

# APPRENTICESHIP-BASED UG DEGREE PROGRAMME IN LOGISTICS

COLLABORATIVE PROGRAMME OF LSC



**REGULATION & CURRICULUM**

VERSION 2021-22

**NATIONAL SKILL QUALIFICATION FRAMEWORK LEVEL:5**

**APPRENTICESHIP-BASED UG DEGREE PROGRAMME  
IN LOGISTICS**

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**REGULATION & CURRICULUM**

**VERSION 2021-22**

***NATIONAL SKILL QUALIFICATION FRAMEWORK LEVEL:5***

## LANGUAGE I

Semester  
I

Course Type  
General

Code  
L21C01

Hours  
45

Credits  
3

Version  
2021-22

### Learning Outcome:

- To develop the skill of articulation for communication.
- To identify, observe and understand appropriate forms of communication.
- To demonstrate the ability to engage in group communication.
- To develop employability skills.

### Learning Objectives:

- To identify and evaluate the key aspects of grammar.
- To understand and engage in various forms of oral communication.
- To improve writing skills.
- To improve reading skills and gain exposure to different types of text.
- To develop interpersonal and group communication skills.

Unit	Topics
I	<b>Module 1: Language</b> Key aspects of language, Sentence: Syntax and Parts, Articles, Linking Words, Modal Verbs, Tense
II	<b>Module 2: Theory of Communication</b> Organizational Communication (Added) Age of Globalization and the Need for Communicating in English. Communication : Concept & process Models of Communication - Shannon Weaver, Modes of Communication, Oral & Written Communication Types of Communication : Verbal & Non Verbal, Non-Verbal-Personal Appearance, Gestures, Postures, Facial Expression, Eye Contacts, Body Language (Kinesics), Silence & Proxemics.
III	<b>Module 3: Speaking</b> Interpersonal & Group Communication: Meaning, importance & usage. Group Dynamics in Group Communication (Added) Techniques used to enhance communication.
IV	One on one communication, Correct Pronunciation (Added), Word and Sentence Stress (Added), Story-telling, (Narrating a short incident- focusing on articulation, fluency and connectivity)
V	<b>Module 4: Written Communication</b> Written Communication : Importance, 7Cs of Written Communication, Précis Writing, Data Interpretation Letter Writing - Personal Correspondence Letters, Invitation Letters, Request Letters & Letters of Gratitude (Thank you letters), Paragraph Writing (Importance of topic sentences)
VI	<b>Module 5: Reading</b> Importance of Reading, Methods of Reading - Skimming & Scanning, Speed Reading- Importance & Techniques. Reading to enhance vocabulary: Articles on relevant topics.
	<b>Module 6: Practicals</b> Individual Presentation, Group Presentations, Role Play with a Social Message, Book Review.

### Text & Reference Books (Language I & II)

- Courtland L. Bovee, John V. Thill, Abha Chaterjee 'Business Communication Today', 10th Edition, Pearson Publication
- Krishna Mohan & Meenakshi Raman, 'Advanced Communicative English' Tata McGraw Hill Education Private Limited, New Delhi.
- Er. A.K.Jain, Dr. Pravin S.R.Bhatia & Dr. A.M. Sheikh, 'Professional Communication Skills', S.Chand Publishing, New Delhi.
- Benjamin, James (1993), 'Business and Professional Communication
- Dr. R.K. Gupta, 'Personality Development & Presentation', Ritu Publication, Mumbai.
- S. Chand, 'Professional Communication Skills', S. Chand Publication, New Delhi.
- R.C. Bhatia 'Business Communication'
- R.K.Madhukar 'Business Communication'

## ENVIRONMENTAL STUDIES

Semester  
ICourse Type  
GeneralCode  
L21C02Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

- It is concerned with the exploration, investigation and development of an understanding of the natural, human and social dimensions of local and wider environments.
- It provides opportunities to engage in active learning, to use a wide range of skills, and to acquire open, critical and responsible attitudes.

**LEARNING OUTCOMES:**

- Master core concepts and methods from economic, political, and social analysis as they pertain to the design and evaluation of environmental policies and institutions.
- Appreciate the ethical, cross-cultural, and historical context of environmental issues and the links between human and natural systems.
- Understand the transnational character of environmental problems and ways of addressing them, including interactions across local to global scales.

Unit	Topics
I	<p>Ecology</p> <p>Ecosystem – Introduction- Abiotic and Biotic components. Structure and functions of Ecosystem – Food Chain, Food web, Ecological pyramids, Energy flow and biogeochemical cycles. Biodiversity – Values, Type and levels of Biodiversity. Causes of depletion. Conservation of biodiversity</p>
II	<p>Pollution</p> <p>Water Pollution - Sources of water, water quality standards, type of pollutants - its sources and effects. Air Pollution</p> <p>- composition of atmosphere, Air quality standards, Sources and adverse effects of air pollution, Greenhouse effect, global warming, acid rain, ozone depletion, Noise Pollution - Introduction, Level of noise, Sources and adverse effects of noise, Control of noise pollution.</p>
III	<p>Solid Waste Management</p> <p>Municipal waste – Introduction, classification of solid waste, composition and characteristics of solid waste, collection conveyance and disposal of solid waste, recovery of resources. Sanitary land filling, Vermi composting, incineration. Biomedical waste – Generation, collection and disposal.</p>
IV	<p>Non-Conventional energy sources</p> <p>Introduction, renewable sources of energy: solar energy, wind energy, Energy from ocean, energy from biomass, geothermal energy and nuclear energy. Potential of renewable energy resources in India.</p>
V	<p>Social Issues and EIA</p> <p>Sustainable Development-Rainwater harvesting. Public awareness and environmental education. Environmental Legislations in India – Environmental Protection act-1986, Air (Prevention and control of Pollution) act, water (Prevention and control of Pollution) act, wildlife protection act, Forest conservation act.</p>

**Text & Reference Books:**

1. Agarwal Shikha, Suresh Sahu, Environmental Engineering and Disaster Management, Dhanpat Rai & Co., 2010
2. Brunner R.C., Hazardous Waste Incineration, McGraw Hill Inc. 1989. Textbooks & Suggested Readings:
3. Clark R.S., Marine Pollution, Clarendon Press Oxford (TB)
4. Cunningham, W.P, Cooper, T.H. Gorhani, E & Hepworth, M.T., Environmental Encyclopaedia, Jaico Publishing House, Mumbai, 2001.

## FUNDAMENTALS OF LOGISTICS

Semester  
ICourse Type  
DomainCode  
L21C03Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

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

**LEARNING OUTCOMES:**

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

Unit	Topics
I	Introduction to Logistics: History of Logistics Need for logistics- Cost and Productivity, cost saving & Productivity improvement. Logistics Cost, reduction in logistics cost, benefits of efficient Logistics, Principles of Logistics, Technology & Logistics -Informatics, Logistics optimization. Listing of Sub-sectors of Logistics
II	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
III	Global Logistics - Global Supply Chain - Organizing for Global Logistics-Strategic Issues in Global Logistics - Forces driving Globalization - Modes of Transportation in Global Logistics Barriers to Global Logistics - Markets and Competition - Financial Issues in Logistics Performance - Integrated Logistics - Need for Integration - Activity Centres in Integrated Logistics. Role of 3PL&4PL.
IV	a) Warehouse: Warehouse-Meaning, Types of Warehouses Benefits of Warehousing. b) Transportation- Meaning; Types of Transportations, efficient transportation system and Benefits of efficient transportation systems. c) Courier/Express - Courier/Express-Meaning, Categorization of Shipments, Courier Guidelines, Pricing in Courier - Express Sector for international and domestic shipping. d) E-Commerce - Meaning, Brief on Fulfillment Centers, Reverse logistics in e-commerce sector, Marketing in e-commerce and future trends in e-commerce.
V	a) EXIM: Brief on EXIM/FF & CC, Multi-modal transportation, brief on customs clearance, bulk load handling and brief on trans-shipment. b) Supply chain. c) Cold chain. d) Liquid Logistics. e) Rail Logistics.

**Text & Reference Books:**

1. Course Material Prepared by LSC
2. Fundamentals of Logistics Management (The Irwin/Mcgraw-Hill Series in Marketing), Douglas Lambert, James R Stock, Lisa M. Ellram, McGraw-hill/Irwin, First Edition, 1998.
3. Vinod V. Sople (2009) Logistic Management (2nd Edn.) Pearson Limited.
4. Logistics Management for International Business: Text and Cases, Sudalaimuthu & Anthony Raj, PHI Learning, First Edition, 2009.
5. Fundamentals of Logistics Management, David Grant, Douglas M. Lambert, James R.Stock, Lisa M. Ellram, McGraw Hill Higher Education, 1997.
6. Logistics Management, Ismail Reji, Excel Book, First Edition, 2008.

## PRINCIPLES OF MANAGEMENT

Semester  
ICourse Type  
GeneralCode  
L21C04Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

- To develop competencies and knowledge of students to become effective professionals
- To orient students on recent changes and development in the field of management
- To help Students to understand basic Principles and concepts of Management

**LEARNING OUTCOMES:**

- To apply the knowledge about management in the real-life business situation
- To enhance their managerial ability and professional skills

Unit	Topics
I	Management: Nature, Definition, Characteristics and Scope of Management - Management as a Science or Art or Profession- Contemporary Issues and - Levels of Management-Skills of a manager- Roles of a manager-Manger Vs Entrepreneur-Challenges in Management of 21st Century
II	Planning: The Process of Planning, Objectives, Policy and Procedures, Forecasting and Decision Making-Strategic Planning – meaning and process MBO – meaning, process and requirements for implementation;
III	Organisation Design and Structure  Organisation – Meaning; Process; Principles; Organisation structure – Determinants and forms: Line and staff, project, matrix and committees; Formal and Informal Organisation; Departmentation –Span of Control – Authority, Responsibility and Accountability; Delegation –Process; Principles; Centralisation and Decentralisation –Degree of decentralisation-Delegation and decentralisation
IV	Staffing and Directing:  Staffing - Manpower Planning-Recruitment and Selection - Training and Development- Performance Appraisal  Directing-Principles-Theory X & Y- Motivation and Behaviour- Theories of Motivation- Maslow's theory and Herzberg theory, Leadership: Styles and Theories
V	Controlling & Decision making  Ethics in the contemporary management and corporate social responsibility; Macro and Micro environmental factors of business-Controllable and uncontrollable factors, SWOT analysis and 7s model of analysis- Decision Making –Types of decisions; Process; Significance; Limitations; –Models-Programmed and non-programmed decisions

**Text & Reference Books:**

1. L M Prasad, Principles and Practices of Management, Himalaya Publishing House
2. Rao, P.S. Principles of Management, Himalaya Publishing House.
3. Rao, V.S.P. & Krishna, V. H. Management: Text and Cases, Excel Books
4. Sharma, R.K & Gupta, S.K. Business Management (3rd edition), New Delhi: Kalyani Publishers.

## BUSINESS STATISTICS

Semester  
ICourse Type  
GeneralCode  
L21C05Hours  
60Credits  
4Version  
2021-22**COURSE OBJECTIVES:**

- This course aims at aiding the students in reaching a level of increased competence in business statistics and expands understanding of the applications of statistical concepts in business.
- Emphasis is placed upon learning statistical concepts through common business problems.

**LEARNING OUTCOMES:**

- Gain conceptual and working knowledge of Business Statistics and use it in the applications of business.
- Learn the methods of solving problems on basic concepts and analytical business statistical model.
- Enable the student to use introductory level of Transportation and queuing theory.

Unit	Topics
I	<p>Data collection and Measures of Central Tendency :</p> <p>Collection and Presentation of Data - Statistical data – Primary and Secondary; Methods of collection of Primary data; Presentation of Data – Textual, Tabular and Diagrammatic form (Line chart, Bar chart, Pie chart, Histogram, Frequency polygon and Ogive); Frequency distribution.</p> <p>Measures of Central Tendency – Mean (A.M., G.M., H.M.), Median, Mode – different properties; Partition values – Quartiles, Deciles, Percentiles; Partition values from Ogives.</p> <p>Measures of Dispersion – Range, Q.D., M.D., S.D. – their coefficients; Comparing consistency; Different properties.</p> <p>Moments, Skewness and Kurtosis – Moments about an arbitrary number; Central Moments; Relation between central and non-central moments up to 4th order 2 3 and – coefficients.</p>
II	<p>Correlation Analysis: Methods of Studying Correlation for Grouped and Ungrouped Frequency Distribution.</p> <p>Regression Analysis: Equation of Regression Lines for Grouped and Ungrouped Frequency Distribution, Standard Error Estimate.</p>
III	<p>Index Number – Construction, Price and Quantity index numbers, Laspeyres', Paasche's, Edgeworth-Marshall's, Fisher's method, Relative methods, Tests of index number formulae: Time and Factor reversal tests, General index number, Chain base index number, Cost of living index number (CLI), Uses of CLI and its applications, Uses and limitations of index numbers</p> <p>Analysis of Time Series - Components of a time series, Adjustment in time series, Measurement of trend by moving average and least squares methods (linear and quadratic trends), Measurement of seasonal variation by simple average method, Forecasting, De-seasonalisation.</p>
IV	<p>Transportation and Assignment Problems Nature and scope of transportation and allocation models, different methods for finding initial solution - N-W Corner Rule, Least Cost Method and VAM. Unbalanced TP, Test for optimality – MODI method, AP a variant of Transportation model, Hungarian method, Restricted Assignment problems.</p> <p>Queuing Theory – Models – Simple Problem – Introduction to simulation</p>
V	<p>Probability and Sampling: Probability theory – concept and approaches; Probability rules – addition and multiplication theorem, Binomial, Poisson and Normal Distribution and their applications. Sampling – Purpose and Methods of Sampling, Merits and limitations of Sampling.</p>

**Text & Reference Books:**

1. Gupta and Gupta, Business Statistics. (Sultan Chand & Sons: New Delhi).
2. Chandan, J. Statistics for Business Economics. (Vikas: New Delhi)
3. Sharma, Shenoy and Srivastava, Quantitative Analysis for Managerial Decision Making,



## MATERIALS MANAGEMENT

Semester  
ICourse Type  
DomainCode  
L21C06Hours  
60Credits  
4Version  
2021-22**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
- To develop competencies and knowledge of students to become effective professionals

**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	Topics
I	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.
II	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
III	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.
IV	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.
V	Stores - Functions- Stores layout -documentation- Materials handling and storage systems, - Principles of Materials Handling system – Safety issues

**Text & Reference Books:**

1. Course Material Prepared by LSC
2. Materials management: procedures, text and cases - A.K. Datta
3. Materials management: An integrated approach - P. Gopalakrishnan
4. Introduction to Materials management - J.R. Tony Arnold & Stephen N. Chapman
5. Purchasing and Materials Management - K S Menon
6. Handbook of Materials Management – Gopalakrishnan



## WAREHOUSING & DISTRIBUTION OPERATIONS

Semester  
ICourse Type  
DomainCode  
L21C07Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

- To develop competencies and knowledge of students to become Warehouse professionals
- To help Students to understand Warehousing and distribution centre operations
- To orient students about contemporary practices followed in Warehousing & Logistics

**LEARNING OUTCOMES:**

- To apply the Basic knowledge of Warehousing and distribution centre operations in the real-life situation
- To enhance their ability and professional skills
- To Understand the contemporary Practices in the Industry

Unit	Topics
I	Introduction to Warehouse– Significance of Warehouses - Types of Warehouses - Broad functions in a warehouse - warehouse layouts - equipment requirement in ware house. Strategic Aspects of Warehousing.
II	Receiving of Goods – Advanced shipment notice (ASN)- Goods Receipt Note(GRN) -Stages involved receipt of goods- Visual inspection of goods unloaded - Formats for recording of goods unloaded from carriers-Procedure for Arranging of goods on dock -Put away of Goods- Put away list and its need - storage location codes and its application.
III	Procedure to Prepare Warehouse dispatches -Procedure to develop Packing list/ Dispatch note- Packing- Importance of proper packing-Packing materials -Packing machines -Reading labels- quality parameters in packing-Significance of Quality parameters in packing- Cross docking method - Situations suited for application of cross docking
IV	Distribution – Definition – Significance of Physical Distribution(Need & Importance)– Channels of distribution -Factors affecting distribution. -Study on emerging trends in warehousing sector.
V	Warehouse Safety Rules and Procedures: The safety rules and 'Procedures to be observed in a Warehouse - Hazardous cargo – Procedure for Identification of Hazardous Cargo - Instructions to handle hazardous cargo . - safety data sheet - Health, Safety & Environment - safety Equipment's and their uses - 5S Concept on shop floor.

**Text & Reference Books:**

1. Course Material Prepared by LSC
2. Definitive Guide to Warehousing, The: Managing the Storage and Handling of Materials and Products in the Supply Chain (Council of Supply Chain Management Professionals) 1st Edition
3. Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse- III Edition-Gwynne Richards

## LANGUAGE II

Semester  
II

Course Type  
General

Code  
L21C08

Hours  
45

Credits  
3

Version  
2021-22

### Learning Outcome:

- To learn to make communication effective.
- To identify, observe and understand appropriate forms of communication.
- To demonstrate the ability to engage in group communication.
- To engage in communication with an audience.
- To develop communication skills for employability.

### Learning Objectives:

- To develop an understanding of grammar used in oral and written communication.
- To sensitize the learners to norms of etiquettes and develop professional communication skills
- To understand and engage in various forms of oral communication.
- To develop the ability to synthesize and draft written communication.(to be worded better)
- To enhance the skill of communicating appropriately in a written form.

Unit	Topics
<b>I</b>	<b>Module 1: Language</b> Direct & Indirect Speech, Active & Passive Voice, Degrees of Comparison, Conditionals, Use of important figures of speech in language: Simile, Metaphor, Personification, Onomatopoeia & Hyperbole
<b>II</b>	<b>Module 2: Communication at Workplace</b> Organizational Communication (Added) Levels of Communication in an Organization: Vertical, Horizontal & Diagonal Ways of communicating in different situations: Reflecting the mood in communication, Terminologies used in the Logistics industry. Basic Etiquettes: Phone Etiquettes, Cubicle Etiquettes, Email Etiquettes, Meal Etiquettes
<b>III</b>	<b>Module 3: Speaking</b> Barriers in Communication, Ice Breakers, Public Speaking, Interviews, Extempore, Analyzing great speeches, (Elements that make it great)
<b>IV</b>	<b>Module 4: Written Communication</b> Statement of Purpose, Questionnaire/ Interviews, Note Making, Business Proposal, Essay Writing: Argumentative (300 words), Emphasis on structure and form - pattern of IELTS) Usage of Punctuations
<b>V</b>	<b>Module 5: Reading</b> Unseen Comprehension & Note Making, Idioms, Proverbs, Abbreviations, Homonyms
<b>VI</b>	<b>Module 6: Practicals</b> Introducing Oneself, Debate, Speech on Current Affairs, Conducting an interview with an industry professional (documenting the interview with a report and a vlog)

### Text & Reference Books (Language I & II)

- Courtland L. Bovee, John V. Thill, Abha Chatterjee 'Business Communication Today', 10th Edition, Pearson Publication
- Krishna Mohan & Meenakshi Raman, 'Advanced Communicative English' Tata McGraw Hill Education Private Limited, New Delhi.
- Er. A.K.Jain, Dr. Pravin S.R.Bhatia & Dr. A.M. Sheikh, 'Professional Communication Skills', S.Chand Publishing, New Delhi.
- Benjamin, James (1993), 'Business and Professional Communication
- Dr. R.K. Gupta, 'Personality Development & Presentation', Ritu Publication, Mumbai.
- S. Chand, 'Professional Communication Skills', S. Chand Publication, New Delhi.
- R.C. Bhatia 'Business Communication'
- R.K.Madhukar 'Business Communication'

## BUSINESS COMMUNICATION

Semester  
II

Course Type  
General

Code  
L21C09

Hours  
45

Credits  
3

Version  
2021-22

### COURSE OBJECTIVES:

- To develop written and verbal communication skills for effective business communication.
- To identify various communication skills involved in the business organization.
- To develop business communication skills among the students.
- To improve language skills – reading, writing and listening

### LEARNING OUTCOMES:

- Expose learners to variety of texts to interact with them
- Capability to increase learners to visualize texts and its reading formulas
- Develop critical thinking.
- Develop a more humane and service-oriented approach to all forms of life around them.
- Improvement in their communication skills for larger academic purposes and vocational purposes
- Critical participants in their everyday business life

Unit	Topics
I	Introduction to Business Communication-Characteristics of Effective Organizational Communication- Basic Forms of Communication-Process of Communication- Principles of Effective Business Communication-7 C's.
II	Academic Vocabulary and English for Business-Creative Writing Critical Thinking: Introduction to critical thinking – Benefits - Barriers – Reasoning —Arguments - Deductive and inductive arguments – Fallacies - Inferential comprehension Critical thinking in academic writing - Clarity - Accuracy – Precision – Relevance.
III	1. Business letters – layout of Business letters - types - Business enquiries and replies – offers – quotations – orders – complaints and adjustments – collection letters – circular letters – status enquiries. 2. Email Writing-The Process of Writing E Mails, breaking it Down – The PAIBO Technique, Structuring an E-Mail – The 3 T's – Introduction, Body and Conclusion, Effective Subject lines, Salutation and Signing off-Teleconferencing, video conferencing
IV	1. Communication in Business Environment: Business Meetings, Notice, Agenda, Minutes - Press Releases - Corporate Communication: Internal and External, Group Discussion, Seminars, Presentations. - Reporting of Proceedings of a meeting. Office Memorandum, Office Orders, Press Release 2. Listening: Active listening – Barriers to listening – Listening and note taking – Listening to announcements – Listening to news on the radio and television.
V	1. Reports and Presentations -Business reports and Proposals, Format, visual aids and contents, Oral Business presentations. 2. Job Application and Resume Writing

### Text & Reference Books:

1. R.C. Bhatia. Business Communication.
2. R.K. Madhukar. Business Communication.
3. Shraf Ravi. Effective Technical Communication.
4. Marilyn Anderson, Pramod K Nayar and Madhu Chandra Sen. Critical Thinking,
5. Lesikar R.V & Flatley M V, Basic Communication Skills for empowering the internet generation, Tata-McGraw Hill, 2009. 2.
6. Sharma R C & Mohan K, Business Correspondence & Report Writing, TMH, 2009.

**FREIGHT FORWARDING (OCEAN & AIR CARGO)**Semester  
IICourse Type  
DomainCode  
L21C10Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

- To develop competencies and knowledge of students to become freight forwarding professionals
- To develop competencies on documentation procedures
- To help Students to understand freight forwarding.

**LEARNING OUTCOMES:**

- Students will be able to apply the Basic knowledge of freight forwarding including ocean and air cargo in the real-life situation
- Students will be able to demonstrate their skill on documentation in their profession.
- This subject will enable them to enhance their ability and professional skills

Unit	Topics
I	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.
II	Multimodal transportation - Vendor management - bulk load handling - brief on transshipment - DG handling - customer acquisition and management - Customs clearance procedure - Documents and its importance - Stages of Documentations process and procedures - - DO's and DON'T's while handling different documents during Custom Clearance
III	Operation Procedures of Freight Forwarding - The procedures for Pre-Operating Checks and Operational checks to be performed for every shipment /consignment - List of basic handling of errors and the Operational errors that occur in common - Procedure for checking of shipping bill, Airway bill based on invoice and packing list received from department for Freight Forwarding.
IV	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 - Packaging requirement for the cargo during shipment from the shipper - Inspection procedure for the cargo while unloading - DO's and DON'T's while handling different cargo.
V	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 - Letters of Credit and payment Terms. Etc. - computer and its application in internal systems of documentation.

**Text & Reference Books:**

1. Course Material Prepared by LSC
2. J P Saxena, Warehouse Management and Inventory Control- Vikas Publication House Pvt Ltd, First Edition, 2003.
3. Warehouse Management: Automation and Organisation of Warehouse and Order Picking Systems [With CDROM], Michael Ten Hompel, Thorsten Schmidt, Springer verlag, First Edition, 2006.
4. Management Guide to Efficient Money Saving Warehousing, Stephen Frey, Gower, 1982.
5. Swapna Pillai, Export Import Procedures & Documentation, Sahitya Bhawan Publication, 2020.

**FORECASTING AND INVENTORY MANAGEMENT**Semester  
IICourse Type  
DomainCode  
L21C11Hours  
60Credits  
4Version  
2021-22**COURSE OBJECTIVES:**

- To develop competencies and knowledge of 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	Topics
I	Forecasting: Meaning –Need -Types of forecasts –Demand Forecasting- Types of Demand Forecasting- -Importance - Demand planning v/s Forecasting-Sources of demand-Supply chain dynamics
II	Sales and Operations Planning- Goals and objectives of S&OP -Collaborative Planning-Types -Collaborative planning, forecasting and replenishment- Cyclic decomposition techniques. Short- term forecasting techniques- Technology Forecasting and Methodologies: Role of Technology Information Forecasting and Assessment Council (TIFAC).
III	Inventory: Purpose of Inventory- -Types of Goods -General Management of Inventory- Multi-Echelon Inventory Systems -Use of Computers in Inventory Management- Evaluation of Performance of Materials Function–Latest trends in Inventory Management
IV	Codification – Classification – Methodology–Requirement of codes – Coding Structure and Design –Advantages - International Codification – Right Quantity – Economic Ordering Quantity -Costs associated with Inventories- Models in logistics
V	Influence of production policy on inventory levels – inventories and customer service level – steps to improve inventory management – optimum inventory –Inventory management uncertainty (fixed order quantity model) - Calculation of safety stocks

**Text & Reference Books:**

1. Course Material Prepared by LSC
2. Sunil Chopra and Peter Meindl, Supply Chain Management Pearson Education Asia, 3rd edition, 2007
3. Chaman L Jain, "Fundamentals of Demand Planning & Forecasting", Graceway Publishing Company 3rd edition.
4. Operations Research – Concepts, Problems & Solutions- Kapoor V.K.-Sultan Chand & Sons/2017- 978-81-8054-854-3 (TC-532)
5. Vijay Kumar Khurana, 2007, Management of Technology and Innovation, Ane books India, Chennai Further Reading Source 5. Simchi-Levi, David, "Designing and Managing Supply Chain", Tata McGraw Hill, 3rd Edition, 2007. 6. David E Mulcahy, "Warehouse Distribution and Operations Handbook, McGraw Hill,6thEdition, 1993.

## SURFACE TRANSPORTATION

Semester  
IICourse Type  
DomainCode  
L21C12Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

- To help Students to understand basics of surface transportation including road and rail transport
- To develop competencies and knowledge of students to become transportation professionals

**LEARNING OUTCOMES:**

- Students will be able to apply the knowledge of surface transportation in the real-life situation
- Enhancement of professional skills with regard to the field.

Unit	Topics
I	Introduction to surface transportation -Need - functions of transportations in logistics -Types of transportations metrics -various land transport carriers and their Load capacities - types of temperature-controlled carriers- inter modal transport -verification of carriers and drivers -transit rules
II	Transportation Optimisation -Documentation for transportation – GST – E Waybill Filing - Importance of consignment number -Transportation Telematics -Vehicle tracking system - GPS systems  -Procedure for downloading and reading tracking data from devices -Probable reasons for delay or any issues during transit -Solutions - re-routing
III	Organisation structure in a Transport organization- Incident management systems & Processes - hazmat goods rules -Importance of safety data sheet and labels -Procedure for Consolidation of consignments for optimal loads -Reporting discrepancies such as pilferages, loss or damage of goods in transit -Checking insurance and claims -steps to close deliveries.
IV	Benefits of efficient transportation systems-emerging trends in transportation sector-pricing in transportation sector-govt regulations on transportation in India. Safety procedures during transit and emergency response steps - List of good practices in driving.
V	Customer Management-Vendor coordination for return truck loads-DG Handling – features and facilities offered by railways – innovative schemes-facilities to popularize rail logistics in India

**Text & Reference Books:**

1. Course Material Prepared by LSC
2. J P Saxena, Warehouse Management and Inventory Control-Vikas Publication House Pvt Ltd, First Edition, 2003.
3. A Practical Guide to Logistics: An Introduction to Transport, Warehousing, Trade and Distribution -Jerry Rudd-Kogan Page publications
4. Management Guide to Efficient Money Saving Warehousing, Stephen Frey, Gower, 1982.
5. Kapoor Satish K., and KansalPurva, 'Basics of Distribution Management: A Logistical Approach', Prentice HALL of India

**HUMAN RESOURCES MANAGEMENT**Semester  
IICourse Type  
GeneralCode  
L21C13Hours  
45Credits  
3Version  
2021-22**COURSE OBJECTIVES:**

- To develop competencies and knowledge of students to become Human resource management professionals
- To enable the students to know on Contemporary practices in HRM
- To orient students on Human resource management in the field of Logistics

**LEARNING OUTCOMES:**

- Will be able to apply the basic knowledge of Human resource management in the real life situation
- Will get to know about the contemporary practices of the Industry
- It will enable them to enhance their ability and professional skills with regard to Logistics Industry

Unit	Topics
I	Introduction to HRM -Functions - of HR Manager-Qualities for a HR Professional-Roles & Responsibilities of HR Professionals. Human Resource Planning-Objectives -HR Planning Levels-Process
II	Job Analysis - Introduction-Uses -Methods of collecting Job Analysis Data-Job Description and specification. Job Design-Meaning-Methods. Recruitment and Selection-Meaning-Objectives of Recruitment- Sources of Recruitment-Selection- Steps & Procedure in selection.
III	Employee Training and Development-Meaning-Steps in Training Process -Training Methods -Areas of Training-Training Evaluation Performance Appraisal-Meaning-Uses- Performance Appraisal Process-Performance Appraisal Methods-Pitfalls.
IV	Compensation and Benefits- Meaning- Objectives of Compensation and Employee Benefits Job Evaluation-Meaning- Process of Job Evaluation-Techniques of Job Evaluation -Types of Incentive Plans. Career Planning & Career Development-Meaning-Need for Career Planning & Career Development
V	Occupational Safety and Health-Causes of Safety and Health problems at the work Place- Provisions to prevent Accidents in the work place. Stress and Consequences on Employee Performance. Grievance Handling- Causes of Grievance-Effective Grievance Redressal and - Grievance Redressal Procedures. Disciplinary Action- Objectives - Forms -Disciplinary Procedure-Types of Disciplinary Actions.

**Text & Reference Books:**

1. Gupta, S. K. (2011). Human Resource Management. First Edition, Kalyani Publishers, New Delhi,
2. Prasad, L. M. (2014). Human Resource Management. Third Edition, Sultan Chand & Sons, New Delhi,
3. Rao, P. S. (2019). Personnel and Human Resource Management. Fifth Edition, Himalaya Publishing House, New Delhi, India.
4. Tripathi, P. C. (2013). Human Resource Development. Fourth Edition, Sultan Chand & Sons, New Delhi,



## MANAGEMENT AND COST ACCOUNTING

Semester  
IICourse Type  
GeneralCode  
L21C14Hours  
60Credits  
4Version  
2021-22**COURSE OBJECTIVES:**

- To develop competencies and knowledge of students to become Management and cost accounting professionals
- To orient students in the field of Logistics
- To help Students to understand Management and cost accounting

**LEARNING OUTCOMES:**

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

Unit	Topics
I	Cost Accounting - Concept of Cost Centres - Cost Units - Classification of Cost – Overheads- Simple Cost Sheet – historical and estimated cost sheets. - Tenders and quotations - Contract costing- Activity based costing (ABC). Management Accounting: Meaning and Definition - Nature and Scope  - Objectives of Management Accounting - Importance and Limitations - Management Accounting vs Cost Accounting.
II	Marginal Costing and Break even analysis:  Marginal Costing and Cost-Volume-Profit (CVP) analysis: meaning, concept - assumptions and practical applications of Break-even analysis – decisions regarding sales mix - make or buy - limiting factor - export decision - plant merger - shut down of a product line- Du Pont Analysis.
III	Budgeting and Budgetary control:  Budget and Budgetary Control: Meaning, - establishing a system of Budgetary Control - Preparation of Sales - Production - Cash Budget - Fixed and Flexible budgets, Master budget - Zero based budgeting (ZBB)-Performance budgeting
IV	Analysis of Financial Statements:  Analysis and Interpretation of Financial Statements: Objects-importance-Types of financial analysis  - Comparative statements - Common size statements, Ratio analysis - Preparation of Balance sheet using ratios Fund flow analysis: Fund flow statement-Preparation-Cash flow statement-cash flow analysis - Analysis of income statements of ports/shipping companies.
V	Standard Costing and Variance Analysis:  Standard Costing and Variance Analysis: Meaning of Standard Cost- Relevance of Standard Cost for Variance Analysis – Significance of Variance Analysis – Computation of Standard Costs for Materials, Labour and Overhead Variances- Comparison between Budgeting and Standard Costing – Variance reporting- Responsibility Accounting – Meaning and Objects – types of Responsibility Centres- Management Reporting.

**Text & Reference Books:**

1. MAHESHWARI, S. N., (2013) Cost and Management Accounting. 14th edition
2. JAIN, S. P. & NARANG, K. L. (2014) Cost and Management Accounting. 14th Edition, Kalyani publishers: New Delhi.
3. TULSIAN, P.C. (2000) Practical Costing. Vikas Publications: New Delhi.
4. SAXENA, V.L. & VASHISHT (2014) Advanced Cost & Management Accounting- Problems & Solutions. Prentice Hall of India.
5. MAHESHWARI, S. N. (2014) Principles of Management Accounting. Sultan Chand & Sons.
6. MURTHY & GURUSAMY (2009) Management Accounting. Tata McGraw Hill: New Delhi.
7. REDDY T. S & HARI PRASAD REDDY (2014) Cost & Management Accounting. Margham Publications.



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