

# GUJARAT TECHNOLOGICAL UNIVERSITY



**Master of Engineering**

**Semester – III**

**Subject Code: 3730008**

**Subject Name: Cost Management of Engineering Projects**

**Type of course: Open Elective**

**Prerequisite: Nil**

**Rationale: Nil**

**Course Scheme:**

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	PR	C	Theory		Practical		
				ESE (E)	PA(M)	ESE (V)	PA (I)	
03	00	00	03	70	30	00	00	100

**Course Content:**

Sr. No.	Course Content	No of Hours	%
1.	<b>Unit-I: Introduction:</b> Introduction and Overview of the Strategic Cost Management Process	2	5
2.	<b>Unit-II: Cost Concepts:</b> Cost concepts in decision-making; Relevant cost, Differential cost, Incremental cost and Opportunity cost. Objectives of a Costing System; Inventory valuation; Creation of a Database for operational control; Provision of data for Decision-Making.	10	25
3	<b>Unit-III: Project:</b> meaning, Different types, why to manage, cost overruns centers, various stages of project execution: conception to commissioning. Project execution is a conglomeration of technical and non-technical activities. Detailed Engineering activities. Pre-project execution main clearances and documents Project team: Role of each member. Importance Project site: Data required with significance. Project contracts. Types and contents. Project execution Project cost control. Bar charts and Network diagram. Project commissioning: mechanical and process	10	25
4	<b>Unit-III: Cost Behavior and Profit Planning Marginal Costing:</b> Distinction between Marginal Costing and Absorption Costing; Break-even Analysis, Cost-Volume-Profit Analysis. Various decision-making problems. Standard Costing and Variance Analysis. Pricing strategies: Pareto Analysis.	15	30

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	Target costing, Life Cycle Costing. Costing of service sector. Just-in-time approach, Material Requirement Planning, Enterprise Resource Planning, Total Quality Management and Theory of constraints. Activity-Based Cost Management, Bench Marking; Balanced Score Card and Value-Chain Analysis. Budgetary Control; Flexible Budgets; Performance budgets; Zero-based budgets. Measurement of Divisional profitability pricing decisions including transfer pricing		
5	<b>Unit-V:</b> Quantitative techniques for cost management, Linear Programming, PERT/CPM, Transportation problems, Assignment problems, Simulation, and Learning Curve Theory.	5	15

## Reference Books:

1. Cost Accounting A Managerial Emphasis, Prentice Hall of India, New Delhi
2. Charles T. Horngren and George Foster, Advanced Management Accounting.
3. Robert S Kaplan Anthony A. Atkinson, Management & Cost Accounting
4. Ashish K. Bhattacharya, Principles & Practices of Cost Accounting A. H. Wheeler publisher
5. N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.

## Course Outcome:

After Completion of the Course, Student will able to:

No	Course Outcomes	RBT Level*
01	Understand the concepts strategic cost management process.	UN
02	Apply cost concepts in decision-making and cost management projects.	AP
03	Implement various stages of project execution with a team project.	AP
04	Analyse various decision-making problems.	AN
05	Evaluate different qualitative techniques and cost behaviour.	EL

\*RM: Remember, UN: Understand, AP: Apply, AN: Analyze, EL: Evaluate, CR: Create