

1. INTRODUCTION**9**

Introduction - Need for quality - Evolution of quality - Definition of quality - Dimensions of manufacturing and service quality - Basic concepts of TQM - Definition of TQM – TQM Framework - Contributions of Deming, Juran and Crosby – Barriers to TQM.

2. TQM PRINCIPLES**9**

Leadership – Strategic quality planning, Quality statements - Customer focus – Customer orientation, Customer satisfaction, Customer complaints, Customer retention - Employee involvement – Motivation, Empowerment, Team and Teamwork, Recognition and Reward, Performance appraisal - Continuous process improvement – PDSA cycle, 5s, Kaizen - Supplier partnership – Partnering, Supplier selection, Supplier Rating.

3. TQM TOOLS & TECHNIQUES I**9**

The seven traditional tools of quality – New management tools – Six-sigma: Concepts, methodology, applications to manufacturing, service sector including IT – Benchmarking – Reason to bench mark, Bench marking process – FMEA – Stages, Types.

4. TQM TOOLS & TECHNIQUES II**9**

Quality circles – Quality Function Deployment (QFD) – Taguchi quality loss function – TPM – Concepts, improvement needs – Cost of Quality – Performance measures.

5. QUALITY SYSTEMS**9**

Need for ISO 9000- ISO 9000-2000 Quality System – Elements, Documentation, Quality auditing- QS 9000 – ISO 14000 – Concepts, Requirements and Benefits – Case studies of TQM implementation in manufacturing and service sectors including IT.

Total : 45 Periods

TEXT BOOK

1. Dale H.Besterfield, et al., “Total Quality Management”, Pearson Education Asia, 3rd Edition, Indian Reprint (2006).

REFERENCE BOOKS

1. James R. Evans and William M. Lindsay, “The Management and Control of Quality”, 6th Edition, South-Western (Thomson Learning), 2005.
2. Oakland, J.S., “TQM – Text with Cases”, Butterworth – Heinemann Ltd., Oxford, 3rd Edition, 2003.
3. Suganthi, L and Anand Samuel, “Total Quality Management”, Prentice Hall (India) Pvt. Ltd., 2006.
4. Janakiraman, B and Gopal, R.K, “Total Quality Management – Text and Cases”, Prentice Hall (India) Pvt. Ltd., 2006.

SUBJECT DESCRIPTION AND OBJECTIVE

AIM:

To provide an in-depth knowledge in problem solving techniques and quality management.

DESCRIPTION:

The many factors that affect quality in business, government, and other organizations, comprise the broad subject called Total Quality Management (TQM). This course focuses on quality in both products and services, and seeks to familiarize students with all aspects of TQM, and provide them with the knowledge they need to become designers of, and participants in, TQM programs. Major topics covered in the course include: strategic quality planning, organizational structure for quality, quality in design and processes, statistical techniques, teamwork and reward systems, and quality standards (such as ISO 9000, the Baldrige Award).

OBJECTIVE :

- To understand the Total Quality Management concept and principles and the various tools available to achieve Total Quality Management.
- To understand the statistical approach for quality control.
- To create an awareness about the ISO and QS certification process and its need for the industries.

Weeks	Hours	Unit/Topics	T/R Book
		UNIT- I INTRODUCTION	
I	1.	Introduction	T 1
	2.	Need for quality	T 1
	3.	Evolution of quality	T 1
	4.	Definition of quality (AV CLASS)	T 1
II	5.	Dimensions of manufacturing and service quality	T 1
	6.	Basic concepts of TQM	T 1
	7.	Definition of TQM	T 1
	8.	TQM Framework	T 1
III	9.	Contributions of Deming, Juran and Crosby	T 1
	10.	Barriers to TQM	T1
		UNIT- II TQM PRINCIPLES	
	11.	Leadership – Strategic quality planning	T 1
	12.	Quality statements, Customer focus – Customer orientation	T 1
IV	13.	Customer satisfaction, Customer complaints	T1
	14.	Customer retention,	T 1
	15.	Employee involvement – Motivation, Empowerment	T 1
	16.	Team and Teamwork, Recognition and Reward (AV CLASS)	T 1
V	17.	Performance appraisal - Continuous process improvement	T 1
	18.	PDSA cycle, 5s, Kaizen (AV CLASS)	T 1
	19.	Supplier partnership – Partnering	T 1
	20.	Supplier selection, Supplier Rating	T 1
		UNIT- III TQM TOOLS & TECHNIQUES I	T 1
VI	21.	The seven traditional tools of quality	T 1
	22.	New management tools	T 1
	23.	Six-sigma: Concepts,	T 1

	24.	Methodology	T 1
VII	25.	applications to manufacturing, service sector including IT	T 1
VII	26.	Benchmarking (AV CLASS)	T 1
	27.	Reason to bench mark	T1
	28.	Bench marking process	T 1
VIII	29.	FMEA – Stages ,Types	T 1
		UNIT- IV TQM TOOLS & TECHNIQUES II	
	30.	Quality circles (AV CLASS)	T 1
	31.	Quality Function Deployment (QFD)	T 1
	32.		T 1
	33.	Taguchi Quality Loss Function,	T 1
IX	34.	TPM	T 1
	35.	Concepts, Improvement Needs	T 1
	36.		T1
	37.	Cost of Quality – Performance measures.	T 1
	38.		T 1
		UNIT- V QUALITY SYSTEMS	
X	39.	Need for ISO 9000	T 1
	40.	ISO 9000:2000 Quality System	T 1
	41.	Elements,	T 1
	42.	Documentation,	T 1
	43.	Quality Auditing	T 1
X1	44.	QS 9000 (AV CLASS)	T 1
	45.	ISO 14000 – Concepts,	T 1
	46.	Requirements and Benefits	T 1
	47.	Case studies of TQM implementation in manufacturing and service sectors including IT.	

T1- Dale H.Besterfiled, et at., “Total Quality Management”, Pearson Education Asia, 3rd Edition, Indian Reprint (2006).

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