



INSTITUTE OF HUMAN RESOURCES DEVELOPMENT

Prajo'e Towers, Vazhuthacaud, Thiruvananthapuram, Kerala, India. Pin695 014
<http://www.ihrd.ac.in>

DIPLOMA IN LOGISTICS AND SUPPLY CHAIN MANAGEMENT

(6 Months)

Scheme & Syllabus

2018

(Effective from January 2018 admission)

[Scheme-2018]



Institute of Human Resources Development
(Established by Govt. of Kerala)

Diploma in Logistics and Supply Chain Management
(Six Months)

Subjects of Study and Scheme of Assessment

(Scheme-2018)

Subject Code	Subject Name	No. of Hrs/Week		Minimum Marks			Maximum Marks		
		T	P	W/P	CE	T	W/P	CE	T
DLSM101	Logistics and Supply chain Management	4	-	30	10	50	75	25	100
DLSM102	Warehouse and Inventory Management	4	-	30	10	50	75	25	100
DLSM103	Business Communication	4	-	30	10	50	75	25	100
DLSM104	Operations Management	4	-	30	10	50	75	25	100
DLSM105	Transportation and Distribution Management	4	-	30	10	50	75	25	100
DLSM106	Sourcing and Procurement	4	-	30	10	50	75	25	100
DLSM107	Mini project	-	6	-	50	50	-	100	100
Total Duration : 490 Hrs in 6 months		24	6	Total marks:			450	250	700

Legend: T – Theory, P- Practical, W/P –Written/Practical, CE- Continuous Evaluation

[Scheme-2018]

DLSM101 Logistics and Supply Chain Management

(Duration: 70 Hours)

Objectives:

1. The aim of this course is to introduce to Logistics and supply chain role in Economy / organizations in terms of effective logistics and supply chain service to the customers.
2. To offer wide knowledge on the fundamentals of logistics and supply chain business
3. The student is expected to understand the overall logistics and supply chain services during this process, he learns to plan / implement / control / cost effectiveness and storage. Thus fulfilling the objectives of Logistics the integration and management of supply chain organizations and through cooperative activities.

Module 1

Supply Chain and Logistics definition – Objectives – Types – Various definitions – Drivers – Need for SCM – SCM as a profession – SCM decisions and skills – Strategy formulation in SCM – Value in Supply Chain – Tradeoffs – CRM Strategy relationship matrix - The Logistics of Business – The Logistical Value Proposition – The Work of Logistics – Logistical Operating Arrangements – Flexible Structure – Supply Chain Synchronization, International Logistics and Supply Chain Management: Meaning and objectives, importance in global economy, Characteristics of global supply chains, Global Supply Chain Integration – Supply Chain Security – International Sourcing – Role of Government in controlling international trade and its impact on Logistics and Supply Chain -Strategic Sourcing – Source evaluation – collaborative perspective – Buyer-Supplier Relationship – Partner Selection – develop of Partnership – importance of inventory – imbalances – uncertainties – inventory costs – inventory turnover ratio

(12hrs)

Module 2

Transportation - Participants in Transportation Decisions-Modes of Transportation-Factors Influencing Transport Economics-Documents in Transport Decision Making Warehousing/Distribution - Functions of Warehouse-Benefits of Warehouse-Service-Warehousing Alternatives-Warehouse Site Selection-Factors while initiating Warehouse Operations-Warehouse Management SystemsPacking and Materials Handling - Functions of Packaging-Communication-Packaging CostTypes of Packaging Material-Unitization-Containerization-Designing a PackageFactors affecting choice of Packaging Materials factors affecting network effectiveness – 3 PL advantages – Indian transport infrastructure – IT solutions – EDI, e-Commerce, e-Procurement – Bar Coding and RFID technology

(15hrs)

Module 3

Global Logistics - Global Supply Chain-Organizing for Global LogisticsStrategic Issues in Global Logistics-Forces driving Globalization-Modes of Transportation in Global Logistics-Barriers to Global Logistics-Markets and Page 5 of 41 Competition- Logistics Strategy - Requirements for an Effective Logistics StrategyStrategic Logistics Planning-Implementation of Strategy Logistics Information Systems - Functions of Logistics Information System(LIS)-LIS Flow-RFID-Principles of Logistics Information

(10 hrs)

Module 4

Organization for Effective Logistics Performance - Centralized and Decentralized Structures-Stages of Functional Aggregation in Organization ,Financial Issues in Logistics Performance - Supply Chain Performance Measures-Steps in ABC Costing-Financial Gap Analysis Integrated Logistics - Need for Integration-Activity Centers in Integrated Logistics Role of 3PL&4PL - Principles of LIS - Supply Chain Management and profitability – quality management – mass customization and globalization – ethical Supply Chains – e-business and SCM – Balanced Score Card – Benchmarking, Performance measurement

(13 hrs)

Text Books:

1. Bowersox, Closs, Cooper, Supply Chain Logistics Management, McGraw Hill.
2. Burt, Dobbler, Starling, World Class Supply Management, TMH.
3. Donald J Bowersox, David J Closs, Logistical Management, TMH
4. Mohanty R.P, S.G Deshmuki "Supply Chain Management" Biztantra, New Delhi

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DLSM102 Warehouse and Inventory Management

(Duration: 70 Hours)

Objective:

1. Warehouse management is an attempt to maintain a systematic and well organized infrastructure and an orderly inventory system. It is also concerned with the adequate supply of goods in the warehouse, while minimizing inventory costs at the same time.
2. To make these management processes more effective, Some recognized warehouse best practices are incorporated in the seminar, for application by the participates.

Module 1:

Warehousing Management - Definition of warehouse and types of goods stored -Types of warehouse storage system - Modern trends in warehousing - Purpose of warehouse management system - Warehouse design and lay outing - Objectives of Stores – Location and Layout – Prevention – Management of Receipts – Issue Control – Stores Documentation. **(10 hrs)**

Module 2:

Inventory management as part of good warehouse - Function of Inventory - Objectives of - Inventory control - Inventory Support system - Control of Inventory System – Supplies classification system ABC system - Operating Environment - Production Planning System - Master Scheduling - Material Requirement Planning (MRP-I) - Enterprise Resource Planning(ERP) - Capacity Planning and Demand Management - Supplies Support system and control of service Inventory -Stock Valuation And Verification - The mission of Logistic Management is to plan and co- ordinate all activities (Inbound, logistics, design,procurement,production,outbound logistics,marketing,research and development) ,necessary to achieve desired levels of delivered service and quality at lowest possible cost.Need for Valuation – Methods of Valuation – FIFO – LIFO – Average Price – Weighted Average – Standard Cost – Replacement Price – Stock Verification – Process of Verification. **(10 hrs)**

Module 3:

Introduction to Inventory Management – Stores Management - Surplus and Obsolescent stocks Buying procedure - Purchasing strategies - Negotiation Skills - Disposal of Obsolete and Scrap items - Management of SOS – Categorization of Obsolete/Surplus – Reasons for Obsolescence – Control of Obsolescence – Control of Scrap – Responsibility for Disposal – Disposal Methods. **(10 hrs)**

Module 4:

Insurance: Risk Management - Buyer's Interest – Marine Insurance – Inland Transit Insurance – Stores Insurance – Contractors All Risk Insurance – Miscellaneous Insurance – A to Z Claims Procedure – Loss Minimization- Spare Parts Management - Salient Features of Spares – Inventory Control of Spares – Categorization of Spares – Provisioning of Spares – Pricing of Spares – Relevance of Maintenance – Maintenance Costs. **(10 hrs)**

Module 5:

Ethics In Materials Management - Importance of Ethics – Business Ethics – Ethics in Buying – Code of Ethics – Problems in Ethics – Backdoor Selling – A to Z Tips for Ethical Buying – Professionalization. **(10 hrs)**

Text Book:

Gopalakrishnan P.– Purchasing and Materials Management – Tata McGraw Hill – 23rd Edition – 2008.

[Scheme-2018]

DLSM103 Business Communication

(Duration :70 Hours)

Objectives:

1. This course is intended to offer a good understanding of nature of Business Communication
2. To understand the methods of communications, technology and terminology used in Business Communication

Module 1

Fundamentals Of Communication, Business Communication – Pre-Course Self Assessment - The Paradox Of Communication – Key To Good Communication Skills

(10 hrs)

Module 2

Communication In Teams – Introduction – Key Areas Of Business Communication – Principles In Use Of Audio – Video In Communication, Non Verbal Communication – Introduction – Categories – Function – Conclusion

(10 hrs)

Module 3

Writing Business Messages – Introduction – Key Ingredient In Composing A Message, Revising Messages – Introduction – Simple Revision - Fog Index – Words That Communicate - Finalizing The Editing Exercise

(10 hrs)

Module 4

Reports & Proposals – Introduction – Developing And Preparing Business Reports – Planning & Researching Reports & Proposals – Developing A Statement Of Purpose – Prepare Work Plan, Developing And Preparing Business Reports – Presenting Format Of A Report – What & How To Conclude

(10 hrs)

Module 5

Developing And Preparing Business Reports – Presenting Format Of A Report – What & How To Conclude , Format, Visual Aids & Contents - Introduction – Using Visual Aid – Process – Design

(10 hrs)

Text Books:

1. Business communication by Urmila R.
2. Business communication Introduction by SM Rai.
3. Business communication – Indian Institute of Logistics communication manual

[Scheme-2018]

DLSM104 Operations Management

(Duration :70 Hours)

Objectives:

1. The objective of this course is to understand systematic approach towards operations in the industry.
2. To understand concepts of costing finance and accountancy.

Module 1

Scope of Operations Management - Operations Planning & Control – Manufacturing Resource Planning (MRP-II) - Scheduling Techniques: Scheduling v/s loading, Scheduling Types – Forward Scheduling & Backward Scheduling, Dispatching Rules –SPT, LPT, DSRO, Critical Ratio, EDD, etc., Sequencing – Johnson's Algorithm, Demand Forecasting, Aggregate Planning - Systems Approach-Historical Development of OM,JIT,TQC &Automation- Operating Decisions Why study OM Concepts of Costing, Finance and Accountancy in OM-Operations Costing Financial Management and Financial Analysis. **(15 hrs)**

Module 2

Job Design-Principles of Job Design-Behavioural Approaches to Job Design-Benefits of Sound Job Design-Process for Job design-Key factors in Job Design Introduction to Work Study-Productivity Evolution and Development- Objectives of Work Study-Method Study-Application of Method Study-Performance Rating. **(8 hrs)**

Module 3

Introduction to Production Planning &Control-Aggregate Production Planning-Documents used in PPC. Demand Forecasting for Production Planning-Forecasting Approaches-Linear Regression Analysis-Time Series Methods-Simple Moving Averages-Weighted Moving Averages-Exponential Smoothing Methods. **(10 hrs)**

Module 4

Aggregate Planning-Three dimensions of Aggregation-Purpose of Aggregate Planning Techniques for Aggregate Planning, Master Production Scheduling-Benefits of Good Scheduling Developing Master Production Schedules **(10 hrs)**

Module 5

Detailed Scheduling Methods for Single Machine & Dispatching-Benefits of Good Scheduling Gantt Chart Line Balancing-Production Line-Steps in Line Balancing Procedure-Production Flow Control. **(7 hrs)**

Text Books:

1. Productions and operations management by Everest E Adam and Ebert.
2. Operations management (theory and problems) –Joseph G monks
3. Productions and operations management by S.N.Chary.
4. Modern production and operations management by E.S .Buffa
5. Production and operations management by Hunawalla and Patil.

[Scheme-2018]

DLSM105 - Transportation and Distribution Management

(Duration: 70 Hours)

Objectives:

1. The main aim of this course is to understand role of distributors – designing various distribution channels – networking the role of transportation
2. Will effectively be able to manage transportations – inventory warehousing – various distribution channels – costs and value measures.

Module 1

Introduction - role of distribution in supply chain – transportation management – warehousing concepts – designing distribution channels – understanding distribution costs Advantages of distribution models – disadvantages of distribution models – prerequisites Of distribution – comparing distribution networks. Transportation management Meaning and Definition -Role of transportation and distribution in Supply chain and logistics management – Importance of an effective transportation system - Characteristics of transportation modes and selection – General criteria for carrier selection – Basics modes of transportation – Transport documentation - Transport economics and pricing –Costing of transportation services. **(10hrs)**

Module 2

Distribution network planning – various factors in distribution - delivery lead time and local facilities – optimization approach and techniques – material management process – role of transportation – transportation principles and participants – contribution of various agencies in transportation. **(8 hrs)**

Module 3

International Air transportation – Types of aircrafts – Air cargo Regulations – Truck and Rail Transportation – Inter model – pipe lines – Packaging objectives – TCL,LCC – Refrigerator – goods – customs duty – Non Traffic barriers – customs cleaning process – International logistics Infrastructure-Transportation Selection – Tradeoff – modes of transportation – models for transportation and distribution. **(7 hrs)**

Module 4

Transportation modes – performance characteristics and selection – various modes of transportation (multimodal) – merits of each all modes of transportation – transportation performance costs and value measures – understanding – comparing – cost components of multimodal transportation. - Transportation routing decisions – transportation administration – transportation operations management – consolidation of freight – cost negotiations – Transportation management strategy – TMS transportation management system – Transportation services – transportation cost consideration – transportation rate profiles - various trends in transportation – application of information technology in transportation – E commerce Intelligent transport management systems. **(15 hrs)**

Module 5

Transit operation software – geographic information systems – advanced fleet management systems – intermodal freight technology – transportation security initiatives And role of technology – various inspection systems. **(10 hrs)**

Text Books:

1. Management of Modern City Transportation System, M Mustafa K KDewan, Deep & Deep
2. Sunil chopra and P Meindl , supply chain management strategy .
3. Transportation Management – Imperatives and Best Practices, S. Jaya Krishna, ICFAI University Press, 2007.
- 4 Marine Transportation Management, Henry S. Marcus, Auburn House Pub. Co.,1986.

[Scheme-2018]

DLSM106 - Sourcing and procurement (Duration: 70 Hours)

Objectives:

The Objective of this course is to gain the knowledge of possibilities of efficient optimization and management of operation in Purchasing and Inventory Management and also the ability to apply them in the enterprise reality to improve the overall efficiency of the firm.

Module 1:

Purchase policy- Rate and Running Contract – Subcontracting- Systems Contract – Stockless purchase –Buying seasonal items – Forward Buying – Hedging – Purchasing Activities – Indent Status – A to Z of Purchase Order – Transportation – Incoming Inspection – Bill settlement –Documentation. **(10 hrs)**

Module 2:

Meaning of Right Price – Price Analysis – Determination of Right Price – Influencing Factors on Pricing – Classification of Pricing – Price Forecasting - Right Place – Purchase Budgets – Budgetary control – Need Identification Problems – Definition of lead time Elements- Cost Reduction and Lead time.

(10 hrs)

Module 3:

Relevance of Good Supplier - Advantages of Good Relations –Prerequisites – Evaluation of Suppliers – The Buyers Role – Role of the Vendor –Relevance of Good Suppliers – Need for vendor evaluation – Goals of Vendor Rating – Advantages of Vendor Rating – Parameters of Vendor Rating.

(10 hrs)

Module 4:

Role of Material Management – Classes of Material – Materials and Profitability – Profit Center Concept – Material Objective –Centralized Purchasing-Decentralizing – Delegation of Powers – Definition of Material Planning –Bill of Material – Material Requirement Planning – Importance of Material Research- Definition – Advantages of Materials Information System.

(10 hrs)

Module 5:

Codification – Classification – Methodology–Requirement of codes – Coding Structure and Design –Advantages - International Codification – Cost and Consequences – Right Quantity – Economic Ordering Quantity – Derivations of EOQ.

(10 hrs)

Text Book:

Gopalakrishnan P.– Purchasing and Materials management – Tata McGraw Hill

[Scheme-2018]

DLSM107 - Mini Project

(Duration: 70 Hours)

Objectives:

The aim of this course is to understand various infrastructure / facilities / operations / costings that are involved in the logistics industry.

Learning Outcomes:

To get in depth knowledge of operation practices in the industry and submit reports on completion of each visit. The following are areas of practical visits conducted:- Ports and terminals / Port operations / Container Freight Stations, Warehouses / Domestic warehouse / Bonded warehouse / Godowns Inland container depots / Empty container plots Toll gates / Air cargo complex

STUDENT ASSESSMENT :

1. The students are to prepare a practical visit report and record of the same to be maintained.
2. The students shall be assessed in any of the attended practical visits.

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[Scheme-2018]

Diploma in Logistics and Supply Chain Management

1. Question Paper Pattern

Duration of Exam. : 3 Hrs.

Maximum Marks : 75

Part - A Short Answer type Questions with answer size up to 1 page per question. 5 Marks each

Part - B Descriptive type Questions with answer size up to 2 to 3 pages per question. 15 marks each.

Marks Distribution :

Part	No. of questions	Need to be answered	Marks/Question	Total
A	5	5	5	25
B	10	5	10	50
Total				75

Remarks:

- Each part should cover questions from each module in the syllabus.
- The level of difficulty shall be as follows
 - Easy Questions : 30% -40%
 - Intermediate level to difficult : 30% -40%
 - Difficult questions : 20% -30%
- The question paper setters must prepare and submit the question papers as per the following guidelines.
 - Question paper must be designed and prepared to fit in an A4 size paper with one inch margin on all four sides.
 - Prepare the Question in MS-Word/Open office-Write document format. Use only "TimesNewRoman" font with size 10. Align text to both left and right margins.
 - Please leave 5 cm. free area at the top of the front page of each question paper to place examination details/Question paper header by the examination department.
 - Avoid placing 1 or 2 questions in the last part in a fresh page, unless it is absolutely necessary. In such case, try to accommodate above questions in the previous page(s) by adjusting top/bottom margins and line spacing, if possible. This will reduce printing expenses.
 - Specify marks for each question/part clearly.
 - Clearly specify the number of questions to be answered for each Part.
 - Confirm that no questions in part B is repeated in Part C also.
 - Avoid repeating questions in Part C from the immediate previous examination.
 - Key for evaluation must be prepared and enclosed in a separate cover and should be submitted along with the question paper set. Key for evaluation must specify evaluation guidelines for each part in the question paper, otherwise the key prepared will be treated as incomplete.
 - Submit Question paper in Laser print out form only. Hand written and printed in poor quality printers is not acceptable.

[Scheme 2018]

Diploma in Logistics and Supply Chain Management

2. Scheme for Continuous Evaluation.

1. For Theory Papers: Weightage

- a). Average of minimum Two test papers : 30%
- b). Average of minimum Two Assignments : 30%
- c). Score for Seminar : 20%
- d). Score for Class Attendance. : 10%
- e). Overall performance in the class. : 10%

2. For Practical Papers: Weightage

- a). Average of minimum Two Lab tests : 30%
- b). Average of minimum Two Lab Assignments : 30%
- c). Maintenance of Lab record : 20%
- d). Score for Lab Attendance. : 10%
- e). Overall performance in the Lab. : 10%

3. Teachers shall submit Mark list for Continuous Evaluation to the Head of Institution in the following format.

Subject:

Sl no.	Regno.	Name	a.Test	b.Assignment	c.Attendance	d.Performance	Total

4. Head of Institution/Co-ordinator shall forward Continuous evaluation marks to the Examination Department in the following format only.

Centre:

Sl no.	Regno.	Name	DLSM101 25	DLSM102 25	DLSM103 25	DLSM104 25	DLSM105 25	DLSM106 25	DLSM107 100

5. Continues evaluation(sessional) marks must be published in the notice board at least one week before the commencement of theory examinations after getting approval from the Head of Institution/Co-ordinator.

Thiruvananthapuram
February 21, 2018

Sd/-
Director