

**BIJU PATNAIK UNIVERSITY OF TECHNOLOGY, ODISHA  
ROURKELA**



**Curriculum and Syllabus**

**MBA (Logistics & Supply Chain Management)  
for the Admission Batch 2021-22**

  
Director, Curriculum Development  
Biju Patnaik University of Technology, Odisha  
Rourkela

## Scheme Of Credit Distribution

(As per the regular MBA syllabus of BPUT)

### 1. First Year:

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|-----|---|------------|
| i.  | 1st Semester 9 papers of 3 credits each = | 27 credits |
| ii. | 2nd Semester 9 papers of 3 credits each = | 27 credits |

### 2. Second Year

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|------|--|------------|
| iii. | 3rd Semester Specialization- 8 papers =  | 24 credits |
| iv.  | 4th semester Specialization – 6 papers = | 18 credits |

3. Internship during vacation after 2nd Semester = 4 credits

4. Seminar Presentation on any one elective in the 4th Semester = 2 Credits

TOTAL = 102 credits

  
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## FIRST YEAR

### 1st SEMESTER

Sl. No.	Sub. Code	Name of the subjects	L-T-P	Credit	University Marks	Internal Evaluation
1.	18MBA101	Managerial Economics	3-0-0	3	100	50
2.	18MBA102	Marketing Management	3-0-0	3	100	50
3.	18MBA103	Management Principles	3-0-0	3	100	50
4.	18MBA104	Organizational Behaviour	3-0-0	3	100	50
5.	18MBA105	Decision Science	3-0-0	3	100	50
6.	18MBA106	Business Communication	3-0-0	3	100	50
7.	18MBA107	Financial Accounting and Analysis	3-0-0	3	100	50
8.	18MBA108	Business Law	3-0-0	3	100	50
9.	18MBA109	Business Environment and Ethics	3-0-0	3	100	50
		<b>TOTAL</b>		<b>27</b>	<b>900</b>	<b>450</b>

### 2<sup>nd</sup> SEMESTER

Sl. No.	Sub. Code	Name of the subjects	L-T-P	Credit	University Marks	Internal Evaluation
1.	18MBA201	Corporate Finance	3-0-0	3	100	50
2.	18MBA202	Indian Financial System and Services	3-0-0	3	100	50
3.	18MBA203	Human Resources Management	3-0-0	3	100	50
4.	18MBA204	Business Research	3-0-0	3	100	50
5.	18MBA205	Operations Management	3-0-0	3	100	50
6.	18MBA206	International Business	3-0-0	3	100	50
7.	18MBA207	Fundamentals of IT & ERP	3-0-0	3	100	50
8.	18MBA208	Corporate Strategy	3-0-0	3	100	50
9.	18MBA209	Entrepreneurship Development	3-0-0	3	100	50
		<b>TOTAL</b>		<b>27</b>	<b>900</b>	<b>450</b>

  
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## SECOND YEAR

### 3<sup>rd</sup> SEMESTER

Sl. No.	Sub. Code	Name of the Papers	L-T-P	Credit	University Marks	Internal Evaluation
1.	21MBA301K	Logistics Management	3-0-0	3	100	50
2.	21MBA302K	International Logistics	3-0-0	3	100	50
3.	21MBA303K	Retail Supply chain Management	3-0-0	3	100	50
4.	21MBA304K	Procurement, Storage and Warehouse Management	3-0-0	3	100	50
		<b>TOTAL</b>		<b>24</b>	<b>800</b>	<b>400</b>

### 4<sup>th</sup> SEMESTER

Sl. No	Sub. Code	Papers	L-T-P	Credit	University Marks	Internal Evaluation
1.	21MBA401K	Port Management for Logistics	3-0-0	3	100	50
2.	21MBA402K	Material Handling in Logistics	3-0-0	3	100	50
3.	21MBA403K	Green Supply Chain Management	3-0-0	3	100	50
		<b>TOTAL</b>		<b>18</b>	<b>600</b>	<b>300</b>

### Compulsory Subjects:

Sl. No.	Semester	Sub. Code	Name of Subject	L-T-P	Credit	University Marks	Internal Evaluation
1.	3rd	18MBA305	Internship *	0-0-2	4		100
2.	4th	18MBA404	Seminar Presentation *	0-0-1	2		100

  
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3 <sup>rd</sup> semester	21MBA301K	Logistics Management	L-T-P 3-0-0	3 credits	35 Hours
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### Course Objectives

- To analyse the supply chain scenario and to make understand the student's insights on the supply chain process from sourcing to distribution.
- To enhance the supply chain integration and sustainable supply chain strategic skills among the students.

### Module I:

**Logistics management and Supply Chain management** - Definition, Evolution, Importance. The concepts of logistics and Supply Chain Management, Key Drivers of Supply Chain Management and Logistics relationships.

**Basics of Transportation:** Transportation Functionality and Principles; Multimodal Transport: Modal Characteristics; Modal Comparisons; International Air Cargo Transport; Coastal and Ocean transportation, Characteristics of shipping transport- Types of Ships

### Module II:

**Containerization:** Genesis, Concept, Classification, Benefits, and Constraints; Inland Container Depot (ICD): Roles and Functions, CFS, Export Clearance at ICD; CONCOR; ICDs under CONCOR;

**Packing and Packaging:** Meaning, Functions and Essentials of Packing and Packaging, Packing for Storage- Overseas Shipment Inland-Transportation- Product content Protection, Packaging Types: Primary, Secondary and Tertiary- Requirements of Consumer Packaging, Channel Member Packaging and Transport Packaging - Shrink packaging -Identification codes, bar codes, and electronic data interchange (EDI)- Universal Product Code- GS1 Standards- package labels- Symbols used on packages and labels.

### Module III:

Special Aspects of Export logistics: Picking, Packing, Vessel Booking [Less-than Container Load(LCL) / Full Container Load (FCL)], Customs, Documentation, Shipment, Delivery to distribution centres, distributors and lastly the retail outlets- Import Logistics: Documents Collection- Valuing- Bonded Warehousing, Customs Formalities- Clearing, Distribution to Units.

### 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

  
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3 <sup>rd</sup> semester	21MBA302K	International Logistics	L-T-P 3-0-0	3 credits	35 Hours
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**Course Objective:**

- To explain the movement of cargo from the vendor to end-user across the globe.
- To increase the value of the product.
- To add value that includes improved quality and product accessibility across the world at optimal cost.

**MODULE-I**

Meaning and Significance of International Transportation- Role of transportation in the integrated logistics process, Basic principles of international transportation, Parties involved in international transportation, Significance of Transportation, Modes of International Transportation- Criteria for Selection of different modes of transportation, Multi-Modal Transportation. Freight costing and pricing- Classification of Costs associated with Transportation process, Cost Strategies, Factors affecting Transportation rate

Features, Types and Terminology- Features, Advantages, and Disadvantages of using sea mode, Classification of ships, Shipping Methods, Swage in Ship, Major Sea-routes around the world, Important Terminology, Freight, Parties, and Perils Associated with Sea Mode- Parties involved in sea mode of transportation- Ocean Freight- Types of Sea Freight, Calculation of Freight; Maritime Risks, Marine Insurance.

**MODULE-II**

Features, Types, and Terminology- Significant Features, Advantages and Constraints of Air transportation, Types of Carriers, Air Cargo Chain Operators, Legal Aspect of Carriage of Goods by Air; Freight Structure and \ organizational set up- ULD Concept, Air Cargo Tariff Structure- Air Freight Classification, Air Freight Calculation, Factors Affecting Air Freight Rates, Air Freight Consolidation, Role of IATA and TIACA in Air Cargo Industry.

Transportation by Rail and Road, Meaning of Land mode of transportation, International Road Transportation, International Road Network, Advantages and Constraints of International Road Transport, International Rail Transportation, Advantages and Constraints of International Rail Transport; Pipeline as a Mode of Transportation and Concept of Multi-modalism, Concept of Containerization.

**MODULE-III**

Export procedure in India, Import Procedure in India, Transport Documents, Mate Receipt, Bill of Lading – features and types, Air-way Bill, Lorry Receipt; INCOTERMS 2013; Packaging and Labelling for Exports- What is the packaging? Functions of Packaging, Labelling the export packages, Packaging for different modes of transportation, Rail Receipt.

**Books:**

1. Ewan Roy, what is global supply chain management? by Trade Ready.
2. Altekar, supply chain management, and concepts PHI.
3. R.B. Handfield and E.L. Nochols, Jr. Introduction Supply Chain Management. Prentice-Hall.
- 4 Sunil Chopra and Peter Meindel. Supply Chain Management: Strategy, Planning, and Operation, Prentice Hall of India,.

  
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3 <sup>rd</sup> semester	21MBA303K	Retail Supply Chain Management	L-T-P 3-0-0	3 credits	35 Hours
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**Course Objective:**

- To analyze the retail supply chain scenario and to make understand the students the insights on retail supply chain process from sourcing to distribution.
- To enhance the retail supply chain integration and sustainable supply chain strategic skills among the students.

**MODULE- I**

Retail Supply chain: Definition – retail as a business – importance of customer segments – value chain – types or retail chain business – comparative advantages – CSR and retail industry.

Retail supply chain environment: drivers of retail supply chain change – globalization – nature of demand – quality function deployment – retail supply chain risk – retail supply chain metrics.

**MODULE-II**

Retail strategy and supply chains: Product life cycle – innovative and functional products – retail market segments – supply chain management excellence – skill requirements. Retail supply chain process improvement: improvement approaches: PDCA, DMAIC, CPFR – supply chain collaboration – core competency – demand-driven supply chain: tools and techniques – product tracking: Barcoding, RFID.

**MODULE-III**

Finance and retail supply chain: Supply chain costs – root causes for cost – retail returns – opportunities in retail returns

**References:**

- 1) Swapana pradhan – Retailing Management, TMH
- 2) J. Lamba – The Art of Retailing , McGraw Hill Education
- 3) Barry Berman, Joel R Evans – Retail Management; A Strategic Approach , Pearson India
- 4) James B Ayers, Mary Ann Odegaard – retail Supply Chain Management, Auerbach Publications
- 5) Dravid Gilbert – Retail Marketing. Pearson India

  
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3 <sup>rd</sup> semester	21MBA304K	Procurement, Storage, and Warehouse Management	L-T-P 3-0-0	3 credits	35 Hours
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### Course Objectives:

1. Provides know-how required to operate an efficient and cost effective warehouse as also the role of inventory in warehouse management.
2. It provides guidance on using the latest technology, reducing inventory, people management, location and design and manage uncertainty risks of customer markets
3. Define the right structure of the supply network and inventory control and warehouse management system.

### Module-I

Procurement System, Principles of Procurement, History of procurement function: from administrative to strategic, value-added role, Procurement Cycle, Procurement Planning, Purchasing Mix: Six Rights, Selecting the right supplier, Source of information and process, Supplier appraisal/vendor capability, Bidding process.

### Module-II

Warehousing: Concepts -Role of warehouse-types of warehouse- warehouse location- Need for warehousing- Supply chain trends affecting warehouse -Warehouse functions- Role of warehouse manager- Warehouse process: e-commerce warehouse- Receiving and put away- Warehouse process – pick up preparation-Receiving - Pre-receipt - In- handling - Preparation - offloading - Checking - Cross-docking - Quality control - Put-away - Pick preparation - Pick area layout – Picking strategies and equipment -order picking methods - Warehouse processes, Replenishment to dispatch- Value adding services - Indirect activities - Stock management - Stock or Inventory counting - Perpetual inventory counts - Security - Returns processing – Dispatch.

### Module-III

Storage Management system – Storage Inventory Management – Functions of storage & Inventory - Classification of Inventory- Methods of Controlling Stock Levels- Always Better Control (ABC) Inventory system- Warehouse Management Systems (WMS) - choosing a WMS-the process implementation-cloud computing- Warehouse Layout-Data collection-space calculation-aisle width- finding additional space. Storage and Warehousing Information system -Storage Equipment: storage option - shuttle technology - very high bay warehouse - warehouse handling equipment - vertical and horizontal movement - Automated Storage/ Retrieval System (AS/RS)-specialized equipment Technical advancements- Resourcing a warehouse- warehouse costs. Types of cost - Return on Investment (ROI) - Charging for shared-user warehouse service - Logistics charging methods Warehousing Information System (WIS)- Performance management- outsourcing decisions.

### Books:

1. Gwynne Richards, Warehouse Management: A Complete Guide to Improve Efficiency and Minimizing Cost in the Modern Warehouse. The Chartered Institute of Logistics and Transport, Kegan page limited.
2. David E. Mulchy & Joachim Sidon, A Supply Chain Logistics Program for Warehouse Management. Auerbachian Publications
3. World-Class Warehousing and Material Handling. (International ed.), McGraw-Hill. Muller, M..
4. Essentials of Inventory Management. (2 nd ed.), American Management Association.

  
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4 <sup>th</sup> semester	21MBA401K	Port Management for Logistics	L-T-P 3-0-0	3 credits	35 Hours
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### Course Objectives:

1. To be familiar with working of Ports and Airports.
2. To understand the operating procedures of logistics at Port and Airport
3. To be familiar with norms of logistics at port and airport.
4. To be aware of the development of facilities at the port in the era of globalization.
5. To be able to analyse the performance of standard operating procedures at port and airport for cargo.

### Module-I

Port Structure and Functions: Definition - Types and Layout of the Ports – Organisational Structure- Fundamental observations. Main functions and features of ports: Infrastructure and connectivity Administrative functions - Operational functions. Main services: Services and facilities for ships - Administrative formalities - Cargo transfer - Services and facilities for cargo - Additional “added value” service- Ports and their stakeholders like PHO, Immigration, Ship agents, Stevedores, CHA

### Module-II

Port Operations: Berths and Terminals - Berth Facilities and Equipment - ship Operation – Pre-shipment planning, the stowage plan, and onboard stowage - cargo positioning and stowage on the terminal - Developments in cargo/container handling and terminal operation - Safety of cargo operations - Cargo security: Measuring and evaluating performance and productivity.

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

### Module-III

Port Administration Ownership and Management Port ownership structure- Types of port ownership and administration – Organizations concerning ports - Boards governing the ports - Port management development Rise and fall of Ports - information technology in ports. Port ownership in Indian context: Acts governing the Ports in India - Port ownership structure in India. Port reform: Framework for port reform - Evolution of ports in a competitive world Alternative Port Management Structure and Ownership Models.

Air Transport: Introduction to Air Transport – Air Freight – IATA – Cargo Handling at Goods at AirPort – Information Management of Air Cargo – System and Modules – Distribution of Goods.

### Books:

1. N.v Suresh, D. Rajesh, V.Suganya, Logistic and air cargo management , iterative international publisher, iip
2. Patrick M.Alderton., Port Management and Operations. Information Law Category, U.K.Reference Books.
3. World Bank., Port Reform Tool Kit. World Bank, Washington.
4. Maria G.Burns., Port Management and Operations. CRS Press, U.K.
5. Alan E.Branch., Elements of Shipping. Chapman and Hall, Fairplay Publications, U.K.
6. De Moni, Measuring and Evaluating Port Performance and Productivity. UNCTAD, New York.

  
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4 <sup>th</sup> semester	21MBA402K	Material Handling in Logistics	L-T-P 3-0-0	3 credits	35 Hours
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**Course objective:**

- It should be able determine appropriate distance to be covered in logistics .
- To Facilitate the reduction in material damage as to improve quality.
- To know how to reduce overall manufacturing time by designing efficient material movement.

**MODULE-I**

**History of Materials Handling** – Need of Materials Handling – Importance of Materials Handling – Advantages of Materials Handling – Disadvantages of Materials Handling – Functions involved in Material Handling – Types of Layout & Performance of Layout.

**MODULE-II**

**Principles and their Uses** – Preliminary Considerations – Principles of Material Handling Equipment – Factors in Selection of Material Handling Equipment – Materials Handling and Role of Management  
**Selection of Materials Handling Equipment** – Economics of Material Handling Equipment – Cost Considerations – Cost Analysis – Cost Account and Material Handling – Cost Indices

**MODULE-III**

**Hoisting Machinery** – Elevating Equipment – Cranes – Important Parts of cranes – Types of cranes – Rotatory or Revolving Cranes – Bridge & Mobile Cranes.

**Conveying Equipment** – Traction Type Conveyors – Traction less Type Conveyors – Surface Tension Equipment – Narrow gauge equipment – Cross Holding Equipment – ODC Material Handling.

**Books:**

- 1) R.B.Choudary & G.R.N.Tagore, Plant Layout, and Material Handling, Khanna Publishers.
- 2) Jacob Fruchtbaum, Bulk Materials Handling Hand Book, CBS Publishers & Distributors.
- 3) Dr.K.C.Arora, Vikas V.Shinde, Aspects of Material Handling, Laxmi Publications (p) Ltd.

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4th semester	21MBA403K	Green Supply Chain Management	L-T-P 3-0-0	3 credits	35 Hours
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**Course Objective:**

- 1) To provide foundational knowledge associated with the green supply chain.
- 2) To teach the implication of today's most pressing environmental issues
- 3) To describe how the various green supply chain practices can actually save money, increase efficiency and reduce delivery time.

**MODULE-I**

Introduction – Traditional Supply Chain and Green Supply Chain – Environmental Concern and Supply Chain – Closed-loop Supply Chain – Corporate Environmental Management – Green Supply Chain (GSCM): Definition, Basic Concepts – GSCM Practices

**MODULE-II**

Design for the Environment (DFE) or Eco-Design – Eco-Design and Supplier Relationships – Definitions of Eco-Design – Tools of Product Eco-Design – Involving suppliers in product eco-design: Drivers, Challenges and Successful factors

Green Procurement and Purchasing – Definitions of green purchasing – Drivers of green purchasing – Green purchasing strategies – Green purchasing performance measurement – Green Supplier Development and Collaboration.


**MODULE-III**

Green Manufacturing or Production: Evolution, Definitions – 4Re's: recycling, remanufacturing, reuse and reduction – Closed-loop Manufacturing – ISO 14000 systems – Life Cycle Analysis (LCA) – Lean Manufacturing for Green Manufacturing or Production.

**Green Logistics and Transportation** – Definitions of Green Logistics – Critical drivers of Green Logistics – Green transportation and logistics practices – Environmental impacts of transportation and logistics – Closing the Loop: Reverse Logistics

**Books:**

1. Joseph Sarkis, Yijie Dou. Green Supply Chain Management: A Concise Introduction, Routledge.
2. Charisios Achillas, Dionysis D. Bochtis, Dimitrios Aidonis, Dimitris Folinas. Green Supply Chain Management, Routledge,.
3. Hsiao-Fan Wang, Surendra M. Gupta. Green Supply Chain Management: Product Life Cycle Approach, McGraw Hill publishing,
4. Stuart Emmett, Vivek Sood. Green Supply Chains: An Action Manifesto by Stuart Emmett, Wiley publications,.

  
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