

SEMESTER-II

GANPAT UNIVERSITY									
FACULTY OF MANAGEMENT STUDIES									
Program	MBA		Branch/Spec.		MBA (Logistics & Supply Chain Management) 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		IIA03LSP		Subject Name		Lean Six Sigma and Process Excellence			
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 students with a strategic framework to lead process excellence initiatives, leveraging Lean Six Sigma methodologies to drive operational efficiency, enhance quality, and create a culture of continuous improvement in global supply chains.									
Course Outcome: CO 1: The students will be able to explain the core principles of Lean and Six Sigma and formulate the strategic business case for a process excellence program. CO 2: The students will be able to analyze supply chain processes using core Lean tools like Value Stream Mapping to identify and categorize waste. CO 3: The students will be able to evaluate a process improvement problem using the DMAIC framework, focusing on problem definition, measurement, and root cause analysis. CO 4: The students will be able to formulate a strategic plan for deploying and sustaining a Lean Six Sigma culture, incorporating change management, project governance, and performance measurement.									
Theory syllabus									
Unit	Content								Hrs
1	Introduction to Six Sigma and Lean Management: Overview of Six Sigma and Lean principles, Importance of process improvement in international business, Key concepts: DMAIC, value stream, waste reduction, Understanding the DMAIC Framework: Define: Identifying business challenges in global operations, Measure: Quantifying problems and setting baselines, Analyze: Root cause analysis using tools like Pareto charts and fishbone diagrams, Understanding the DMAIC Framework: Improve: Implementing solutions and best practices, Control: Ensuring sustainability of improvements								6
2	Lean Principles and Tools: Tools for waste identification: 5S, Kaizen, and value stream mapping, Kaizen, and value stream mapping, Application of Lean in international supply chains and operations, Lean Principles and Tools: Core Lean principles: value, flow, pull, and perfection, Case studies on lean principles and tools used by companies								8
3	Data-Driven Decision Making: Basics of data analysis for process improvement, Using statistical tools and software (e.g., Minitab or Excel) for Six Sigma projects, Case studies: Data-driven improvements in multinational companies, International Business Applications: Challenges in applying Six Sigma and								8

	Lean globally, Adapting methodologies to cultural and regional differences	
4	Case study on cultural and regional challenges faced by various companies, International Business Applications: Examples of successful implementations in international contexts, Case studies on IB Applications.	8
Practical content		
Reference Books		
1.	Womack, James P., and Jones, Daniel T. Lean Thinking: Banish Waste and Create Wealth in Your Corporation. Free Press, 2003.	
2.	Liker, Jeffrey K. The Toyota Way: 14 Management Principles from the World's Greatest Manufacturer. McGraw-Hill, 2004.	
3.	Goldratt, Eliyahu M. The Goal: A Process of Ongoing Improvement. 3rd Edition, North River Press, 2004.	
4.	Gawande, Atul. The Checklist Manifesto: How to Get Things Right. Metropolitan Books, 2009.	
5.	George, Michael L., et al. The Lean Six Sigma Pocket Toolbook. McGraw-Hill, 2004.	
6.	Kotter, John P. Leading Change. Harvard Business Review Press, 2012.	
7.	Rother, Mike, and Shook, John. Learning to See: Value Stream Mapping to Add Value and Eliminate Muda. Lean Enterprise Institute, 2009.	
8.	Pyzdek, Thomas, and Keller, Paul. The Six Sigma Handbook. 5th Edition, McGraw-Hill, 2018.	
9.	Ries, Eric. The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses. Currency, 2011.	
10.	Collins, Jim. Good to Great: Why Some Companies Make the Leap... and Others Don't. HarperBusiness, 2001.	
11.	Heizer, Jay, and Render, Barry. Operations Management: Sustainability and Supply Chain Management. 12th Edition, Pearson, 2016.	