC, CPER – Supply Chain Collaboration – Core Competency-Demand driven, Supply Chain: Tools and Techniques – Product Tracking: Bar coding, RFID

Module No. 4: Finance and Retail Supply Chain 14

Root causes for cost – retail returns-opportunities in retail returns- 4 Pl Value – GSI System of world-wide supply -chain standards system

Module No. 5: 08

Skill Developments Activities:

- 1. Make a Report on scanning and reporting, identify various components
- 2. Describe any 2 case-study of any Retail.
- 3. Role-play to understand managers, employees and customers.

- 1. Retail Sector in India T. Kenary
- 2. Nextstep Institute of Logistics and Aviation Guide -Paniraj Murthy & Shobha K.V
- 3. Retail Strategy Management R T U

Course Code: B.Com (LSCM) 4.4 Open Elective Course (OEC)

Name of the Course: Cold Chain Logistics

Course Credits	No. of Hours per week	Total No. of Teaching Hours
3 Credits	3 Hrs	42 Hrs

Pedagogy: Classroom lecture, Tutorials, Group discussion, Seminar, Case studies, Fieldwork etc.,

Course Outcomes: On successful completion of the course, the Students will be able to

- Understand the Cold Chain Logistics Business, Method and Process of Cold Chain Logistics.
- Customer behavior with respect to Cold Chain Logistics

Syllabus

Module No. 1: Cold Chain Business (16 Hrs)

Introduction, Cold Chain Business, Cold Chain business in Global and India, New Trends in Cold chain Logistics, Market Statistics, Customers Behaviour in Cold Chain Business, History Cold storage, Efficient Cold storage management, Cold Chain Equipment, Electrical and non-electrical and solar equipment, Equipment's and types of vehicles used for Transportation.

Module No. 2:. Importance of Cold Chain Business (14 Hrs)

Changing nature of Cold Chain Business, Future of Cold Chain Business Cold Chain Components Reefer Technology, Methods of temperature control units, Role of Warehouse in Cold chain Business, Cold Chain systems, Do's and Don'ts in Cold chain Business, Temperature monitoring system, real time, temperature monitoring mapping, distribution system, cold chain distribution management.

Module No. 3: Operation methods of last mail connectivity (12 Hrs)

Cold Chain warehousing functions. Role of MIS Information Technology in Cold chain management New trends in Cold Chain Logistics Business.

Module No. 4 Cold chain Equipment & Temperature Monitoring System. (8Hrs)

Introduction,- Type of Equipment used in Cold chain Management – Electrical and Non Electrical equipment, solar cold chain equipment, equipment & Types of Vehicle used for transportation, Measuring and recording of Temperature, Technologies related cold chain Management system.

Skill Developments Activities:

- Visit the Cold chain warehouse and understand the procedure.
- Make a study report of the Temperature monitoring system.

- Cold storage, Cold Chain & Warehouse by NPCS
- Nextstep Institute of Logistics & Aviation Guide Paniraj Murthy & Shobha K V
- Hand Book for Vaccine & Cold Chain Handlers MHRD

Note: Latest edition of textbooks and reference Books may be used