

GUJARAT TECHNOLOGICAL UNIVERSITY

BRANCH NAME: PRODUCTION ENGINEERING
SUBJECT NAME: Department Elective-II (Supply Chain Management)
SUBJECT CODE: 2172505
B.E. 7th SEMESTER

Type of course: Under Graduate

Prerequisite: NIL

Rationale: The course aims to impart basic skills of supply chain management.

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks						Total Marks
L	T	P		Theory Marks			Practical Marks			
			ESE (E)	PA (M)		PA (V)		PA (I)		
				PA	ALA	ESE	OEP			
3	2	0	5	70	20	10	30	0	20	150

Content:

Sr. No.	Content	Total Hrs	% Weightage
1	Introduction Introduction, Generic Types of supply chain, Various Definitions and Implications, Major Drivers of Supply chain.	2	4
2	Strategic Decisions- in Supply Chain Management Introduction, Business Strategy, Core Competencies in Supply Chain, Strategic SC Decisions, Customer Relationship Management Strategy, Supplier Relationship Management Strategy	5	11
3	Source of Management in Supply Chain Introduction, Elements of Strategic Sourcing, A Collaborative Perspective, Development of Partnership.	4	8
4	Inventory Management in Supply Chain Introduction, Types of Inventory, Supply/ Demand Uncertainties, Inventory costs, Selective Inventory Control, Vendor Manage Inventory system, Inventory Performance Measure	5	11
5	Logistics In Supply Chain Management Introduction, Strategy, Transportation Selection, Trade-off, Models for Transportation and Distribution, Third Party Logistics,, Overview of Indian Infrastructure for Transportation	5	11
6	Information Technology in Supply Chain Introduction, Types of IT Solutions like Electronic Data Inter change (EDI), Intranet/ Extranet, Data Mining/ Data Warehousing	4	8

	and Data Marts, E-Commerce, E- Procurement, Bar Coding Technology.		
7	Information System in Supply Chain Introduction, Computer Based Information Systems, Computer Models and Perceptions about ERP, ERP & SCM.	4	8
8	Application of Mathematical Modeling in Supply Chain Introduction, Modeling, Consideration in Modeling SCM System, Structuring the Logistic chain, Concept of Modeling.	4	8
9	Reverse Supply Chain Introduction, Reverse Supply Chain v/s Forward Supply Chain, Types of Reverse Flows, Issues in Management of Reverse Supply Chain, Reverse Supply Chain for Food items, Reverse Logistic and Environment Impact.	3	8
10	Integration & Collaborative Supply Chain Introduction, Evolution of collaborative SCM, Efficient Customer response, Collaboration at various levels, Imperatives for Successful Integrative Supply Chains.	3	8
11	Agile Supply Chain Introduction, Source of Variability, Characteristics of Agile Supply Chain, Achieving Agility in Supply Chain.	3	7
12	Cases of Supply Chain Cases of Supply Chain like, News Paper Supply Chain, Book Publishing, Mumbai Dabbawala, Disaster management, Organic Food, Fast Food.	2	8
	Total	44	100%

Suggested Specification table with Marks (Theory):

Distribution of Theory Marks					
R Level	U Level	A Level	N Level	E Level	C Level
7	21	14	7	14	7

Legends: R: Remembrance; U = Understanding; A = Application and above Levels (Revised Bloom's Taxonomy)

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table

Reference Books:

1. Supply Chain Management Theories & Practices, R. P. Mohanty, S. G. Deshmukh, Dreamtech Press, 19-A, Anari Road, Daryaganj, New Delhi
2. Supply Chain Management Strategy, Planning & Operation by Sunil Chopra, Peter Meindl
3. Total Supply Chain Management by Ron Basu, J. Nevan Wright
4. Supply Chain Management, Chopra, Pearson
5. Logistics Engineering and Management, Blanchard, pearson

Course Outcome:

After learning the course the students should be able to:

1. Understand about SCM.
2. Implement information system in supply chain.
3. Analyze Mathematical modeling of Supply Chain.
4. Understand basics of Reverse & Agile supply chain.
5. Analyze various case studies on supply chain.

List of Experiments:

Assign Tutorials based on Syllabus

Design based Problems (DP)/Open Ended Problem:

NA

Major Equipment:

NIL

List of Open Source Software/learning website:

1. <http://nptel.ac.in/>

ACTIVE LEARNING ASSIGNMENTS: Preparation of power-point slides, which include videos, animations, pictures, graphics for better understanding theory and practical work – The faculty will allocate chapters/ parts of chapters to groups of students so that the entire syllabus to be covered. The power-point slides should be put up on the web-site of the College/ Institute, along with the names of the students of the group, the name of the faculty, Department and College on the first slide. The best three works should submit to GTU.