SEMESTER-IV

GANPAT UNIVERSITY									
FACULTY OF MANAGEMENT STUDIES									
Program	MBA		Branch/Spec.		MBA (International Business) Elective Subject				
Semester	IV				Version	1.0.0.0			
Effective from Academic Year		2025-26			Effective for the batch Admitted in		June 2025		
Subject code	**IVA03AIB**		Subject Name		**AI & Big Data in Global Trade**				
Teaching scheme					Examination scheme (Marks)				
(Per week)	Lecture(DT)		Practical(Lab.)		Total		CE	SEE	Total
	L	TU	P	TW					
Credit	2	0	0		2	Theory	100		100
Hours	2	0	0		30	Practical			

Objective:
To equip MBA students with a strategic framework to leverage AI and Big Data for optimizing global trade operations, enhancing supply chain resilience, and driving competitive advantage.

Course Outcome:
CO 1: The students will be able to explain the strategic importance of AI and Big Data in the context of modern global trade challenges and opportunities.
CO 2: The students will be able to analyze the application of AI and predictive analytics in optimizing core supply chain functions like logistics and demand forecasting.
CO 3: The students will be able to evaluate the role of AI and Big Data in transforming trade finance, compliance, and geopolitical risk management.
CO 4: The students will be able to formulate a strategic roadmap for adopting AI and Big Data technologies in a global trade context, considering implementation challenges and ethical implications.

Theory syllabus

Unit	Content	Hrs
1	Foundations of AI & Big Data in a Global Context, The Datafication of Global Trade, Big Data Fundamentals: Volume, Velocity, Variety, AI & Machine Learning: A Managerial Overview, The Synergy: How Big Data Fuels AI, The Business Case for Intelligent Trade, Use Cases: Moving from Descriptive to Predictive Analytics Integration with Global Trade Platforms and Cross-border Data Flows, AI Tools for Practice: Google Colab, ChatGPT (OpenAI), KNIME Analytics Platform, Tableau Public	6
2	AI-Driven Supply Chain Optimization & Logistics Intelligence: Predictive Demand Forecasting using AI, Intelligent Inventory Management & Stock Optimization, AI in Logistics: Dynamic Route & Fleet Optimization, Smart Warehousing & Automation, End-to-End Supply Chain Visibility with IoT & AI Integration, Predictive Maintenance for Fleet & Assets, Supplier Performance Analytics with AI Dashboards, Case Study: Amazon's AI-Powered Logistics Network	8
3	AI in Trade Finance, Compliance & Strategic Implementation: Automating Trade Document Processing using NLP, Algorithmic Credit Scoring for Trade Finance, Fraud Detection in Cross-Border Transactions, Predictive Risk Management: Geopolitical & Weather Risk Sensing, Supplier Risk & Disruption Prediction, Automated Customs Classification & Compliance Checks, Sanctions Screening & Anti-	8

	Money Laundering (AML) using AI, Building a Business Case for AI in Global Trade Firms, Data Governance & Quality for AI Models, Ethical AI in Trade: Bias, Transparency, Accountability, The Rise of Autonomous Supply Chains & Digital Twins	
4	Hands-on Lab: Global Supply Chain & AI Tools Workshop: AnyLogistix– Designing and simulating a global supply chain network, OpenRouteService – Optimizing international logistics routes for cost & time, KNIME Analytics – Predictive demand & inventory analytics workflow, Google OR-Tools – Coding optimization models for warehouse distribution, Tableau Public – Visualizing cross-border trade data trends, Power BI – Creating compliance & supplier risk dashboards.	8
Practical content		
Reference Books		
1.	Iansiti, Marco, and Lakhani, Karim R. Competing in the Age of AI: Strategy and Leadership When Algorithms and Networks Run the World. Harvard Business Review Press, 2020.	
2.	Siegel, Eric. Predictive Analytics: The Power to Predict Who Will Click, Buy, Lie, or Die. 2nd Edition, Wiley, 2016.	
3.	Chopra, Sunil, and Meindl, Peter. Supply Chain Management: Strategy, Planning, and Operation. 7th Edition, Pearson, 2018.	
4.	Marr, Bernard. Data Strategy: How to Profit from a World of Big Data, Analytics and the Internet of Things. Kogan Page, 2017.	
5.	Davenport, Thomas H., and Harris, Jeanne G. Competing on Analytics: The New Science of Winning. Harvard Business Review Press, 2017.	
6.	Rogers, David L. The Digital Transformation Playbook: Rethink Your Business for the Digital Age. Columbia Business School Publishing, 2016.	
7.	Mayer-Schönberger, Viktor, and Cukier, Kenneth. Big Data: A Revolution That Will Transform How We Live, Work, and Think. Mariner Books, 2014.	
8.	Ross, Jeanne W., et al. Designed for Digital: How to Architect Your Business for Sustained Success. MIT Press, 2019.	
9.	Agrawal, Ajay, et al. Prediction Machines: The Simple Economics of Artificial Intelligence. Harvard Business Review Press, 2018.	
10.	Brynjolfsson, Erik, and McAfee, Andrew. The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies. W. W. Norton & Company, 2014.	
11.	O'Neil, Cathy. Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy. Crown, 2016.	
12.	Harvard Business Review. HBR's 10 Must Reads on AI, Analytics, and the New Machine Age. Harvard Business Review Press, 2019.	
13	Tegmark, Max. Life 3.0: Being Human in the Age of Artificial Intelligence. Vintage, 2018.	