



**Lok Jagruti Kendra University**  
University with a Difference

# **Diploma in Automobile Engineering**



**Course Code: 025010504**  
**Logistics and Supply Chain**

<b>Programme / Branch Name</b>			Diploma in Automobile Engineering			
<b>Course Name</b>	Logistics and Supply Chain				<b>Course Code</b>	025010504
<b>Course Type</b>	HSSC	BSC	ESC	PCC	OEC	PEC

**Legends:** HSSC: Humanities and Social Sciences Courses  
 ESC: Engineering Science Courses  
 OEC: Open Elective Courses

BSC: Basic Science Courses  
 PCC: Program Core Courses  
 PEC: Program Elective Courses

## 1. Teaching and Evaluation Scheme

Teaching Hours / Week					Evaluation Scheme				
L	T	P	Total Teaching Hours	Total Credit	CA	CCE	SEE (TH)	SEE (PR)	Total
3	2	0	5	5	10	40	50	-	100

**Legends:** L: Lectures T: Tutorial P: Practical  
 CA: Continuous Assessment (Attendance + Activity)  
 CCE: Continuous & Comprehensive Evaluation  
 SEE (Th): Semester End Evaluation (Theory)  
 SEE (Pr): Semester End Evaluation (Practical)

## 2. Prerequisite

- ✓ Management

## 3. Rationale

- ✓ The rationale for teaching Logistics and Supply Chain Management at the diploma level is that it is a crucial component of modern business operations. With the growth of globalization, companies are increasingly relying on efficient supply chain management to gain a competitive advantage. Effective supply chain management can help reduce costs, improve customer satisfaction, and increase efficiency throughout the supply chain.
- ✓ In addition, logistics and supply chain management play a vital role in the Indian economy, which is experiencing rapid growth and expansion. The logistics sector in India has been identified as a key driver of economic development and is expected to continue to grow in the coming years. By offering a diploma level course in Logistics and Supply Chain Management, students can develop the skills and knowledge necessary to succeed in this rapidly growing field.
- ✓ Moreover, logistics and supply chain management are multidisciplinary fields that require an understanding of various functions such as procurement, transportation, inventory management, warehousing, and distribution. As such, a diploma level course in Logistics and Supply Chain Management provides students with a well-rounded education that prepares them for a variety of career opportunities in different industries.
- ✓ Overall, the rationale for teaching Logistics and Supply Chain Management at the diploma level is to equip students with the knowledge and skills needed to manage the flow of goods and services effectively, reduce costs, improve customer satisfaction, and gain a competitive advantage in today's global business environment.

#### 4. Objectives

- ✓ To introduce students to the concept and importance of logistics and supply chain management in business operations.
- ✓ To provide students with an understanding of the different functions of logistics and supply chain management, including procurement, inventory management, transportation, warehousing, and distribution.
- ✓ To familiarize students with the challenges and opportunities involved in managing the supply chain, such as globalization, changing customer demands, and advancements in technology.
- ✓ To equip students with the skills and knowledge necessary to analyze and optimize supply chain operations, reduce costs, and improve customer satisfaction.
- ✓ To provide students with an understanding of the importance of supply chain integration and the role of technology in supply chain management.
- ✓ To develop students' critical thinking and problem-solving skills through case studies, simulations, and group projects.
- ✓ To prepare students for entry-level positions in logistics and supply chain management or for further education in the field.

#### 5. Contents

Unit No.	Unit Name	Topics	Learning Outcome	% Weightage	Hours
1.	<b>Introduction to Logistics and Supply Chain Management</b>	1.1 Definition and overview of logistics and supply chain management 1.2 Importance of logistics and supply chain management in business operations 1.3 Evolution of logistics and supply chain management 1.4 Key stakeholders in a supply chain	<ul style="list-style-type: none"> <li>Students will have a basic understanding of logistics and supply chain management concepts and principles.</li> </ul>	20	08
2.	<b>Procurement and Inventory Management</b>	2.1 Procurement process and its role in supply chain management 2.2 Types of inventory and inventory management techniques 2.3 Inventory control and its importance in supply chain management 2.4 Information technology in procurement and inventory management	<ul style="list-style-type: none"> <li>Students will have a basic understanding of procurement and inventory management concepts and practices.</li> </ul>	20	09
3.	<b>Transportation Management</b>	3.1 Different modes of transportation and their advantages and disadvantages 3.2 The role of transportation in supply chain management	<ul style="list-style-type: none"> <li>Students will have a basic understanding of transportation management</li> </ul>	20	08

		3.3 Key transportation challenges (e.g., congestion, infrastructure, regulations) 3.4 The role of technology in transportation management (e.g., GPS, telematics)	concepts and practices.		
4.	<b>Warehousing and Distribution</b>	4.1 The role of warehousing in supply chain management 4.2 Types of warehouses and their functions 4.3 Distribution network design and its impact on supply chain management 4.4 The role of technology in warehousing and distribution (e.g., automation, WMS)	<ul style="list-style-type: none"> <li>Students will have a basic understanding of warehousing and distribution concepts and practices.</li> </ul>	20	09
5.	<b>Supply Chain Integration</b>	5.1 Importance of supply chain integration for business performance 5.2 Types of supply chain integration (e.g., vertical, horizontal, internal, external) 5.3 Benefits and challenges of supply chain integration 5.4 The role of technology in supply chain integration (e.g., ERP, SCM software)	<ul style="list-style-type: none"> <li>Students will have a basic understanding of supply chain integration concepts and practices.</li> </ul>	20	08

**Total Hours**      **42**

## 6. Suggested Specification Table for Evaluation Scheme

Unit No.	Unit Name	Distribution of Topics According to Bloom's Taxonomy					
		R %	U %	App %	C %	E %	An %
1.	Introduction to Logistics and Supply Chain Management	15	15	35	15	10	10
2.	Procurement and Inventory Management	15	15	35	15	10	10
3.	Transportation Management	15	15	35	15	10	10
4.	Warehousing and Distribution	15	15	35	15	10	10
5.	Supply Chain Integration	15	15	35	15	10	10

**Legends:**      R: Remembering      U: Understanding  
                     App: Applying      C: Creating  
                     E: Evaluating      An: Analyzing

## 7. Reference Books

- 1) "Supply Chain Management: Strategy, Planning, and Operation" by Sunil Chopra and Peter Meindl
- 2) "Logistics Management and Strategy" by Alan Harrison and Remko Van Hoek
- 3) "Introduction to Logistics Systems Planning and Control" by Gianpaolo Ghiani, Gilbert Laporte, and Roberto Musmanno
- 4) "Principles of Supply Chain Management: A Balanced Approach" by Joel D. Wisner, Keah-Choon Tan, and G. Keong Leong
- 5) "Operations and Supply Chain Management: The Core" by F. Robert Jacobs and Richard B. Chase
- 6) "Supply Chain Management: A Global Perspective" by Nada R. Sanders
- 7) "Logistics Engineering and Management" by Benjamin S. Blanchard and Wolter J. Fabrycky
- 8) "Global Logistics and Supply Chain Management" by John Mangan, Chandra Lalwani, and Tim Butcher
- 9) "Transportation and Logistics Management" by Donald J. Bowersox, David J. Closs, and M. Bixby Cooper
- 10) "Managing Supply Chains: Principles and Practice" by Vinod V. Sople

## 8. Open Sources (Website, Video, Movie)

- 1) "Logistics and Supply Chain Management" by MIT OpenCourseWare (Open-source link) - This is a comprehensive course that covers the principles and concepts of logistics and supply chain management, including procurement, transportation, warehousing, and inventory management.
- 2) "Introduction to Supply Chain Management" by University of California, Irvine on Coursera (Online video course) - This course introduces supply chain management, including topics such as demand planning, inventory control, transportation, and distribution.
- 3) "Supply Chain Fundamentals" by Georgia Tech on edX (Online video course) - This course covers the basics of supply chain management, including topics such as forecasting, inventory management, transportation, and warehousing.
- 4) "Logistics and Supply Chain Management" by Indian Institute of Management Bangalore on edX (Online video course) - This course covers the principles and practices of logistics and supply chain management, including topics such as procurement, inventory management, and transportation.
- 5) "Logistics and Supply Chain Management" by Khan Academy (Online video course) - This course covers the basics of logistics and supply chain management, including topics such as inventory management, transportation, and distribution.
- 6) "Supply Chain Management" by Udemy (Online video course) - This course covers the fundamentals of supply chain management, including topics such as procurement, inventory management, transportation, and distribution.
- 7) "Logistics and Supply Chain Management" by Coursera (Online video course) - This course covers the principles and practices of logistics and supply chain management, including topics such as procurement, inventory management, and transportation.
- 8) "Supply Chain Analytics" by edX (Online video course) - This course covers the basics of supply chain analytics, including topics such as data analysis, optimization, and simulation.
- 9) "Logistics and Supply Chain Management" by FutureLearn (Online video course) - This course covers the principles and practices of logistics and supply chain management, including topics such as procurement, inventory management, and transportation.