



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Programme: Master of Business Administration, 3<sup>rd</sup> Semester**  
**Branch: Logistic & Supply Chain Management**  
**Subject Name: Port and Airport Logistics Management**  
**Subject Code: 1539709**

**1. Learning Outcome:**

<b>Learning Outcome Component</b>	<b>Learning Outcome (Learner will be able to)</b>
Business Environment and Domain Knowledge (BEDK)	Understand port structure and function, port operation, port administration, and air transport.
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	Analyse various aspects of port and airport logistic management and provide feasible techno-managerial solutions for logistic management.
Global Exposure and Cross-Cultural Understanding (GECCU)	Acquire a global understanding of the different approaches to port and airport administration and management.
Social Responsiveness and Ethics (SRE)	Construct a strong framework related to ethical and legal dilemmas frequently encountered by logistics businesses.
Effective Communication (EC)	Identify strategies for successfully managing the functioning of airports and ports. Construct several kinds of port and airport management documents to ensure efficient port and airport administration and apply information technology to administer the ports and airports.
Leadership and Teamwork (LT)	Develop the leadership abilities necessary to plan and execute port and airport logistics systems from inception to completion.

**LO - PO Mapping: Correlation Levels:**

1 = Slight (Low); 2 = Moderate (Medium); 3 = Substantial (High), “-“= no correlation

<b>Sub. Code:</b>	<b>PO1</b>	<b>PO2</b>	<b>PO3</b>	<b>PO4</b>	<b>PO5</b>	<b>PO6</b>	<b>PO7</b>	<b>PO8</b>	<b>PO9</b>
LO1: Understand port structure and function, port operation, port administration, and air transport.	3	3	2	-	-	-	-	-	1
LO2: Analyse various aspects of port and airport logistic management and provide feasible techno-managerial solutions for logistic management.	2	3	3	-	-	-	-	2	2
LO3: Acquire a global understanding of the different approaches to port and airport administration and management.	2	2	2	1	3	-		-	1
LO4: Identify strategies for successfully managing the functioning of airports and ports.	2	2	2	3					1



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LO5: Construct several kinds of port and airport management documents to ensure efficient port and airport administration and apply information technology to administer the ports and airports.	2	2	2	3	-	-	1	-	1
LO6: Develop the leadership abilities necessary to plan and execute port and airport logistics systems from inception to completion.	2	2	2	-	-	3	-	2	2

**2. Course Duration:** The course duration is of **40 sessions of 60 minutes each.**

**3. Course Contents:**

Module No:	Contents	No. of Sessions	70 Marks (External Evaluation)
I	<b>Port Structure and Functions:</b> 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	10	18
II	<b>Port Operations:</b> Berths and Terminals - Berth Facilities and Equipment - ship Operation – Pre shipment planning, the stowage plan and on-board 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.  <b>Port Development:</b> 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.	10	18
III	<b>Port Administration Ownership and Management</b> 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	10	17



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	reform - Evolution of ports in a competitive world Alternative Port Management Structure and Ownership Models.		
<b>IV</b>	<b>Air Transport:</b> Introduction to Air Transport – Air Freight – IATA – Cargo Handling at Goods at Air Port – Information Management of Air Cargo – System and Modules – Distribution of Goods.	10	17
<b>V</b>	<b>Practical:</b> <ul style="list-style-type: none"> <li>○ Research and define port types, layouts, and organizational structures, emphasizing key observations.</li> <li>○ Analyze port functions, including infrastructure, connectivity, administrative, and operational aspects.</li> <li>○ Evaluate port services for ships and cargo, administrative processes, and value-added services.</li> <li>○ Explore port operations, focusing on berths, terminals, cargo handling, safety, and security measures.</li> <li>○ Investigate port development phases, growth trends, and the impact of shipping technology.</li> <li>○ Examine port administration, ownership structures, and the role of information technology.</li> </ul>	---	(30 marks CEC)

**4. Pedagogy:**

- ICT enabled Classroom teaching
- Case study
- Practical / live assignment
- Interactive class room discussions

**5. Evaluation:**

Students shall be evaluated on the following components:

<b>A</b>	<b>Internal Evaluation</b>	<b>(Internal Assessment- 50 Marks)</b>
	• Continuous Evaluation Component	30 marks
	• Class Presence & Participation	10 marks
	• Quiz	10 marks
<b>B</b>	<b>Mid-Semester examination</b>	<b>(Internal Assessment-30 Marks)</b>
<b>C</b>	<b>End –Semester Examination</b>	<b>(External Assessment-70 Marks)</b>

**6. Reference Books:**

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1	Patrick M.Alderton	Port Management and Operations	Information Law Category, U.K.	2008
2	World Bank	Port Reform Tool Kit.	World Bank, Washington.	2007
3	Maria G.Burns	Port Management and Operations.	CRS Press, U.K.	2014



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4	Alan E.Branch	Elements of Shipping	Chapman and Hall, Fairplay Publications, U.K.	2008
5	De Monie	Measuring and Evaluating Port Performance and Productivity.	UNCTAD, New York.	1989

**Note:** Wherever the standard books are not available for the topic appropriate print and online resources, journals and books published by different authors may be prescribed

**7. List of Journals / Periodicals / Magazines / Newspapers / Web resources, etc.**

1. Maritime Policy & Management
2. Journal of Transport Geography
3. Port Technology International
4. International Journal of Shipping and Transport Logistics
5. International Journal of Logistics Management
6. Air Cargo World
7. IATA Publications
8. Port Technology News
9. Journal of Air Transport Management
10. International Journal of Aviation Management