

## COST MANAGEMENT OF ENGINEERING PROJECTS

Course Code	Category	Hours / Week			Credits	Maximum Marks		
BCSB28	Open Elective	L	T	P	C	CIA	SEE	Total
		3	-	-	3	30	70	100
<b>Contact Classes: 48</b>	<b>Tutorial Classes: Nil</b>	<b>Practical Classes: Nil</b>			<b>Total Classes: 48</b>			

### I. COURSE OVERVIEW:

The course allow students to have a comprehensive understanding of cost management principles and practices in engineering projects. They are equipped with the skills to plan, estimate, control, and communicate project costs effectively, contributing to the successful delivery of projects within budgetary constraints

### II. COURSE OBJECTIVES:

**The students will try to learn:**

- I. Establish systems to help streamline the transactions between corporate support departments and the operating units.
- II. Devise transfer pricing systems to coordinate the buyer-supplier interactions between decentralized organizational operating units
- III. Use pseudo profit centers to create profit maximizing behavior in what were formerly cost centers.

### III. COURSE OUTCOMES:

**After successful completion of the course, students should be able to:**

CO 1	Summarize the concept of strategic cost management, strategic cost analysis – target costing, life cycle costing and Kaizen costing and the cost drive concept.	Understand
CO 2	Describe the decision-making; relevant cost, differential cost, incremental cost and opportunity cost, objectives of a costing system.	Understand
CO 3	Interpret the meaning and different types of project management and project execution, detailed engineering activities.	Understand
CO 4	Understand the project contracts, cost behavior and profit planning types and contents, Bar charts and Network diagram	Understand
CO 5	Analyze by using quantitative techniques for cost management like PERT/CPM.	Analyze

### IV. SYLLABUS:

<b>UNIT-I</b>	<b>INTRODUCTION</b>	<b>Classes: 09</b>
Introduction and Overview of the Strategic Cost Management Process		
<b>UNIT-II</b>	<b>COST CONCEPTS</b>	<b>Classes: 09</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.		
<b>UNIT-III</b>	<b>PROJECT MANAGEMENT</b>	<b>Classes: 09</b>
Project: meaning, Different types, why to manage, cost overruns centers, various stages of project execution: conception to commissioning. Project execution as conglomeration of technical and nontechnical 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.		

<b>UNIT-IV</b>	<b>COST BEHAVIOR AND PROFIT PLANNING</b>	<b>Classes: 09</b>
Cost Behavior and Profit Planning Marginal Costing; 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. 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.		
<b>UNIT-V</b>	<b>QUANTITATIVE TECHNIQUES</b>	<b>Classes: 09</b>
Quantitative techniques for cost management, Linear Programming, PERT/CPM, Transportation Problems, Assignment problems, Simulation, Learning Curve Theory.		
<b>Text Books</b>		
1. Robert S Kaplan Anthony A. Alkinson, Management & Cost Accounting. 2. N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.		
<b>Reference Books</b>		
1. Cost Accounting A Managerial Emphasis, Prentice Hall of India, New Delhi. 2. Charles T. Horngren and George Foster, Advanced Management Accounting. 3. Ashish K. Bhattacharya, Principles & Practices of Cost Accounting A. H. Wheeler publisher.		
<b>Web References</b>		
1. <a href="https://onlinecourses.nptel.ac.in/noc16_ce02/preview">https://onlinecourses.nptel.ac.in/noc16_ce02/preview</a>		
<b>E-Text Books</b>		
1. <a href="http://nptel.ac.in/downloads/110101003/">http://nptel.ac.in/downloads/110101003/</a>		