

Course Syllabi: UHU033 Total Quality Management (L : T : P :: 3 : 1 : 0)

1. **Course number and name:** UHU033; Total Quality Management

2. **Credits and contact hours:** Credits: 3.5; Hours: 4

3. **Text book, title, author, and year**

- *Besterfield, D.H, Michna, C.B., Besterfield, G.H., Sacre, M.B., Total Quality Management. Pearson Education, Asia (2006).*
- *Mitra, A., Fundamentals of Quality Control and Improvement. PHI. (2007).*
- *Grant, E.L., Statistical Quality Control, Tata Mc-Graw Hill (1996).*
- *Shiba, S., Grahan, A., Walden, D., a New American TQM, Four Revolutions in Management. Productivity Press (1993).*
- *Jain, P. L. Quality Control and Total Quality Management. Tata Mc-Graw Hill. (2004).*
- *Ross, J. E., Total Quality Management. St. Lucie Press. (1995) 2nded.*
- *Kanji G. K., Total Quality Management. Chapman & Hall. (2007).*

a. Other supplemental materials

- Nil

4. **Specific course information**

a. Brief description of the content of the course (catalog description)

Introduction to Total Quality Management: Culture, the TQM axioms, Cost of Quality, Tools for Quality: Management Tools, Statistical Tools, TQM and Japanese success; TQM implementation in India.

The Evolution of Quality Concept: Quality Movement, Development of four fitnesses i.e. Fitness to Standard, Fitness to Use, Fitness of Cost, Fitness to Latent Requirements, Comparative study of philosophies of Deming, Juran and Crosby.

Technical Tools for Quality: SQC, Control charts for Variables and Attributes, Acceptance Sampling, Operating Characteristic Curves, Taguchi's Approach to Experimental Design and Off Line Quality Control, Measurement System Analysis, Process Capability Studies (PPk, Cpk, Cp, Pp), Risk Management.

Management Tools for Quality: Four Revolutions in Management Thinking: Continuous Improvement, Customer Focus, Total Participation and Societal Networking, Kaizen, PDCA, Six Sigma Methodology; Reactive and Proactive Improvement, Seven QC tools, 7 – step improvement programme, Quality Function Deployment, Failure Mode and Effect Analysis (FMEA), 5 S, Benchmarking, Quality by Design, Concept of Teams, Poke-Yoke, Total Quality Control, QC Circles, Suggestion Schemes.

5. **Specific goals for the course**

After the completion of the course, the students will be able to:

- Explain the concept of TQM and its advantages.
- Describe the four fitnesses.
- Select appropriate technical tools for quality.
- Demonstrate the use of management tools for quality.

6. **Brief list of topics to be covered**

- Introduction to Total Quality Management
- The Evolution of Quality Concept
- Technical Tools for Quality
- Management Tools for Quality