

## **MB301: Total Quality Management**

### **Course Objectives:**

- The overall purpose of the course is to provide an understanding of the process of managing quality and managing services.
- The principles of Quality, Quality Assurance, and Total Quality Management will provide an insight into the concepts of Excellence and Best Value and the contribution of quality to strategic management.
- This course aims to show how all the fundamental disciplines of business are intrinsically linked with the concepts of service excellence and quality. Because these concepts are so interrelated they can be shown to have a strategic importance to the culture and success of any organization.
- There are many tools and doctrines that can be used for assessing product/service quality and selection of these tools can help in the pursuit of excellence. This course is designed to provide a valuable perspective for future business managers.

### **Unit-I: TQM- History and Evolution:**

Connotations of Quality, Quality Dimensions: Product and Service. The Concept of TQM, Evolution of TQM, Inspection, SQC, QA and TQM. Conventional Quality Management versus TQM. Customer Supplier Focus in TQM, Benefits and Costs of TQM, Historical Perspectives of TQM. Quality System Awards and Guidelines ISO, Malcolm Baldrige National Quality Award (MBNQA), European Foundation for Quality Management (EFQM).

### **Unit -II: Tools of TQM:**

Measurement Tools: Check Sheets, Histograms, Run Charts, Scatter Diagrams, Cause and Effect Diagrams, Pareto's Chart, Process Capability Measurement. Analytical Tools: Process Mapping, Regression Analysis, Resource Utilization and Customer Service Analysis, The Five Why's, Overall Equipment Effectiveness. Improvement Tools and Techniques: Kaizen, JIT, Quality Circles, Force Field Analysis, Five S's. Control Tools: Gantt Chart, Network Diagram, Radar Chart, The PDCA Cycle, Milestone Tracker Diagram and Earned Value Management.

### **Unit -III: Techniques of TQM:**

Quantitative Techniques: Failure Mode Effect Analysis (FMEA), Statistical Process Control (SPC), Quality Function Deployment (QFD), Design of Experiments (DOE), Quality by Design and Monte Carlo Technique (MCT). Qualitative Techniques: Benchmarking, The Balanced Scorecard, Sales and Operations Planning, Kanban and Activity Based Costing (ABC). Taguchi Methods: Quality Loss Function, Orthogonal Arrays, Signal to - Noise Ratio, Nominal - the - Best, Target the - Best, Smaller the - Best, Larger the - Best, Parameter Design, Tolerance Design.

### **Unit- IV: Six Sigma:**

The Concept of Six Sigma, Objectives of Six Sigma, The Frame-Work of Six Sigma

Programme, Six Sigma Organization: Roles and Responsibilities, Six Sigma Problem Solving Approach, The DMAIC Model, Six Sigma Metrics: Cost of Poor Quality, Defects Per Million Opportunities and First Pass Yield, Benefits and Costs of Six Sigma.

**Unit -V: TQM in the Service Sectors:**

Implementation of TQM in Service Organization: Framework for Improving Service Quality, Model to Measure Service Quality Programs, TQM in Health - Care Services, Hotels and Financial Services - Banks, Investment Company and Mutual Funds.

**Suggested Books:**

1. John L. W. Beckford, "Quality: A Critical Introduction", 3rd Ed. Routledge Taylor and Frances Group, New York and London.
2. Dale H. Besterfield, Carol Besterfield - Michna, Glen H Besterfield and Mary Besterfield-Sacre, "Total Quality Management", 2006, 3rd Ed. PHI.
3. Ron Basu, "Implementing Quality: A Practical Guide to Tools and Techniques", 2006, THOMPSON.
4. Greg Brue, "Six Sigma for Managers", 2002, TMH.
5. R. P. Mohanty & R. R. Lakhe, "TQM in the Service Sector", Jaico Books.

**Course Outcomes :**

- On successful completion of the course students will be able to:
- 1. Understand the fundamental principles of Total Quality Management;
- 2. Choose appropriate statistical techniques for improving processes;
- 3. Develop research skills that will allow them to keep abreast of changes in the field of Total Quality Management