



**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**Programme: Master of Business Administration, 4<sup>th</sup> Semester**  
**Branch: Logistic & Supply Chain Management**  
**Subject Name: Digital Technologies for e-Logistics**  
**Subject Code: 1549702**

**1. Learning Outcome:**

<b>Learning Outcome Component</b>	<b>Learning Outcome (Learner will be able to)</b>
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> <li>• <i>Develop</i> understanding of basics of e-Logistics technologies.</li> </ul>
Critical Thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	<ul style="list-style-type: none"> <li>• <i>Provide</i> feasible techno-managerial solutions by analyzing the prevailing logistics industry and applying the latest digital tools for redesigning the e-logistics.</li> </ul>
Global Exposure and Cross-Cultural Understanding (GECCU)	<ul style="list-style-type: none"> <li>• <i>Develop</i> a global perspective regarding various types of digital technologies used in logistics systems.</li> </ul>
Social Responsiveness and Ethics (SRE)	<ul style="list-style-type: none"> <li>• <i>Construct</i> a strong framework related to ethical, legal &amp; IPR related dilemmas frequently encountered by logistics businesses.</li> </ul>
Effective Communication (EC)	<ul style="list-style-type: none"> <li>• <i>Develop</i> various requirements document, to be written in clear and concise business language, and present it to a business entities.</li> </ul>
Leadership and Teamwork (LT)	<ul style="list-style-type: none"> <li>• <i>Acquire</i> leadership for successful execution of digital technologies in logistics systems; right from conceptualization to implementation.</li> </ul>

**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>
<b>LO1:</b> <i>Develop</i> understanding of basics of e-Logistics technologies.	<b>2</b>	<b>2</b>	<b>2</b>	-	<b>2</b>	-	-	<b>1</b>	<b>2</b>
<b>LO2:</b> <i>Provide</i> feasible techno-managerial solutions by analyzing the prevailing logistics industry and applying the latest digital tools for redesigning the e-logistics.	<b>2</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>2</b>	-	<b>2</b>	<b>2</b>
<b>LO3:</b> <i>Develop</i> a global perspective regarding various types of digital technologies used in logistics systems.	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>1</b>
<b>LO4:</b> <i>Construct</i> a strong framework related to ethical, legal & IPR related dilemmas frequently encountered by logistics businesses.	-	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	-	<b>3</b>	-	<b>2</b>



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<b>LO5:</b> <i>Develop</i> various requirements document, to be written in clear and concise business language, and present it to a business entities.	1	1	2	3	2	2	2	2	2	1
<b>LO6:</b> <i>Acquire</i> leadership for successful execution of digital technologies in logistics systems; right from conceptualization to implementation.	1	2	3	3	1	3	-	1	1	1

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

2. **Course Contents:**

Module No.	Contents	No. of Sessions	70 Marks (External Evaluation)
<b>I</b>	<p><b>Drivers of Digital Business and Industry 4.0:</b> Introduction to digital business and e-commerce, Marketplace analysis for e-commerce, Managing Digital Business Infrastructure, E-environment and Factors Driving E-Business. Industry 4.0 and Emerging Trends.</p> <p><b>Managing Digital Business Infrastructure:</b> Technology and digital business infrastructure components, Focus on Web services, SaaS, cloud computing and service-oriented architecture (SOA), Benefits of web services or SaaS, Application programming interfaces (APIs), Challenges of deploying SaaS, Virtualization, Service oriented architecture (SOA), Selecting hosting providers.</p>	10	18
<b>II</b>	<p><b>E-Business Environment:</b> Social and legal factors for e-business service adoption, Understanding users’ access requirements and consumers influence from online channels, Contemporary business demand for digital business services, B2B, B2C, C2C and B2G Models, Privacy and trust in e-commerce, National and International regulations on privacy and electronic communications.</p>	10	18
<b>III</b>	<p><b>Digital Business Strategy:</b> The imperative for digital business strategy, Digital channel strategies, Strategy process models for digital business, Selection of digital business strategy, Competitive environment analysis, Assessing competitive threats, Sell-</p>	10	17



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	side and Buy-side threats, Co-opetition, Competitor analysis, Resource-advantage mapping, Digital business channel priorities and its diversification, Business, service and revenue models, Marketplace restructuring.		
<b>IV</b>	<p><b>E-Procurement:</b>            Understanding the procurement process, Participants in different types of e-procurement, Drivers of e-procurement, Benefits of e-procurement, Estimating e-procurement costs, Barriers and risks of e-procurement adoption.</p> <p><b>E-Logistics:</b>            E-Logistics Technologies: Advance Ship Notice (ASN), Tracking systems, Satellite global positioning systems (GPS) and geographic information systems (GIS), Bar-coding and scanning, RFID, QR Codes, Digital Signature Technology, Application of AI, ML, IOT, Block chain, Robotics, Automation and Drone technologies in logistics.</p>	10	17
<b>V</b>	<p><b>Student should:</b></p> <ul style="list-style-type: none"> <li>• Investigate digital business fundamentals, e-commerce marketplace dynamics, and models of e-business.</li> <li>• Examine digital infrastructure management, including web services, cloud computing, and service-oriented architecture.</li> <li>• Explore digital business strategy development, competitive analysis, and diverse channel strategies.</li> <li>• Investigate e-procurement processes, benefits, and emerging e-logistics technologies for supply chain optimization.</li> <li>• Analyze &amp; understand latest digital technology adopted by firms across the world in e-logistics.</li> </ul>	---	(30 marks CEC)

**3. Pedagogy:**

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

**4. Evaluation:**

Students shall be evaluated on the following components:

	<b>Internal Evaluation</b>	<b>(Internal Assessment- 50 Marks)</b>
<b>A</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>



**5. Reference Books:**

No.	Author	Name of the Book	Publisher	Year of Publication / Edition
1	Dave Chaffey	Digital Business and E-commerce Management – Strategy, Implementation and Practices	Pearson	Latest Edition
2	Gerhard Oswald & Michael Kleinemeier	Shaping the Digital Enterprise: Trends and Use Cases in Digital Innovation and Transformation	Springer	Latest Edition
3	Elias M. Awad	Electronic Commerce	Pearson	Latest Edition
4	Ravi Kalakota & Andrew B. Whinston	Electronic Commerce-A Manager's guide	Addison Wesley	Latest Edition
5	Efraim Turban, David King, Jae Lee, H. Michael Chung	Electronic Commerce–A Managerial Perspective	Pearson	Latest Edition

**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.

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

1. Journal of Electronic Commerce Research
2. Harvard Business Review
3. International Journal of Electronic Commerce
4. Journal of Supply Chain Management
5. Journal of Business Logistics
6. Digital Commerce 360
7. McKinsey Digital
8. Deloitte Insights
9. MOOC: (For Reference) Prof. Priyanka Verma, Prof. Sushmita Narayana, Prof. Debabrata Das, “Supply Chain Digitization”, IIT Bombay, MOOC, NPTEL: <https://nptel.ac.in/courses/110101436>