



GUJARAT TECHNOLOGICAL UNIVERSITY

Syllabus for Master of Business Administration, 3rd Semester

Subject Class: Sectoral _ Elective

Subject Name: Logistics and Supply Chain Management (LSCM)

Subject Code: 4539297

With effective
from academic
year 2018-19

1. Learning Outcomes:

Learning Outcome Component	Learning Outcome (Student will be able to)
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> • <i>Analyze</i> the relationship between logistics decisions (e.g., facilities, inventory, and transportation) and the performance of a given firm.
Critical thinking, Business Analysis, Problem Solving and Innovative Solutions (CBPI)	<ul style="list-style-type: none"> • <i>Recommend</i> strategies to manage inventories, including decisions regarding the timing and quantity for replenishments without hurting the level of product availability. • <i>Estimate</i> best paths to route vehicles to deliver and collect goods at multiple stops.
Global Exposure and Cross-Cultural Understanding (GECCU)	<ul style="list-style-type: none"> • <i>Compare</i> and <i>contrast</i> the developments in supply chain management of various countries.
Social Responsiveness and Ethics (SRE)	<ul style="list-style-type: none"> • <i>Identify</i> malpractices prevalent in supply chain management.
Effective Communication (EC)	<ul style="list-style-type: none"> • <i>Justify</i> the decisions undertaken to manage logistics and supply chain in a given situation.
Leadership and Teamwork (LT)	<ul style="list-style-type: none"> • <i>Analyze</i> a given case / situation in a team and <i>create</i> and <i>explain</i> an optimal and sustainable solution by applying Logistics and Supply Chain Management strategies.

LO – PO Mapping: Correlation Levels:

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

Sub. Code: 4539297	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
LO1: <i>Analyze</i> the relationship between logistics decisions (e.g., facilities, inventory, and transportation) and the performance of a given firm.	3	2	3	-	-	1	-	1	3
LO2: <i>Recommend</i> strategies to manage inventories, including decisions regarding the timing and quantity for replenishments without hurting the level of product availability.	2	2	-	2	-	1	-	1	2
LO3: <i>Estimate</i> best paths to route vehicles to deliver and collect goods at multiple stops.	1	1	2	-	-	-	-	3	2
LO4: <i>Compare</i> and <i>contrast</i> the developments in supply chain management of various countries.	2	2	3	2	3	1	-	1	1
LO5: <i>Identify</i> malpractices prevalent in supply chain management.	1	-	-	1	1	1	3	1	1



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LO6: <i>Justify</i> the decisions undertaken to manage logistics and supply chain in a given situation.	2	2	1	3	1	1	2	1	1
LO7: <i>Analyze</i> a given case / situation in a team and <i>create</i> and <i>explain</i> an optimal and sustainable solution by applying Logistics and Supply Chain Management strategies.	3	-	3	2	1	3	1	1	1

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	<p>Logistics and Supply Chain Management – An Overview:</p> <ul style="list-style-type: none"> Logistics, SCM and the difference between logistics and SCM. Supply chain and value chain Mission of logistics management Value addition by logistics Drivers of supply chain performance <p>Supply Chain Strategy and Performance Measures:</p> <ul style="list-style-type: none"> Customer service and cost trade-offs <ul style="list-style-type: none"> Impact of out-of-stock Setting customer service objectives and priorities Supply chain performance measures Enhancing supply chain performance <p>Outsourcing: Make versus Buy.</p>	10	18
II	<p>Logistics Management:</p> <ul style="list-style-type: none"> Role of Logistics in Supply Chain Management Logistics Service Providers 3PL's & 4PL's Logistics Activities Marketing and logistics interface Logistics cost analysis and total cost analysis Reducing logistics lead time Packaging and materials handling <p>Designing Transportation Network:</p> <ul style="list-style-type: none"> Drivers of transportation decisions Modes of transportation Design options <ul style="list-style-type: none"> Direct shipment network 	10	18



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	<ul style="list-style-type: none"> ▪ Direct shipping via milk run ▪ Distribution centre ▪ Cross docking ▪ Shipping via DC using milk runs ▪ Tailored network • Routing, scheduling and sequencing in transportation. • Vehicle Routing Problems. • Route sequencing procedure <ul style="list-style-type: none"> ▪ Farthest insert, nearest insert, nearest neighbor, Sweep • Route improvement procedure <ul style="list-style-type: none"> ▪ 2-OPT and 3-OPT. <p>Reverse Logistics:</p> <ul style="list-style-type: none"> • Definition, reasons, benefits • Elements of reverse logistics • Closed loop supply chain 		
III	<p>Network Design:</p> <ul style="list-style-type: none"> • Define the network design process • Perform a LSCM Audit • Examine the LSCM network alternatives • Conduct a Facility Location analysis • Make decisions regarding network and facility locations • Develop an implementation plan. • Modeling Approaches: <ul style="list-style-type: none"> ▪ Optimization and simulation models • Facility Location <p>Supply Chain Integration:</p> <ul style="list-style-type: none"> • Internal and External Integration <p>Supply Chain Restructuring.</p>	10	17
IV	<p>Synchronous Supply Chain:</p> <ul style="list-style-type: none"> • Virtual supply chain and the extended enterprise • Quick response logistics • Role of information <p>Agile Supply Chains.</p> <p>Introduction to use of Technology in SCM</p> <ul style="list-style-type: none"> • Role of Technology in Supply Chain Management • Key Application Tools <p>Strategic Challenges for supply chains.</p> <p>Sustainable Supply Chain Management.</p>	10	17
V	<p>Practical:</p> <p>Assignment/Presentation based on the above topics or the selected Industry or Firm.</p>	---	(30 marks CEC)



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4. Pedagogy:

The course will use the following pedagogical tools:

- Classroom Discussion of Concepts and Applications
- Case Discussions
- Discussion on articles and news from Financial Daily such as Business Standard or Economic Times, blogs and other websites on daily basis
- Management Exercise / Stimulations /Games/ Learning from Movies

5. Evaluation:

Students shall be evaluated on the following components:

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

6. Reference Books:

Sr. No.	Author	Name of the Book	Publisher	Year of Publication
1	Martin Christopher	Logistics and Supply Chain Management	FT Publishing	2016 / 5 th
2	Donald J Bowersox, David J Closs, M. Bixby Cooper, John C. Bowersox	Supply Chain Logistics Management	McGraw Hill	2018 / 4 th
3	John J. Coyle, C. John Langley, Brian J. Gibson, Robert A. Novack	Managing Supply Chain: A Logistics Approach	Cengage	2013 / 9 th
4	Janat Shah	Supply Chain Management: Text and Cases	Pearson	2016 / 2 nd
5	Chopra Sunil, Peter Meindl, Kalra Dharam Vir	Supply Chain Management : Strategy, Planning, and Operation	Pearson Publishers	2016 / 6 th
6	Mr.V.Anandaraj, Dr.S.Ramachandran, Mr.S.Kumaran, Mr.Ishanka Saikia	Supply Chain and Logistics Management	Airwalk	2018 / 1 st
7	D. K. Agarwal	Textbook of Logistics and Supply Chain Management	Trinity	2015
8	Chase Richard B, Shankar Ravi, Jacobs F Robert	Operations and Supply Chain Management	McGraw Hill	2014
9	Russell and Taylor	Operations and Supply Chain Management	Wiley	2016 / 9 th
10	Bhat Shridhara K	Supply Chain Management	Himalaya	2010
11	Wisner, Keong Leong and Keah-Choon Tan	Principles of Supply Chain Management A Balanced Approach	Cengage	2018 / 5 th



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12	James Stevens	Supply Chain Management: Strategy, Operation & Planning for Logistics Management (Logistics, Supply Chain Management, Procurement)	Shepal	2016
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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. The International Journal of Logistics Management
2. International Journal of Logistics Research and Applications
3. Journal of Supply Chain Management, Logistics and Procurement
4. Logistics and Supply Chain Practices in India
5. Supply Chain Management Review
6. Inbound Logistics