

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
M E (Civil) CONSTRUCTION ENGINEERING AND MANAGEMENT

**TQM IN CONSTRUCTION**

**Objectives:**

To give knowledge of various aspects of quality management to students so that they are able to prepare quality manuals, checklists, inspection reports, quality assurance system for different construction projects.

**Course content:**

Quality : Necessity for improving Quality in the context of Global Challenges.

Concept of Quality Control, Quality Assurance, Quality Management and Total Quality Management (TQM) Study of various Quality Standards in Construction : Related to building materials and other inputs for construction processes, methods and techniques for construction outputs, products and services, such as BIS, BS, Indian standard, British, American, German & Japanese standards, Managing Quality in various projects stages from concept to completion by building quality into design of structures, Inspection of incoming material and machinery In process quality inspections and tests.

Designing of quality manuals, checklists and inspection reports, installing the quality assurance system, monitoring and control.

Quality Assurance Department and quality control responsibilities of the line organization.

Quality in foundations and piling work, structural work. Concreting, electrical system building facilities, waste recycling and maintenance.

Developing quality culture in the organization : Training of people, Bench – marking quality.

Quality circles.

Study of ISO 9000, ISO 14000 and QS 9000 standards and certification procedures.

1. Terms related TQM

2. Study of quality standards related to construction materials and other construction inputs.

3. Study on Construction processes methods and technique for construction outputs.

4. Study of BIS and other standards

5. Inspections of incoming materials and machineries.

6. Preparations of quality manuals check lists and inspection reports

7. Study on quality assurance system.

8. Case studies on quality in foundations, piling work, structural waste recycling and facilities like electrical systems.

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