

GANPAT UNIVERSITY									
FACULTY OF MANAGEMENT STUDIES									
Programme	MBA				Branch/Spec.	Innovation, Entrepreneurship and Venture (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	IVA19OSP		Course Name		Operations Strategy & Process Excellence (Lean Six Sigma)				
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	Formulate operations strategies that create competitive advantage by aligning process capabilities with market requirements and business goals.								
CO2	Analyze business processes to identify bottlenecks and inefficiencies using flow diagrams, service blueprints, and capacity planning frameworks.								
CO3	Apply Lean management principles to eliminate waste, optimize workflows, and foster a culture of continuous improvement in manufacturing and service contexts.								
CO4	Utilize the Six Sigma DMAIC framework and managerial quality tools to solve complex operational problems and ensure consistent service delivery.								
Theory Syllabus									
Unit	Content								Hrs.
1	Introduction to Operations Management, The Role of Operations in Corporate Strategy, Operations as a Competitive Weapon, Order Winners and Order Qualifiers, Strategic Fit in Operations, Manufacturing vs Service Operations, The Input-Process-Output Model, Productivity Measurement, Capacity Strategy and Planning, Economies of Scale vs Economies of Scope, Make or Buy Decisions, Outsourcing and Offshoring Strategies, Vertical Integration, Technology Selection in Operations, Operational Challenges for Startups, Scaling Operations from Seed to Growth Stage, Service Strategy, The Service-Profit Chain.								15
2	Process Analysis Fundamentals, Process Flow Charting, Swim Lane Diagrams, Service Blueprinting for Customer Experience, Identifying Bottlenecks, Theory of Constraints (TOC), Drum-Buffer-Rope Concept, Cycle Time and Throughput Rates, Little's Law, Business Process Reengineering (BPR), Job Design and Work Measurement, Facility Layout Strategies, Process Types (Project Job Shop Batch Line Continuous), Innovation in Service Delivery, Managing Waiting Lines (Queue Psychology), Agile Operations, Design Thinking in Process Design.								15
3	History of Lean and Toyota Production System (TPS), The Philosophy of Continuous Improvement (Kaizen), The 7 Wastes (Muda), The 5S Framework for Workplace Organization, Value Stream Mapping (VSM) Current and Future State, Just-in-Time (JIT) Systems, Kanban Systems and Pull Production, Single Minute Exchange of Die (SMED) Concepts, Poka-Yoke (Mistake Proofing), Visual Management, Total Productive Maintenance (TPM) Basics, Lean in Services and Administration, The Lean Startup								15

	Methodology (Build-Measure-Learn), Gemba Walks, Standardized Work, Cellular Manufacturing.	
4	Definition of Quality, Dimensions of Product and Service Quality, Cost of Quality (COQ), Evolution from Inspection to TQM, Total Quality Management Principles, Introduction to Six Sigma, The Belts System (Yellow Green Black), The DMAIC Framework (Define Measure Analyze Improve Control), Voice of the Customer (VOC), SIPOC Model, Root Cause Analysis, The 5 Whys, Fishbone (Ishikawa) Diagram, Pareto Analysis (80/20 Rule), Control Charts (Managerial Understanding of Variation), Benchmarking, ISO 9000 Standards Overview, Implementing Process Excellence in Ventures, Change Management for Process Improvement.	15

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Practical, assignments and tutorials are based on above syllabus.

Text Books

1	Operations and Supply Chain Management by F. Robert Jacobs and Richard B. Chase (McGraw Hill)
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Reference Books

1	Operations Strategy by Nigel Slack and Michael Lewis (Pearson)
2	The Goal: A Process of Ongoing Improvement by Eliyahu M. Goldratt
3	The Machine That Changed the World by James P. Womack and Daniel T. Jones
4	Lean Six Sigma for Service by Michael George
5	The Six Sigma Way: Team Fieldbook by Peter S. Pande et al.
6	The Lean Startup by Eric Ries
7	Toyota Production System: Beyond Large-Scale Production by Taiichi Ohno.
8	Juran's Quality Handbook by Joseph A. Defeo
9	Gemba Kaizen: A Commonsense, Low-Cost Approach to Management by Masaaki Imai.
10	Service Operations Management by Robert Johnston and Graham Clark

ICT/MOOCs Reference

1	Coursera: Six Sigma Yellow Belt – University System of Georgia
2	Udemy: Lean Six Sigma Green Belt Certification Course

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	P S O 1	P S O 2	P S O 3	P S O 4
CO1	3	3	3	–	–	–	3	3	3	3	3	3	–
CO2	3	3	2	2	–	–	2	2	2	2	3	3	–
CO3	3	3	2	2	–	–	3	3	3	3	3	3	–
CO4	3	3	3	2	–	2	3	3	3	3	3	3	2