



SARDAR VALLABHBHAI PATEL EDUCATION SOCIETY'S
R. N. G. PATEL INSTITUTE OF TECHNOLOGY - RNGPIT

An Autonomous Institute u/s UGC Act 1956

Approved by AICTE & affiliated to Gujarat Technological University

Bardoli - Navsari Road, At: Isroli (tarpore), Po: Afwa, Tal: Bardoli, Dist: Surat, Pin - 394620
 Phone: 95129 00457, 95129 00458 • Email: Info@rngpit.ac.in • Website: www.rngpit.ac.in

Program Name: MBA
Level: Post Graduation
Branch: Logistics & Supply Chain Management
Course / Subject Code: 1MB1302
Course / Subject Name: Supply Chain Planning

w. e. f. Academic Year:	2025-26
Semester:	III
Category of the Course:	Core Course (CC) SP Major

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Understand the key components and strategies involved in supply chain planning and management.	U
02	Analyze demand forecasting techniques and their impact on supply chain efficiency.	A
03	Apply inventory management and optimization techniques to improve supply chain performance.	A
04	Develop decision-making skills for logistics planning, supply chain network design, and risk management.	E

**Revised Bloom's Taxonomy (RBT)*

Teaching and Examination Scheme:

Teaching Scheme (in Hours)				Total Credits L+T+ (PR/2)	Assessment Pattern and Marks				Total Marks
L	T	PR	TW/ SL	C	Theory		Tutorial / Practical		
					SEE (TH)	IAT	CCE	SEE (P)	
3	1	0	0	4	70	30	50	00	150

SEE: Semester End Examination

IAT: Internal Assessment Test

CCE: Continuous and Comprehensive Evaluation



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TW/SL : Term Work and Self Learning

Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	Introduction to Supply Chain Planning <ul style="list-style-type: none">• Definition and Scope of Supply Chain Planning• Strategic Role of Supply Chain in Business• Supply Chain Performance Metrics• Supply Chain Planning Process• Demand Planning and Forecasting• Supply Chain Integration and Collaboration	12	25%
2.	Inventory and Demand Management <ul style="list-style-type: none">• Types of Inventory and Inventory Control Systems• EOQ Model and Safety Stock Calculation• Demand Forecasting Techniques• Bullwhip Effect and Its Mitigation• Just-in-Time (JIT) and Lean Supply Chain• Supplier Relationship and Procurement Strategies	12	25%
3.	Supply Chain Network Design and Optimization <ul style="list-style-type: none">• Logistics and Distribution Planning• Facility Location and Warehouse Management• Transportation Planning and Optimization• Global Supply Chain and Risk Management• Technology and Digital Transformation in Supply Chains• Sustainable and Green Supply Chain Practices	12	25%
4.	Supply Chain Analytics and Decision Making <ul style="list-style-type: none">• Use of Big Data and Analytics in Supply Chains• Decision Support Systems in Supply Chain• Simulation and Modeling Techniques	12	25%



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	<ul style="list-style-type: none"> Block chain and AI in Supply Chain Planning Case Studies on Successful Supply Chain Strategies Challenges in Implementing Supply Chain Planning 		
5.	Students will be engaged in practical activities such as Demand Forecasting Analysis using Excel/Python, Inventory Optimization and Cost Minimization, Designing an Efficient Supply Chain Network for a Given Industry, Risk Management and Sustainability in Supply Chain and Presentation on Emerging Trends in Supply Chain Planning	12	30 Marks
Total		60	100

Suggested Specification Table with Marks (Theory):

Distribution of Theory Marks (in %)

R Level	U Level	A Level	N Level	E Level	C Level

Where R: Remember; U: Understanding; A: Application, N: Analyze and E: Evaluate C: Create (as per Revised Bloom's Taxonomy)

Evaluation:

Students shall be evaluated on the following components:

A	Continuous and Comprehensive Evaluation	(Internal Assessment – 50 Marks)
	Practical activities suggested in Module V	30 Marks
	Class Presence & Participation	10 Marks
	Quiz	10 Marks
B	Internal Assessment Test	(Internal Assessment-30 Marks)
C	Semester End Examination	(External Assessment-70 Marks)

References/Suggested Learning Resources:

Books:

- Chopra, S., Meindl, P., & Kalra, D. (2021). *Supply Chain Management: Strategy, Planning, and Operation* (8th ed.). Pearson Education.
- Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2019). *Designing and Managing the Supply Chain: Concepts, Strategies, and Case Studies* (4th ed.). McGraw-Hill.
- Christopher, M. (2016). *Logistics & Supply Chain Management* (5th ed.). Pearson Education.



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4. Stadtler, H. (2015). *Supply Chain Management and Advanced Planning: Concepts, Models, Software, and Case Studies* (5th ed.). Springer.
5. Hugos, M. (2018). *Essentials of Supply Chain Management* (4th ed.). Wiley.
6. Shapiro, J. (2006). *Modeling the Supply Chain* (2nd ed.). Cengage Learning.
7. Wisner, J. D., Tan, K. C., & Leong, G. K. (2018). *Principles of Supply Chain Management: A Balanced Approach* (5th ed.). Cengage Learning.
8. Rushton, A., Croucher, P., & Baker, P. (2017). *The Handbook of Logistics and Distribution Management* (6th ed.). Kogan Page.

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