TOTAL QUALITY MANAGEMENT

Module – I (12 hours)
An Overview: Quality Definition, Quality, Price, Value Relationship, Evolution in Quality Management – Inspection, Quality Control, Statistical Quality Control, Quality Assurance, Total Quality Management
Thoughts/ Contribution of Quality Gurus: Deming's 14 Points, Deming PDCA Cycle, Juran's Trilogy, and Crosby's Zero Defect.
Core Concepts of TQM: Top Management Leadership, Customer Orientation, Total Employee Involvement, Continuous Process Improvement
Supplier Partnership: Partnering, Sourcing, Selection, Certification, Relation development

Module – II (12 hours)
Concept of Quality Control and Quality Improvement: Costs of Quality - Prevention, Appraisal, Internal Failure, External Failure.
Failure: Random and Assignable causes; Statistical Process Control Charts – X & R chart, p-chart, c-chart, Concept of process capability
Acceptance Sampling and OC curve, Buyer risk and Supplier risk, Average Outgoing Quality
Emphasis on small improvements – Kaizen, People participation Quality Circle, QC Tools (old) & 7 Tools (new), Conditions for Success of TQM

Module – III (11 hours)
Overview of some other initiatives of process improvement: Six Sigma, TPM, Lean Manufacturing
Some tools for analysis: Quality Benchmarking, Quality Function Deployment (QFD), Failure Mode and Effect Analysis (FMEA)
Quality Management Systems: Product vs Process Quality Standard, ISO 9000 series of standards, ISO 9001 Requirements, Implementation, Documentation, Audits, and Registration; Benefits of ISO.

Books:

1. Mukherjee - "Total Quality Management", PHI
2. Evans J.R. – "Total Quality Management", Cengage
3. Besterfield et al, - "Total Quality Management", Pearson
4. Gryna, Chua,& Defeo-"Quality Planning & Analysis for Enterprise Quality", TMH
5. Montogomery, -"Introduction to Statistical Quality Control", John Wiley & Sons
6. Zaidi A.- "SPC Concepts, Methodologies and Tools", Pearson