

**An Apprenticeship Embedded Degree Program
(AEDP)**

Course Curriculum

For
**Bachelor of Commerce (B. Com) in
Logistics
(Faculty of Commerce)**

Semester I, II (2025-26)

Semester III, IV (2026-27)

Semester V, VI (2027-28)



**MAHARAJA GANGA SINGH UNIVERSITY
BIKANER, RAJASTHAN**

Programme Outcomes (POs) – B. Com. Logistics

After completion of the programme, graduates will be able to:

1. **Knowledge Application** – Apply fundamental concepts of commerce, management, and logistics to real-world BCL supply chain and logistics operations.
2. **Professional Competence** – Demonstrate skills in logistics domains such as warehousing, transportation, inventory management, freight forwarding, port logistics, and e-commerce.
3. **Critical Thinking & Problem-Solving** – Analyze logistics and supply chain challenges, and design cost-effective, efficient, and sustainable solutions.
4. **Technology Usage** – Use digital tools, MIS, ERP, and logistics software for decision-making, tracking, and performance management.
5. **Communication Skills** – Exhibit effective communication, documentation, and presentation skills essential for logistics and supply chain professions.
6. **Ethics & Values** – Apply constitutional values, professional ethics, and corporate governance practices in logistics and trade operations.
7. **Entrepreneurial Orientation** – Develop entrepreneurial and intrapreneurial skills for creating innovative solutions in logistics and supply chain businesses.
8. **Teamwork & Leadership** – Work effectively in diverse teams and demonstrate leadership abilities in logistics organizations.
9. **Global Perspective** – Understand global logistics, international trade practices, multimodal transportation, and cross-border regulatory frameworks.
10. **Lifelong Learning** – Engage in continuous learning to keep pace with changing logistics technology, government policies, and industry practices.

Programme Specific Outcomes (PSOs)

On successful completion of the programme, students will be able to:

1. **Industry-Ready Logistics Professionals** – Acquire practical skills and on-the-job training through apprenticeship in reputed logistics companies, making them job-ready.
2. **Supply Chain Integration** – Plan, implement, and control efficient logistics operations across procurement, warehousing, distribution, and transportation.
3. **International Trade & Documentation** – Handle export-import documentation, customs clearance, freight forwarding, and global logistics compliance.
4. **Technology-Driven Operations** – Apply MIS, ERP, E-commerce logistics systems, and digital tracking tools for enhancing logistics efficiency.
5. **Sectoral Expertise** – Specialize in Aviation, E-commerce Logistics, or Land Transportation through elective modules, aligning with career interests.
6. **Sustainable Logistics** – Demonstrate awareness of cost reduction, energy efficiency, multimodal integration, and green logistics practices.
7. **Entrepreneurship & Innovation in Logistics** – Design business solutions and start-ups in courier services, warehousing, distribution, and transportation sectors.
8. **Career Progression & Higher Studies** – Pursue higher studies (MBA, M.Com, PG Diplomas in Logistics/Supply Chain) or certifications (e.g., CILT, FIATA, SAP SCM) for career advancement.

Program Structure: Bachelor of Commerce (B. Com) Logistics Program is a three-year course divided into six-semesters. For the award of degree, a student will be required to complete the credits as per the University norms

Semester Wise Course Details

Semester I											
Group	Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks			Total
								Internal	External	Practical	
Compulsory	ENV4.5AECCT11	Environment Studies	AEC	2	0	0	2	0	50	0	50
BCL	BCL4.5DSCT12	Fundamentals of Logistics	DSC	6	0	0	6	30	120	0	150
BCL	BCL4.5DSCT13	Materials Management	DSC	6	0	0	6	30	120	0	150
BCL	BCL4.5DSCT14	Warehousing & Distribution Centre Operations	DSC	6	0	0	6	30	120	0	150
Total							20	Total			500

Semester II											
Group	Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks			Total
								Internal	External	Practical	
Compulsory	ENG4.5AECCT21 HIN4.5AECCT21	General English or Hindi	AEC	2	0	0	2	0	50	0	50
BCL	BCL4.5DSCT22	Freight Forwarding (Ocean & Air Cargo)	DSC	6	0	0	6	30	120	0	150
BCL	BCL4.5DSCT23	Forecasting and Inventory Management	DSC	6	0	0	6	30	120	0	150
BCL	BCL4.5DSCT24	Surface Transportation	DSC	6	0	0	6	30	120	0	150
Total							20	Total			500

Semester III											
Group	Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks			Total
								Internal	External	Practical	
Compulsory	ELE5SDCT31	Elementary Computer	SDC	2	0	0	2	0	50	0	50
BCL	BCL5DSCT32	MIS for Logistics	DSC	6	0	0	6	30	120	0	150
BCL	BCL5DSCT33	Retail Logistics and E- Commerce	DSC	6	0	0	6	30	120	0	150
BCL	BCL5DSCT34	Liner Logistics	DSC	6	0	0	6	30	120	0	150
Total							20	Total			500

Semester IV											
Group	Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks			Total
								Internal	External	Practical	
Compulsory	IKS5VACT41	Indian Knowledge System	VAC	2	0	0	2	50	0	0	50
BCL	BCL5DSCT42	Port Terminal Logistics	DSC	6	0	0	6	30	120	0	150
BCL		Specialization Module – Course I	DSE	6	0	0	6	30	120	0	150
BCL		Specialization Module – Course II	DSE	6	0	0	6	30	120	0	150
Total							20	Total			500

Semester V											
Group	Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks			Total
								Internal	External	Practical	
Compulsory	CS5.5SDCT51	Communication Skills	SDC	2	0	0	2	50	0	0	50
BCL	BCL5.5OJT52	Apprenticeship	OJT	0	2	32	18	90	360	0	450
Total							20	Total			500

Semester VI											
Group	Paper Code	Paper Name	Code	L	T	P	Total Credits	Maximum Marks			Total
								Internal	External	Practical	
Compulsory	IPR5.5SECP61	Intellectual Property Rights and Development	SEC	2	0	0	2	50	0	0	50
BCL	BCL5.5OJT62	Apprenticeship	OJT	0	2	32	18	90	360	0	450
Total							20	Total			500

Specialization Modules

Course	Group A – Aviation		Group B – Ecommerce		Group C – Land Transportation	
	Paper code	Paper Name	Paper code	Paper Name	Paper code	Paper Name
1	BCL5DSET43	Introduction to Aviation Industry & Airport Operations	BCL5DSET45	First Mile Operations	BCL5DSET47	Principles & Practices of Tourism
2	BCL5DSET44	Introduction to Air Cargo Industry	BCL5DSET46	Last Mile Operations	BCL5DSET48	Commercial Aspects of Transportation

In Semester IV of the B. Com (Logistics) programme, students enter into a Specialisation Module. Here, they have to choose one group out of three (Aviation, E-commerce, or Land Transportation). Each group contains two courses (Course I and Course II). Students shall choose one of the three Modules and pursue both courses listed in the chosen Module.

Testing and Evaluation

There will be Internal Assessment for 30 marks and Final Semester-End Examination (External) will be for 120 marks in each course/paper.

Evaluation

Internal Assessment: 30 Marks

- a. Midterm Examination: 2 Exams of 20 Marks each to be conducted by the College / Department. Best marks obtained in any of the two, be counted for each course.
- b. Students' Participation in curricular, extra-curricular activities, class participation, attendance etc. shall account for 10 Marks.

External Assessment: 120 Marks

Semester End Examination Paper Pattern: Logistics Course (120 Marks)

There shall be three Sections:

Section A: (20 marks) Shall contain 10 questions, two from each Unit. Each question shall be of 2 marks. All the questions are compulsory. Section A shall contain 5 Multiple Choice Questions and remaining 5 will be fill-in the blanks type. Minimum Two questions must be set from each Module/ Unit.

Section B: (40 marks) Shall contain 5 questions (two from each unit with internal choice). Each question shall be of 8 marks. The candidate is required to answer all 5 questions. The answers should not exceed 150 words.

Section C: (60 marks) Shall contain 5 questions, one from each Unit. Each question shall be of 20 marks. The candidate is required to answer any three questions. The answers should not exceed 400 words.

Unless specifically mentioned for a particular course, the above Scheme of Internal and External Evaluation shall remain constant. To pass in a particular Paper / Course, every candidate shall be required to obtain at least 36% marks separately in Theory, Practical and Internals Exams. In Semester IV (Indian Knowledge System), Semester V (Communication Skills), and Semester VI (Special Elective Course) Semester End assessment/exam/evaluation will not be conducted by the University. The respective College / Department will send the Semester assessment (marks) of the student to the University.

Apprenticeship

Apprenticeship Assessment will be conducted at Internal and external level.

Internal assessment will be conducted by the department/College. The Principal of the College shall appoint Internal Examiner for evaluation of skills learnt by the candidate through a Viva-Voce.

The industry establishment where the student is doing apprenticeship will be responsible for undertaking continuous evaluation of his/her performance. The Industry where the student is undergoing Apprenticeship will award External Evaluation marks and send it to the respective College in a sealed confidential envelope. The College Principal on receipt of these marks will keep the copy in safe custody and update the marks on University Portal, as and when required.

The duration of External examination shall be 3 hours.

On the basis of total marks (Internal and External) obtained, the student shall be awarded SGPA and CGPA under the formula specified for CBCS. Total Credits (All semesters) shall be 120 and Total Marks (All semesters) shall be 3000.

Course Wise Contents for B. Com Programme

Semester I: Ability Enhancement Compulsory Course

ENVT4.5AECCT11: Environment Studies
Common Curriculum for all Under Graduate Students

Semester-I Discipline Specific Course

BCL4.5DSCT12: Fundamentals of Logistics
<p><u>Objective:</u></p> <ul style="list-style-type: none"> ● 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
<p><u>Course Outcomes:</u></p> <ul style="list-style-type: none"> ● 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
<p>UNIT-I</p> <p>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</p>
<p>UNIT-II</p> <p>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</p>
<p>UNIT-III</p> <p>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.</p>
<p>UNIT-IV</p> <p>Warehouse: Warehouse-Meaning, Types of Warehouses Benefits of Warehousing. Transportation- Meaning; Types of Transportations, efficient transportation system and Benefits of efficient transportation systems. Courier/Express - Courier/Express-Meaning, Categorization of Shipments, Courier Guidelines, Pricing in Courier - Express Sector for international and domestic shipping. E-Commerce - Meaning, Brief on Fulfilment Centers, Reverse logistics in e-commerce sector, Marketing in e-commerce and future trends in e-commerce.</p>

UNIT-V

EXIM: Brief on EXIM/FF & CC, Multi-modal transportation, brief on customs clearance, bulk load handling and brief on trans-shipment.

Supply chain.

Cold chain.

Liquid Logistics.

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.

BCL4.5DSCT13: Material Management**Objective:**

- 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

Course 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-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.

UNIT-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

UNIT-III

Inventory - Need of Inventory -Types of Inventories - 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.

UNIT-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.

UNIT-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 ArnoBCL & Stephen N. Chapman
5. Purchasing and Materials Management - K S Menon
6. Handbook of Materials Management – Gopalakrishnan

BCL4.5DSCT14: Warehousing & Distribution Centre Operations**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

Course 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-I

Introduction to Warehouse (Storage and Packaging) Background - Types of Warehouses - Broad functions in a warehouse - warehouse layouts and layout related to functions. Equipment requirement in warehouse -Strategic Aspects of Warehouse.

UNIT-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- its activity -Put away list and its need-Put away of goods into storage locations - storage location codes and its application

UNIT-III

Procedure to prepare warehouse dispatches-Preparing Packaging List/Dispatch Note-Packaging-its importance of packing-Packaging Materials-reading Labels-quality parameters in packing significance-Cross Docking Method-and its application- Automation: Pick / Put to Light - A Frame - Automated Order Selection – Pick-N- Go - Outbound Sorters - Automatic Truck Loading.

UNIT-IV

Distribution – Definition – Need for physical distribution —concept – system perspective - functions of distribution
– marketing forces affecting distribution. Channels of distribution: role of marketing channels
– channel functions
– channel structure –designing distribution channel – choice of distribution channels

UNIT-V

Warehouse Safety Rules and Procedures: Hazardous cargo – Procedure for Identification of Hazardous Cargo - safety data sheet- Familiarization with the industry. Health, Safety & Environment - 5S Concept on shop floor. Personal protective Equipment's (PPE) and their uses.

Text & Reference Books:

- Course Material Prepared by LSC
- 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
- Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs in the Modern Warehouse- III Edition-Gwynne Richards

Semester II: Ability Enhancement Compulsory Course

ENG4.5AECCT21: General English HIN4.5AECCT21: General Hindi
Common Curriculum for all Under Graduate Students

Semester II: Discipline Specific Course

BCL4.5DSCT22: Freight Forwarding (Ocean & Air Cargo)

Objective:

- 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.

Course 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-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.

UNIT-II

Operation Procedures of Freight Forwarding - The procedures for Pre-Operating Checks and Operational checks to be performed for every shipment / consignment

UNIT-III

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. Regulations (EXIM/IATA/Countries)/COM based on permutations and combinations of weight vs volume.

UNIT-IV

Cargo handling, INCO terms and terminologies used in Cargoes - Different Types of Cargoes for transportation. Full Export and Import value of the cargo – Importer and exporter Code (IEC), The registered PAN based Business Identification number received from the Directorate General of Foreign Trade - Different type of Cargo, their quantity and value - 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

UNIT-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. Technical knowledge on 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 Organization of Warehouse and Order Picking Systems [With CDROM], Michael Ten Hompe, Thorsten Schmidt, Springer verlag, First Edition, 2006.
4. Management Guide to Efficient Money Saving Warehousing, Stephen Frey, Gower, 1982. Swapna Pillai, Export Import Procedures & Documentation, Sahitya Bhawan Publication, 2020

BCL4.5DSCT23: Forecasting and Inventory Management**Objective:**

- 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

Course 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-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

UNIT-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).

UNIT-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

UNIT-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

UNIT-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:

Course Material Prepared by LSC

Sunil Chopra and Peter Meindl, Supply Chain Management Pearson Education Asia, 3rd edition, 2007

Chaman L Jain, “Fundamentals of Demand Planning & Forecasting”, Graceway Publishing Company 3rd edition.

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

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, 6th Edition, 1993.

BCL4.5DSCT24: Surface Transportation

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

Course 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-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

UNIT-II

Transportation Optimization -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

UNIT-III

Organization 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.

UNIT-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.

UNIT-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

Semester III: Skill Development Compulsory Course

ELE5SDC31: Elementary Computer
Common Curriculum for all Under Graduate Students

Semester III: Discipline Specific Course

BCLM5DSCT32: MIS for Logistics

Objectives:

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

Course Outcomes:

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

UNIT-I

Introduction- IT and management opportunities and Challenges-Strategic planning and models - Information management & IT Architecture – IT Architecture & infrastructure, cloud computing and services, Virtualization and Virtual Machines.

UNIT-II

Database Technology- Data warehouse- Data Mart Technologies- Data and Text mining- Business Intelligence & Analytics, Digital and physical document management. Networks, collaboration & sustainability: Business IT networks & components, communication technologies – Sustainability and Ethical issues - Internal control- Business Control and Auditing.

UNIT-III

Dissemination of technology information- and strategic planning – Technology choice and evaluation methods – Analysis of alternative technologies – Implementing technology programmes - Intellectual Capital - An introduction to Intellectual Property Right - Patent -Copyrights - Trademarks and other issues.

UNIT-IV

Functional Area & Compliance systems: Management levels and functional systems Enterprise Systems and applications: Enterprise systems, Enterprise Resource Planning (ERP), Supply Chain Management (SCM), Collaborative Planning, Forecasting, and Replenishment system (CPFR), Customer Relationship Management (CRM). Performance Management: Data visualization, Mashups, and Mobile intelligence, Fleet Management Information System.

UNIT-V

Business Process and Project Management: - Architecture & IT design, System development, Software & Applications for management (Business software tools), Support system. ERP modules-sales and Marketing, Accounting, Finance, Materials and Production management etc.

Text & Reference Books:

- Course Material Prepared by LSC
- KENNETH C. L., JANE P. L., & RAJANISH DASS (2001) Management Information System - Managing the Digital Firm. Pearson Education: New Delhi.
- RAVI, K., & ANDREW, B. W. Frontiers of Electronic Commerce. Pearson Education: New Delhi.
- KENNETH, C. L., & JANEP, L. (2001) Essentials of MIS. Prentice Hall India: New Delhi.
- SADAGOPAN, S. (2003) Management Information System. Prentice Hall India: New Delhi.
- EFF, O.Z. (2003) Management Information Systems. Vikas Publishing House Pvt. Ltd.: New Delhi.

CLM5DSCT33: Retail Logistics and E- Commerce

Objectives:

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

Course Outcomes:

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

UNIT-I

Concept and Scope: Concepts of Retail Logistics and supply chain- Importance of Logistics in these days global Sourcing, Dimension of Logistics: Macro and Micro Aspects-Supply chain contours: Backward and forward linkages

UNIT-II

Logistics and Retail Marketing: Logistics as a Support function of Order Fulfilment, Assembling & Labelling from Multi-storage points and Delivery- Logistics as an interface of Market forecasting, Stock level management and other relevant activities till transportation, preparation for dispatch and outbound documentation and customer facilitation tracking out-bound shipments.

UNIT-III

Reverse Logistics: Basic of reverse logistics - concept, key activities, coordinating with carriers, route map optimization, collecting pickup and feedback - Types of reverse logistics –Roles and responsibilities -Best practices in reverse logistics

UNIT-IV

E-Commerce: Introduction to E-commerce logistics including delivery and pickup models and the overall logistic setup – Order Processing – Activities in order processing - Types of order processing - - Procedures for generating plans and schedules through MIS

UNIT-V

Types of E-commerce- B2B-B2C and intra business. Retail E-commerce – Retailing through internet, Direct Online Sales model and its types- Business Models for e-commerce. Electronic Payment system, Electronic CRM Applications. E-Security

Text & Reference Books:

- John Fernie & Leigh Sparks, "Logistics and Retail Management: Emerging Issues and New Challenges in the Retail Supply Chain ",Kogan Page 3rd Edition,2009
- James B. Ayers & Mary Ann Odegaard , "Retail Supply Chain Management "taylor & francis, 2nd edition
- Mr. Gibson G, "Retail Management: Functional Principles & Practices", Jaico Publishing house, 6th

Edition, 2003.

- Ray, Supply Chain Management For Retailing, TMH, 2010.
- James B. Ayers, Retail Supply Chain Management, Auerbach Publications, 2007.

BCLM5DSCT34: Liner Logistics**Objectives:**

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

Course Outcomes:

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

UNIT-I

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

UNIT-II

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

UNIT-III

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

UNIT-IV

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

UNIT-V

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

Text & Reference Books:

- Course Material Prepared by LSC

- Ship Operation Management, Fujita, N.H. Publisher, 1974.
- Ship Operation Management, Bertrams Publication, 2010.
- Handbook of Ship Calculations, Construction and Operation, Charles H. Hughes, Wexford College Press, 2008.
- Ocean Shipping - Elements of Practical Steamship Operation, Robert Edwards Annin, Thompson Press, 2010.

Semester IV: Value Addition Compulsory Course

IKS5VACT41: Indian Knowledge System

Common Curriculum for all Under Graduate Students

Semester IV: Discipline Specific Course

BCL5DSCT42: Port Terminal Logistics

Objectives:

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

Course Outcomes:

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

UNIT-I

Difference between Major and Minor Ports - Ports in India - Natural Harbours - New Ports to be developed in India - Major Ports of the World - Largest Port in the world - Port Officials and their roles - Role of Ports - Who Are Port users

UNIT-II

Container Terminals - Privatisation of Terminals - Reason for Privatisation - Major Terminal Operators in India- Terminal Operators of the world - Privatisation the need of the hour - Agreement between and existing Port Terminal and the new operator

UNIT-III

Import Cycle - Export Cycle - Positions and Places in a Terminal - Facilities in a Terminal - Container Monitoring and stacking - CFS inside a Terminal - Reasons for Congestion of a terminal - de-congesting the terminal - Window system in a terminal.

UNIT-IV

Major Port Trust Act - Port as a custodian of the cargo - Transit sheds - Cargo receivers - Wharfs and Berths - Various berths in a Port - Meaning of Berth Restrictions - Port equipment's and damage - Extra services - Berth reservation schemes

UNIT-V

Port Tariff - Pilots and their duties - Tugs and its usage - Night navigations - Light Dues - Tariff Authorities of Major Port - Revision of rates - Port Trustees - Safety Procedures - Introduction of ISPS - Damage to Port property by ships - Compensation and confiscation of cargo to adjust dues

Text & Reference Books:

- Course Material Prepared by LSC
- Major Port Trust Act – Government of India
- Port Industry Statistics, American Association of Port Authorities
- AP MOLLOR Guide book on Terminal
- DUBAI PORT AUTHORITIES Manual

Discipline Specific Elective Course

Specialization Course Module- Group A-Course I

BCL5DSET43: Introduction to Aviation Industry& Airport Industry	
<u>Objectives:</u> <ul style="list-style-type: none"> To develop competencies and knowledge of students to become Aviation Professionals <ul style="list-style-type: none"> To help Students to understand Fundamentals of Aviation Industry & Airport Operations 	
<u>Course Outcomes:</u> <ul style="list-style-type: none"> Students will be able to apply the Basic knowledge of Aviation and Airport Operations in the real-life situation This subject will enable them to enhance their ability and professional skills in the Aviation Industry & Airport Operations 	
Unit I	
History of Aviation & Key Organizations in the Aviation Industry a. History of Aviation through the ages-Origins in Greek Mythology- The Wright Brothers- Aviation in the era of World War 1 & 2- Commercial Aircraft Era- Modern Jetliners b. Key Organizations in the Aviation Industry- <ol style="list-style-type: none"> 1. ICAO- International Civil Aviation Organization, 2. IATA - International Air Transport Association 3. MoCA - Ministry of Civil Aviation, 4. DGCA - Directorate General of Civil Aviation 5. AAI- Airports Authority of India, 6. AAICLAS- Airports Authority of India Cargo Logistics Allied Services 7. AERA- Airport Economic Regulatory Authority 8. BCAS- Bureau of Civil 	
Unit II	
Aviation Security Freedoms of the Air & the Airline Business a. Freedoms of the Air- Overview- Nine Freedoms of the Air b. Airline Business- <ol style="list-style-type: none"> i Business Models- Legacy, Low Cost, Charter, Regional, Cargo & Hybrid ii Airplane Manufacturers- Primary Manufacturers- Boeing, Airbus and others iii Narrow Body v/s Wide Body- Definition & Features iv The Airline Industry as a Business- Key Functions in the Airline Business v Airline Codeshares & Alliances- <ol style="list-style-type: none"> a. Concept, b. Key Benefits, c. Major Airline Alliances vi Airline Cabin Classes- First, Business, Premium Economy & Economy 	
Unit III	
World Geography & Airline Communication Protocol Traffic Conference Areas, Time Zones, Codes- Country, City, Carrier, Currency, Aircraft Registration,	

Airline Phonetics

Unit IV

Airport Operations

- a. Key Stakeholders, Airport Types, Airport Revenue Sources, Airport Functional Layout- Landside, Governmental Agencies at Airport, Baggage Handling, Airside Operations
- b. Airport as an Operational System- Infrastructure & Facilities, Airport Operations Control Centre (AOCC), Airport Collaborative Decision Making (ACDM), Key Information Technology Systems at Airports
- c. Concessionaire Activities at Airports (terminology restricted to Indian scenario)

Unit V

- a. Non-Aero Activities- Retail, Food & Beverage, Real Estate, Car Rentals Car Parking, Currency & Banking, Advertising
- b. Maintenance Repair & Overhaul (MRO)- Types of MRO Models
- c. Ground Handling
 - i Concept,
 - ii Self-Handling V/s Outsourced Handling
 - iii IATA Standard Ground Handling Agreement

Text & Reference Books:

1. Course Material Prepared by LSC
2. Airport Operations- Norman Ashford, Pierre Coutu, John Beasley- McGraw-Hill Education; 3rd edition (16 December 2012)
3. Principles of Airport Economics- P.S.Sengupta- Excel Books (1 December 2007)
4. Managing Airports-An International Perspective-Anne Graham-Routledge; 5 editions (June 9, 2018)
5. IATA Airport Handling Manual- 40th edition-Year of Publication- 2020
6. IATA Ground Operations Manual- 9th edition-Year of Publication- 2020

Specialization Course Module- Group A-Course II

BCL5DSET44: Introduction to Air Cargo Industry	
<p><u>Objectives:</u></p> <ul style="list-style-type: none"> ● To develop competencies and knowledge of students to become Air Cargo Professionals ● To help Students to understand Fundamentals of Air Cargo Industry 	
<p><u>Course Outcomes:</u></p> <ul style="list-style-type: none"> ● Students will be able to apply the Basic knowledge of Air Cargo Industry in the real-life situation ● This subject will enable them to enhance their ability and professional skills in the Air Cargo Industry 	
<p style="text-align: center;">UNIT I</p> <p>History of Air Cargo & Multi Modal forms of Transport</p> <ol style="list-style-type: none"> a. History of Air Cargo & Mail, Air Freight, Air Express, Overnight Air Express & Air Mail b. Other Multi Modal forms of Transport- Rail, Sea & Surface Transport- Key Concepts <p style="text-align: center;">UNIT II</p> <p>Key Organizations Facilitating Air Cargo</p> <p>International Air Transport Association (IATA), International Civil Aviation Organization (ICAO), International Federation of Freight Forwarders Association (FIATA), The International Air Cargo Association (TIACA)</p> <p style="text-align: center;">UNIT III</p> <p>Air Cargo Business Models</p> <p>Freighters, Charters, Integrators, Combination Carriers, Systems), Couriers, E-commerce, Postal mail</p> <ol style="list-style-type: none"> a. Key Concepts- Brief Introduction to the Business Models b. Impact of various Business Models in relation to geography, size and scope <p style="text-align: center;">UNIT IV</p> <p>Key Stakeholders & Key Terminologies</p> <ol style="list-style-type: none"> a. Key Stakeholders- Airports, Airlines (Direct), Airlines through General Sales Agents (GSA) or General Sales & Service Agents (GSSA), Shippers, Freight Forwarders, Custom Brokers, Consolidators, Trucking b. Key Terminologies & Abbreviations <p style="text-align: center;">UNIT V</p> <p>Training & Development in Air Cargo Industry</p> <ol style="list-style-type: none"> a. Importance of Training in the Aviation & Cargo Industry b. Areas of Training in the Air Cargo Industry <p>Key Organizations facilitating Training & Development in the Aviation & Air Cargo Industry</p>	
<p>Text & Reference Books:</p> <ol style="list-style-type: none"> 1. Course Material Prepared by LSC 2. Air Cargo Management- Air Freight and The Global Supply Chain- Michael Sales- Routledge (2016) 3. Air Cargo and Logistics - Classics and Contemporary practice by Rico Merket and Jackie Walters- 	

Academic Publishers (01 June, 2019)

4. Moving Boxes by Air - The Economics of International Air Cargo by Peter S. Morrell and Thomas Klein - Routledge; 2 edition (19 October 2018)

Discipline Specific Elective Course

Specialization Course Module- Group B-Course I

BCL5DSET45: First Mile Operation
<p><u>Objective:</u></p> <p>To understand the First Mile operational processes in e-commerce logistics.</p>
<p><u>Course Outcomes:</u></p> <p>THE STUDENTS WILL LEARN: Basics of First Mile operations. Shipment pickup operations. Different types of shipment processing operations at Processing Centers. Layout of a Processing Centre. Key challenges in First Mile operations and First Mile metrics.</p>
<p style="text-align: center;">Unit I</p> <p style="text-align: center;">Role of First Mile in E-Commerce Logistics</p> <p>Difference between First Mile, Line Haul and Last Mile operations. -First Mile Operations - Overview. - Why is First Mile operations important in e-commerce Logistics-First Mile process flow.</p>
<p style="text-align: center;">Unit II</p> <p style="text-align: center;">Shipment Pickup Operations</p> <p>Shipment pickup process. -Pickup operations staff - roles and responsibilities. -Pickup coordination. - Safety and security of shipments during Pickup-Pickup documentation.</p>
<p style="text-align: center;">Unit III</p> <p style="text-align: center;">Shipment Processing Operations</p> <p>Primary and secondary processing. Bagging operations. -Manual Processing Operations-Automated processing operations</p>
<p style="text-align: center;">Unit IV</p> <p>Layout of A Processing Centre Inbound Operations-Processing Operations-Outbound Operations-Safety and Security-Processing Centre staff - roles and responsibilities</p>
<p style="text-align: center;">Unit V</p> <p style="text-align: center;">First Mile Analytics and Metrics</p> <p>Productivity-Pickup Operations Metrics-Processing operations Metrics-First Mile dashboard. Tools and Applications. Pickup tools and applications-Processing tools and applications-Exceptions in First Mile and impact on operations- Tools and communication to resolve exceptions.</p>
<p>Text & Reference Books:</p> <p>1. Course Material Prepared by LSC</p>

Specialization Course Module- Group B-Course II

BCL5DSET46: Last Mile Operation	
<u>Objectives:</u> <ul style="list-style-type: none"> ● To understand Last Mile Operations in E-Commerce. 	
<u>Course Outcomes:</u> <p>The students will be able to:</p> <ul style="list-style-type: none"> ● Understand the basics concept of Last mile logistics in E-Commerce ● Understand the processes involved in Last mile logistics ● Understand various metrics and customer services processes to be followed in last mile logistics ● Explain the prospects of last mile logistic 	
UNIT I	
Introduction <ul style="list-style-type: none"> 1.1 What is Last Mile in E-commerce? 1.2 Importance of Last Mile in the supply chain 1.3 Last Mile Delivery challenges for e-commerce 1.4 Trends in Last Mile delivery 1.5 Route optimization in Last Mile operations 	
UNIT II	
Last Mile Processes <ul style="list-style-type: none"> 2.1 Delivery Process & its challenges 2.2 Reverse pickup process in Last mile operations 2.3 Challenges in Reverse Pickup process 2.4 Tools and applications in Last Mile operations 2.5 Considerations for effective last mile logistics strategy 	
UNIT III	
Metrics <ul style="list-style-type: none"> 3.1 Metrics to measure in last file 3.2 Automation and technology driving metrics. 	
UNIT IV	
Customer service <ul style="list-style-type: none"> 4.1 Customer service and its importance 4.2 Good and bad customer service (Dos and Don'ts of customer service) 4.3 Relationship between metrics and customer service. 	
UNIT V	
Prospects of Last Mile Logistics- 5Hrs <ul style="list-style-type: none"> 5.1 Innovations in Last Mile Logistics 5.2 Technology Trends in Last Mile Delivery 	

5.3 Last Mile Delivery Market Future Prospects

Text & Reference Books:

1. Course Material Prepared by LSC

Discipline Specific Elective Course

Specialization Course Module- Group C-Course I

BCL5DSET47: Principle & Practice of Tourism

Objective:

- Understand the fundamentals of the Tourism industry and its development in India.
- Develop insights on the difference between International and National Industry.
- Knowhow on Tourism in India through Surface transportation.
- Impart knowledge on new trends in Tourism

Course Outcomes:

- To develop an understanding of the nature of tourism in India
- Throw light on an initiative by Government and Railways to promote tourism.
- To understand different modes and package tours by Travel Agencies and to learn how to develop packages.
- Recent trends of tourism and Infrastructure including Hotels

UNIT-I

Basics of Tourism-History & Growth-Tourism & Economy, Multiplier Effect-Principles, Components & Types of Tourism – Service Industry, Passenger Transportation. Travel Agencies

UNIT-II

Domestic & International Tourism-Tourism Policy & Initiatives of Govt – Dept of Tourism, ITDC, IRCTC Etc- Inbound & Outbound Tourism – Segmentation, Bookings, Package Tours- Travel Agencies, Destinations & Infrastructure – Ratings

UNIT-III

Tourism - Road-Road Infrastructure – Connectivity to destinations, Quadrangle, Highways, Bharatmala Project-Road Vehicles – Cabs, Minibuses, luxury buses, Double deck sleeper. Regulations-Single point. Multiple destinations, Group booking, Cluster approach.

UNIT-IV

Tourism by Rail-Infrastructure – Rail destination. Toy trains to Hills – Shimla, Darjeeling, Ooty – Last mile Connectivity-Railway Initiatives – Rail Yatrik Niwas at stations, Budget hotels. Online bookings, Tourist lounges. Bookings – Group ticket, package tours, circular journey ticket etc.-Tourist trains – Palace on Wheels, Maharaja, Deccan Odyssey, Rail package tours, Coach Bookings itinerary.

UNIT-V

Trends in Tourism-Sustainable tourism – Ecological & environmental issues-Heritage, Religious, Medical, Leisure, Conferences Tourism, Destination weddings-New destinations- Statue of Unity, Akshardham, Winter tourism etc.

Text & Reference Books:

1. Course Material Prepared by LSC

Specialization Course Module- Group C-Course II

BCL5DSET48: Commercial Aspects of Transportation

Objectives:

- To highlight vital part of commercial considerations in providing transport services for Freight and Passengers movement.
- To Understand the importance and need for marketing and strategies involved.
- To Describe the principles in fixing Railway Freight and Rates
- To evaluate Competition in rates of Road and Rail mode of transportation.

Course Outcomes:

- Develop a clear perspective of various commercial aspects in transportation
- Distinguish between the Operational feasibility of a work and its commercial viability
- Know the issues involved in booking and reservation of passengers,
- Know the various types of costs involved and understand the concept of cost-of-service vs value of service

UNIT-I

Commercial Aspects in Transportation – A Perspective-Role and importance of Commercial Aspects, relative strengths of rail vs Road-Concept of commercial viability vis a vis operational Feasibility-Issues/ functions included in the commercial aspects, organizational set up to handle these

UNIT-II

Commercial Aspects involving Passenger transportation –Passenger Services on Indian Railways; Booking and Reservation of passengers, Various class of services, types of tickets, concessions etc-Passengers Services in Road Sector, A state subject- differences from State to state-Supplementary and related services such luggage, parcel, refunds, catering etc.

UNIT-III

Commercial Aspects involving Goods / Freight transportation–Different components of freight traffic, Booking and delivery of freight traffic on Railways, Demurrage and Wharfage, Sidings-Booking and delivery of goods in roadways, agencies involved and their Role-Claims and liabilities, Organizational set-up and procedure for Claims' compensation,

UNIT-IV

Pricing of Transport-Basic consideration in pricing; Different type of costs involved in computing price, Relativity index of passenger fares in Indian Railways; surcharges and Discounts-Principles of classification and Rate fixation and routing of Traffic-Cost of service vs value of service, Cross subsidization etc.

UNIT-V

Marketing Strategies for Commercial growth –Need for marketing, Rail vs Road: Complementary and not competitive role, High profit yielding commodities-Incentive schemes, IT-enabled user-friendly solutions for Booking, payment, tracking consignments and trains, Passenger movement – PRS, etc- Future trends: technology- induced improvements in various aspects of commercial working

Text & Reference Books:

1. Course Material Prepared by LSC

Semester V: Skill Development Compulsory Course

CS5.5SDCT51: Communication Skills
Common Curriculum for all Under Graduate Students

Semester V: On the Job Training Course

BCL5.5OJT52: Apprenticeship
<p>Objectives:</p> <ul style="list-style-type: none"> ● To provide hands-on experience of logistics operations in real business environments. ● To enable students to apply classroom knowledge of logistics, warehousing, transportation, MIS, and distribution to actual industry practices. ● To develop professional competencies such as teamwork, communication, documentation, and reporting. ● To familiarize students with industry rules, policies, compliance, and safety standards. ● To build adaptability, problem-solving, and critical thinking skills through real-time logistics challenges.
<p>Outcomes:</p> <ul style="list-style-type: none"> ● Apply theoretical concepts of logistics and supply chain management to on-the-job assignments. ● Operate warehouse systems, distribution processes, and transportation management in industry setups. ● Demonstrate skills in documentation, record-keeping, and report preparation related to logistics functions. ● Work effectively under supervision, meeting performance expectations and deadlines. ● Exhibit professional behavior, discipline, and workplace ethics in logistics organizations.

Semester VI: Special Elective Compulsory Course

IPR5.5SECP61: Intellectual Property Rights and Development

Objectives:

To explore the characteristics of knowledge, its role in economic growth, and the economic principles that govern its creation, dissemination, and appropriation. To introduce students to the different forms of intellectual property rights (IPRs), their historical development, and the mechanisms used to protect innovations and creative works. To examine the evolution of intellectual property statutes, from early legal frameworks to international treaties such as the TRIPs Agreement, and the impact of global IP harmonization. To provide a foundational understanding of India's Patent Acts and subsequent amendments, particularly in relation to discoveries and innovations. To understand the role of IPRs in technology transfer, benefit-sharing, and the protection of indigenous knowledge, as well as practical steps for patent filing in India.

Course Outcomes:

The successful completion of this course shall enable the learner:

Explain the Economic Role of Knowledge and IPR: Describe the characteristics of knowledge, its economic implications, and the role of IPR in incentivizing and protecting innovation and creativity. **Identify Different Forms of IPR:** Distinguish between patents, copyrights, trademarks, industrial designs, and understand their application in protecting intellectual property. **Analyze Historical and International IP Frameworks:** Assess the evolution of intellectual property statutes globally, including key treaties and agreements, and discuss their impact on IPR harmonization and extension. **Interpret Indian Patent Legislation:** Outline the basics of the Indian Patent Act and its amendments, distinguishing between discovery and innovation within the Indian legal context. **Apply IPR Knowledge Practically:** Demonstrate understanding of the IPR process in India, including patent filing, technology transfer, and the ethical and legal considerations for indigenous knowledge and benefit-sharing.

Contents

Unit I

Knowledge – characteristics and role in economic growth, Tacit and codified knowledge, Knowledge as public good and 'market failure', Market for knowledge, Incentives for creation of new knowledge, Appropriation of knowledge: knowledge monopoly and its consequences.

Unit II

Pre-IPR system of protection: Secrecy/Trade guilds/Cartels. Basic forms of IPRs: Patent, copyright, trademark, industrial design.

Unit III

Evolution of IP Statutes: English Statute of Monopolies (1624); United States Patent Act (1836), Paris Convention, Berne Convention, Rome convention. WTO Framework and the TRIPs Agreement, Unification of IP rights, Extension of protectable subject matter, New forms of IPRs, Role of Patent. Cooperation Treaty

Unit IV

Distinction between discovery and innovation. Basics of the Patent Act of India 1911 and the Indian Patent Act of 1970. Patent Amendment Act (2005)

Unit V

IP rights in India and progressive harmonization with international standards. IPRs and technology transfer. IPR and Benefit sharing, Indigenous knowledge and its appropriation.

Procedure of Filing Patents in India.

Readings:

- Bare Acts
- Ramakrishna B & Anil Kumar H.S, Fundamentals of Intellectual Property Rights: For Students, Industrialist and Patent Lawyers, Notion Press; 1st edition
- E. T. Lokganathan E T Lokganathan, Intellectual Property Rights (Iprs): Trips Agreement and Indian Laws: TRIPS Agreement & Indian Laws, Ingram short title
- B.L. Wadehra, Law Relating To Intellectual Property, 2011, Universal Law Publishing - An imprint of LexisNexis; Fifth edition (2016)
- Choudhuri, S. (2003). The WTO and India's Pharmaceutical Industry. Oxford University Press: New Delhi.
- Watal, Jayshree (2001). Intellectual Property Rights in the WTO and Developing Countries. Oxford University Press: New Delhi.
- Cottier, Thomas and Mavroidis, C. Petros (2003). Intellectual Property: Trade, Competition, and Sustainable Development. World Trade Forum, Volume 3. The University of Michigan Press
- Intellectual Property: A Very Short Introduction; Siva Vaidhyanathan; Oxford University Press; 1st Edition; 2008
- Intellectual Property: Patents, Trademarks, and Copyright in a Nutshell; Arthur R. Miller, Michael H. Davis; West Academic Publishing; 4th Edition; 2022
- Intellectual Property Law: Text, Cases, and Materials; Amanda Reid, Peter Goodhart; Oxford University Press; 2nd Edition; 2017
- Handbook of Intellectual Property and Innovation; Shubha Ghosh; Edward Elgar Publishing; 1st Edition; 2019

Semester VI: On the Job Training Course

BCL5.50JT62: Apprenticeship

Objectives:

- To provide advanced exposure to specialized logistics functions such as multimodal transportation, export-import, courier, aviation, or e-commerce logistics.
- To enable students to take up higher responsibility and independent roles in logistics processes.
- To enhance decision-making, analytical, and problem-solving abilities in a real-time industry setting.
- To prepare students for final placement opportunities by bridging the gap between academics and industry needs.
- To nurture leadership, entrepreneurial, and innovation skills through practical industry engagement.

Outcomes:

- Manage complex logistics operations with minimal supervision in real industry situations.
- Demonstrate sector-specific knowledge (e.g., aviation logistics, e-commerce logistics, land/rail transport, or courier services).
- Solve operational challenges related to inventory, documentation, transportation, and customer service.
- Exhibit advanced skills in teamwork, leadership, negotiation, and communication in a professional context.
- Prepare a comprehensive Apprenticeship Project Report with analysis of logistics processes, challenges, and solutions.
- Showcase employability skills and readiness for logistics and supply chain industry placements.