GANPAT UNIVERSITY

FACULTY OF MANAGEMENT STUDIES

Programme	MBA	Branch/Spec.	Innovation, Entrepreneurship and Venture Development (Minor Specialization - Operations and Supply Chain Management)
Semester	IV	Version	2.0.0.0
Effective from Academic Year	2026-27	Effective for the Batch admitted in	January 2026
Course Code	IVA18SCL	Course Name	Supply Chain Design & Logistics Management

Teaching Scheme						Examination Scheme (Marks)			
(Per week)	Lecture (DT)		Practical (Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	4	0	0		4	Theory	60	40	100
Hours	4	0	0		4	Practical			

Pre-requisites

Course Outcomes

On successful completion of the course, the students will be able to:

CO1	Understand the fundamental drivers of supply chain performance and their alignment with business strategies in a global and entrepreneurial context.
CO2	Analyze and design distribution networks and sourcing strategies that balance cost, responsiveness, and scalability for emerging ventures.
CO3	Evaluate logistics operations, including transportation, warehousing, and inventory management, to ensure operational efficiency and customer satisfaction.
CO4	Apply modern innovations, digital tools, and sustainability practices to mitigate risks and solve complex supply chain challenges in dynamic markets.

Theory Syllabus

Unit	Content	Hrs.
1	Introduction to Supply Chain Management, Evolution of Logistics to SCM, The Value Chain Concept for Startups, Supply Chain Strategy versus Business Strategy, Achieving Strategic Fit, Drivers of Supply Chain Performance (Facilities Inventory Transportation Information Sourcing Pricing), Introduction to Strategic Framework & Network Design, Designing the Supply Chain Network, Factors Influencing Network Design, Distribution Network Design Options, Manufacturer Storage with Direct Shipping, Distributor Storage with Carrier Delivery, Omni-Channel Distribution Strategies, Network Design in an Uncertain Environment, The Role of IT in Network Design, Scaling Supply Chain from Local to Global, Supply Chain Challenges for New Ventures.	15
2	Application of Planning, Sourcing & Inventory Management, Demand Forecasting in a Supply Chain, Managerial Approaches to Forecasting, Qualitative vs Quantitative Methods, Aggregate Planning Concepts, Managing Supply and Demand Imbalance, Inventory Management Fundamentals, Cycle Inventory and Economies of Scale, Safety Stock and Service Levels, Product Availability Strategies, Vendor Managed Inventory (VMI), Just-in-Time (JIT) and Lean Concepts, The Bullwhip Effect and Coordination, Sourcing Decisions, Make-or-Buy Analysis, Supplier Scoring and Assessment, Supplier Selection Processes, Contract Negotiation Strategies, Building Strategic Partnerships, Procurement for Startups.	15
3	Introduction to Logistics Management, The Role of Logistics in the Economy, Transportation Modes (Road Rail Air Water Pipeline), Performance Characteristics of Modes, Intermodal Transportation, Design of Transportation Networks, Trade-offs in Transportation Design, Warehousing Functions and Types, Warehouse Layout and Operations, Cross-Docking Strategies, Packaging and Materials Handling, Order Processing and Fulfillment, E-	15

	Commerce Logistics Models, Last-Mile Delivery Challenges, Third-Party Logistics (3PL) and 4PL Providers, Reverse Logistics Management, Managing Returns and Refurbishment.	
4	Digital Innovation, Global Trade & Sustainability, Information Technology in Supply Chain, Role of ERP Systems, Supply Chain Digitalization, Introduction to Blockchain in SCM, Artificial Intelligence and Data Analytics in Logistics, Global Logistics and International Trade, Incoterms 2020 Basics, Import-Export Documentation and Customs, Green Supply Chain Management, The Circular Economy, Sustainability and Ethical Sourcing, Supply Chain Risk Management, Building Resilient and Agile Supply Chains, Crisis Management, Performance Measurement, The SCOR Model, Key Performance Indicators (KPIs) for Logistics, Future Trends (Drones Autonomous Vehicles).	15
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Practical, assignments and tutorials are based on above syllabus.		
Text Books		
1	Supply Chain Management: Strategy, Planning, and Operation by Sunil Chopra and Peter Meindl (Pearson).	
Reference Books		
1	Designing and Managing the Supply Chain by David Simchi-Levi, Philip Kaminsky, and Edith Simchi-Levi (McGraw Hill).	
2	Supply Chain Logistics Management by Donald Bowersox, David Closs, and M. Bixby Cooper (McGraw Hill).	
3	Essentials of Supply Chain Management by Michael H. Hugos (Wiley) – Excellent for non-technical conceptual understanding.	
4	Logistics & Supply Chain Management by Martin Christopher (Pearson).	
5	Purchasing and Supply Chain Management by Robert M. Monczka and Robert B. Handfield (Cengage).	
6	Warehouse Management: A Complete Guide to Improving Efficiency and Minimizing Costs by Gwynne Richards (Kogan Page).	
7	Global Logistics and Supply Chain Management by John Mangan and Chandra Lalwani (Wiley).	
8	Operations and Supply Chain Management by F. Robert Jacobs and Richard B. Chase (McGraw Hill).	
9	The Toyota Way: 14 Management Principles by Jeffrey Liker – Crucial for Lean/JIT concepts.	
10	Supply Chain Management for Dummies by Daniel Stanton – Great for quick revision before interviews.	
11	Lean Supply Chain and Logistics Management by Paul Myerson.	
12	Strategic Supply Chain Management by Shoshanah Cohen and Joseph Roussel.	
ICT/MOOCs Reference		
1	Coursera: Supply Chain Management Specialization – Rutgers University	
2	Udemy: Logistics and Supply Chain Management Masterclass	

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PSO 1	PSO 2	PSO 3	PSO 4
CO1	3	3	2	–	–	–	2	2	2	2	3	3	–
CO2	3	3	2	2	–	–	3	3	3	3	3	3	–
CO3	3	3	2	2	–	–	2	2	2	2	3	3	–
CO4	3	3	3	2	–	2	3	3	3	3	3	3	2