



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 (tajpore), 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: 1MB1306

Course / Subject Name: Risk Management in Supply Chain and Logistics

w. e. f. Academic Year:	2025-26
Semester:	III
Category of the Course:	Elective

Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level
01	Understand the key risks associated with supply chain and logistics operations.	U
02	Apply risk identification, assessment, and mitigation strategies in supply chains.	A
03	Utilize data-driven approaches and analytical tools to manage logistics risks effectively.	A
04	Develop resilient and sustainable supply chain models to minimize disruptions.	E

*Revised Bloom's Taxonomy (RBT)

Teaching and Examination Scheme:

Teaching Scheme (in Hours)				Total Credits L+T+ (PR/2)+SL/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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Course Content:

Unit No.	Content	No. of Hours	% of Weightage
1.	Introduction to Supply Chain and Logistics Risk Management <ul style="list-style-type: none"> Overview of Risk Management in Supply Chains Types of Risks in Supply Chain and Logistics (Operational, Financial, Strategic, Disruptions) Risk Assessment Techniques: Qualitative and Quantitative Approaches Risk Identification Frameworks (SCOR, FMEA, Monte Carlo Simulation) The Role of AI, IoT, and Blockchain in Risk Mitigation Case Study: Managing Supply Chain Risks in a Globalized Market 	12	25%
2.	Supply Chain Disruptions and Contingency Planning <ul style="list-style-type: none"> Impact of Disruptions: Natural Disasters, Pandemics, Political Instability Business Continuity Planning (BCP) and Disaster Recovery Strategies Supplier Risk Management: Single vs. Multiple Sourcing Strategies Inventory and Demand Variability Risks Role of Lean and Agile Supply Chains in Risk Reduction Case Study: COVID-19 and Its Impact on Global Supply Chains 	12	25%
3.	Financial and Cybersecurity Risks in Logistics <ul style="list-style-type: none"> Financial Risks in Supply Chains (Exchange Rate, Credit, Price Volatility) Risk Management Strategies in Freight and Transportation Costs Cybersecurity Threats in Logistics and Digital Supply Chains Cyber Risk Mitigation: Blockchain, AI, and Cloud Security 	12	25%



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	<ul style="list-style-type: none"> • Fraud Detection and Prevention in Supply Chain Transactions • Case Study: Cyber Attacks and Data Breaches in Supply Chain Networks 		
4.	Sustainable and Ethical Risk Management in Supply Chains <ul style="list-style-type: none"> • Environmental and Sustainability Risks in Logistics • Green Supply Chain Management and Carbon Footprint Reduction • Ethical Sourcing and Supplier Compliance Issues • Regulatory and Legal Risks in Global Supply Chains • Role of Corporate Social Responsibility (CSR) in Supply Chain Risk Management • Case Study: Sustainability Risks in the Apparel and Fashion Industry 	12	25%
5.	Students will be engaged in practical activities such as Supply Chain Risk Identification for a Selected Industry, Developing a Business Continuity Plan for a Logistics Firm, Cyber Risk Analysis and Mitigation in a Digital Supply Chain, Financial Risk Simulation Using Monte Carlo Methods and Sustainability Risk Assessment and Carbon Footprint Analysis	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



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	Quiz	10 Marks
B	Internal Assessment Test	(Internal Assessment-30 Marks)
C	Semester End Examination	(External Assessment-70 Marks)

References/Suggested Learning Resources:

Books:

1. Christopher, M. (2020). *Logistics and Supply Chain Management* (5th ed.). Pearson Education.
2. Chopra, S., & Meindl, P. (2021). *Supply Chain Management: Strategy, Planning, and Operation* (8th ed.). Pearson Education.
3. Waters, D. (2011). *Supply Chain Risk Management: Vulnerability and Resilience in Logistics* (2nd ed.). Kogan Page.
4. Manuj, I., & Mentzer, J. T. (2008). *Global Supply Chain Risk Management Strategies*. *Journal of Business Logistics*, 29(1), 133-155.
5. Simchi-Levi, D. (2013). *Operations Rules: Delivering Customer Value through Flexible Operations*. MIT Press.
6. Sheffi, Y. (2005). *The Resilient Enterprise: Overcoming Vulnerability for Competitive Advantage*. MIT Press.
7. Pettit, T. J., Croxton, K. L., & Fiksel, J. (2013). *Ensuring Supply Chain Resilience: Development of a Conceptual Framework*. *Journal of Business Logistics*, 34(1), 46-76.
8. Tang, C. S. (2006). *Robust Strategies for Value Chain Management*. Springer.

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