



GUJARAT TECHNOLOGICAL UNIVERSITY
Programme: Master of Business Administration, 4th Semester
Branch: Logistic & Supply Chain Management
Subject Name: Designing Operations and Supply Chain
Subject Code: 1549706

1. Learning Outcomes:

Learning Outcome Component	Learning Outcome
Business Environment and Domain Knowledge (BEDK)	<ul style="list-style-type: none"> Interpret the Service, Process, Supply chain and facility & work design.
Critical thinking , Business Analysis ,Problem solving & Innovative solutions (CBPI)	<ul style="list-style-type: none"> Analyze & Evaluate the Service, Process, Supply chain and facility & work design.
Global Exposure & Cross Cultural Understanding (GECCU)	<ul style="list-style-type: none"> Evaluate the Operations & Supply chain global scenario.
Social Responsive & Ethics (SRE)	<ul style="list-style-type: none"> Distinguish between sustainable- unsustainable & ethical & unethical practices.
Effective Communication (EC)	<ul style="list-style-type: none"> Develop communication, presentation & writing skills for effective information presentation of Service, Process, Supply chain and facility & work design.
Leadership & Teamwork (LT)	<ul style="list-style-type: none"> Collaborate & contribute toward effective decision making concerning Operations & Supply chain design.

LO - PO Mapping: Correlation Levels:

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

Sub. Code:	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9
Interpret the Service, Process ,Supply chain and facility & work design.	3	2	-	-	2	1	-	1	1
Analyze & Evaluate the Service, Process, Supply chain and facility & work design.	2	3	3	-	2	1	-	1	1
Evaluate the Operations & Supply chain global scenario.	2	2	1	2	3	1	1	1	1
Distinguish between sustainable- unsustainable & ethical & unethical practices.	1	1	1	1	2	-	3	1	1
Develop communication, presentation & writing skills for effective information presentation of Service, Process, Supply chain and facility & work design.	2	2	2	3	1	1	1	-	1
Collaborate & contribute toward effective decision making concerning Operations & Supply chain design.	2	2	2	3	2	3	1	1	1

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



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3. Modules

Module No	Module Content	No. of Sessions	70 Marks (External Evaluation)
I	<p>Service Design:</p> <ul style="list-style-type: none"> • Characteristics of Services, • Customer contact in Service systems, Customer contact behavior & skill, Service Provider selection, development & empowerment, service guarantees & recovery • Service Design Process, Integrated framework for Goods & Service Design • Complexity & Divergence in Service Systems • Tools for Service Design- Service Blueprinting • Service Delivery System Design- facility location & layout, Services cape 	12	18
II	<p>Process Selection, Design and Analysis</p> <ul style="list-style-type: none"> • Process Choice Decisions, • Service Positioning Matrix • Process Design- Process & Value Stream Mapping • Process Analysis & improvement • Process Design & Resource Utilization- Little's law 	08	17
III	<p>Supply Chain Design</p> <ul style="list-style-type: none"> • Global Supply Chains- Decision in supply chain design • Supply Chain Design Trade-Offs- Efficient & Responsive Supply Chains, Push & Pull Systems, Vertical Integration, Make or Buy decisions, Outsourcing and Offshoring decisions, economics of outsourcing decisions • Location decisions- Critical factors in Location Decisions, Location decision Process, Center of Gravity Method • Creating an effective supply chain • Strategic Options for Supply Chain Design- efficient supply chain, Responsive supply chain, Design for responsive & efficient Supply Chains, • Supply Chain design for Mass customization 	12	18



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IV	<p>Facility and Work Design</p> <ul style="list-style-type: none"> • Facility Layout- Facility Layout in Service Organizations, Product, Process, Cellular & fixed position layout • Designing Process layouts • Workplace and Job Design- Workplace design, Job design, Safety, ergonomics and work environment, workforce ethics and global supply chains, 	08	17
V	<p>Students are suggested to visit and study the manufacturing unit and understand their vendors supply chain system as well as supply chain designs.</p> <p>Students are also suggested to visit logistic providing companies and understand their service operations and network for the B2B and B2C goods as well as Ecommerce and understand that how these operations are different and which are the key commonalities</p>		30(CEC)

4. Pedagogy:

1. ICT enabled Classroom teaching
2. Case study
3. Practical / live assignment
4. Interactive class room discussions

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	David A. Collier & James R. Evans	Operations + Supply Chain management	Cengage	6 th edition-2022
2	Lee J Krajewski, Manoj R Malhotra, Larry P Ritzman, Samir K. Srivastava	Operations Management- Processes & supply Chains	Pearson	12 th edition-2019
3	B. Mahadevan	Operations Management- Theory & Practice	Pearson	3 rd Edition
4	Roberta S. Russel & Bernard W. Taylor	Operations and Supply Chain Management	Wiley	8 th edition-2017

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.



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

1. International Journal of Logistics Research and Applications
2. Journal of Supply Chain Management, Logistics and Procurement
3. Logistics and Supply Chain Practices in India
4. Supply Chain Management Review
5. International Journal of Production Economics
6. Journal of Process Management