

Course Code	Course Title	L	T	P	C
OLMBA644	Quality Management	3	1	0	4
Pre-requisite	NIL	Syllabus Version			
		1.0			
Course Objectives:					
1. To explore the Quality Management Systems & Tools and Quality Assurance with their application in continuous improvement					
2. To know TQM techniques					
3. To improve Reliability of the product and also maintainability and availability.					
4. Acquire knowledge on preventive measures to maintain the cost of quality.					
Course Outcomes:					
1. Understand the importance of quality management in organization					
2. Apply the Quality management tools for effective planning.					
3. Understand the application of various techniques in Total Quality Management.					
4. Understand and apply the different metrics to analyse the maintainability and availability of the reliable System.					
Module:1	Principle of Quality Management				
Definition of quality: Deming, Miller - Crosby Theories – Characteristics of Quality Leaders - Service and Product quality – Customer Orientation. Evaluation of Total Quality Management – Inspection – Quality Control					
Module:2	Quality Planning & Control				
Quality Planning – SMART Goal setting – Designing for Quality – Quality Inspection – Control Charts – Reasons for Quality variations – Process control – Process capability – CPK – Statistical Quality Control Scientific Approach to TQM – Data based approach – Quantification – Statistical tools					
Module:3	TQM Techniques				
Definition, Concept and Features of TQM, Building blocks of TQM. Essentials for TQM implementation – Models and frameworks for Total Quality Management- Benchmarking – Quality Awards – MBNQA – Quality Metrics – Corrective & Preventive techniques – Cause & Effect Analysis – Root Cause Analysis – Quality Circle – 5S – Continuous Improvement Techniques - POKA YOKE – Deming wheel/ PDCA Cycle – Quality Assurance - Six Sigma – ISO 9000 Certification					
Module:4	Quality Tools				
Quality Control Tools – New 7 tools, FMEA, Quality Function Deployment (QFD) – House of Quality, QFD Process, Benefits, Taguchi Quality Loss Function, Total Productive Maintenance (TPM) – Concept and need.					
Module:5	Reliability				
Bath Tub Curve – Failure rate – Failure Density – Hazard rate – Mean time to failure - Mean time between failures – Reliability – System reliability – Series & Parallel configuration – Reliability Improvement by Redundancy					
Module:6	Maintainability and Availability				

System downtime – Mean time to repair – Mean time between maintenance – Preventive Maintenance Downtime – Maintainability trade off.			
Module:7	Cost of Quality and Service Quality		
Quality Cost, Service Quality & Strategy - GAP and SERVQUAL Model of Customer Satisfaction. Issues & Challenges of implementing, maintaining and improving the Quality System in Service Sectors.			
	Total Hours of Study:		120 Hrs.
Text Book(s)			
1.	Dale H. Besterfield, Hemant Urdhwareshe, Mary Besterfield-Sacre, Carol Besterfield- Michna, Rashmi Urdhwareshe, Glen H. Besterfield, (2015), Total Quality Management, 3rd revised edition, Pearson India.		
2.	L.S. Srinath, (2011), Reliability Engineering, Affiliated East West Press, New Delhi.		
Reference Books			
1.	Samuel K Ho, (2004), TQM – An Integrated Approach, Crest Publishing House.		
2.	Joseph M, Juran, Joseph A De Feo, (2017), Juran's Quality Handbook, 6th edition, McGraw-Hill. McGraw Hill Education		
3.	James R. Evens, (2014), Managing for Quality and Performance Excellence, 9th edition, Cengage Learning.		
Mode of Evaluation: Quiz/ Assignment/CAT/FAT			
Recommended by Board of Studies		04-11-2024	
Approved by Academic Council		No.76	Date 28-11-2024