

# GUJARAT TECHNOLOGICAL UNIVERSITY

B.E Semester: 4

## PRODUCTION ENGINEERING

**Subject Code**

**Subject Name** FUNAMENTALS OF QUALITY MANAGEMENT  
(Institute Elective – I)

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Sr.No	Course content
1.	Introduction to Quality management Conceptual framework, strategic quality management, contemporary views.
2.	Total quality Management Evolution and issues related to quality control, responsibilities for quality, quality cost concept, quality and productivity, management of quality, contribution of quality gurus: Deming, Juran, Crosby, Ishikawa and its comparison.
3.	Acceptance Sampling Need for acceptance sampling, sampling by attributes and variables, types of sampling plans, single and double sampling plans, operating characteristics curve- construction and use, sampling related terminology and their interpretation, standard sampling system for attributes, sequential, chain and continuous sampling, acceptance sampling by variables.
4.	Statistical Process Control Specification and control limits, types of control charts, control charts for variables and attributes, comparison between control charts for variables and attributes.
5.	standards and excellence models for quality Quality system standards, Bureau of Indian Standard (BIS), international Organization for standardization, Quality Council of India, conformance to specifications, quality assurance, types of quality audits, ISO 9001, ISO14000, Malcolm Baldrige Award criteria, Deming Award criteria, Tata Business Excellence Model.
6.	Software Quality Management Importance of soft wares in business improvement, quality measurement metrics, capability maturity model integration
7.	Practices and tools for quality improvement Quality Function Deployment six sigma, benchmarking, seven Quality Tools
8.	Service Quality Management Comparison of products and services, classification of services, services quality.
9.	Quality Management scenario in Indian Industry Quality development in India, quality management in India, quality priorities in Indian industry.

## **Reference Books:**

1. Statistical Quality Control by M. Mahajan, Dhanpai Rai & Sons, New Delhi.
2. Total quality management by D.D Sharma.
3. Quality planning and analysis by Juran J.M & Gryna F.M., TMH, New Delhi.
4. Managing for total quality by N. Logothetis, Prentice Hall of India, New Delhi.
5. Total quality management by Besterfield and others, Person Education.
6. Quality Control, ITTI Madras Publication.
7. TQM and ISO14000 by Arora K.C., S.K.Katariya publications.
8. Quality Management by Bedi Kanishka, Oxford University Press, New Delhi
9. Fundamentals of quality control and improvement, Mitra Amitava, Prentice Hall of Indian, New Delhi