



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

COURSE CONTENT

COST MANAGEMENT OF ENGINEERING PROJECTS								
III Semester: ST								
Course Code	Category	Hours / Week			Credits	Maximum Marks		
BSTD30	Elective	L	T	P	C	CIA	SEE	Total
		3	0	0	3	40	60	100
Contact Classes: 48	Total Tutorials: Nil	Total Practical Classes: Nil			Total Classes: 48			
Prerequisite: NIL								

I. COURSE OVERVIEW:

The Cost Management of Engineering Project offers a comprehensive and systematic introduction to the basic principles and basic approach of the project cost management as well as the application in engineering practice. The main content includes the outline of project cost management, project cost forecasts, project cost plan, project cost control, cost accounting, cost analysis, project cost assessment, responsibility cost management, financing cost management, procurement cost management and quality cost management. Scope, time, and cost management are at the heart of successful project management. This course will give you the tools to develop a project scope, schedule and budget and then status them to predict project performance. Throughout the course, you will learn about change management and techniques to implement it.

II. COURSE OBJECTIVES:

The student 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 Build the strategic cost management plans to ensure that the completion of the project with in the proposed budget.
- CO 2 Simplify the complex problems related financial matters using appropriate cost management system for effectively utilizing available funds and timely completion of project as well.
- CO 3 Categorize the proposed project into different levels considering various work phases, technical and non-technical activates for smoothly organizing the project.
- CO 4 Plan the execution of the project constructing network diagrams for timely arranging the funds, material, and work force as well.
- CO 5 Examine the complex problems related cost aspects during the different phases of construction and notify the variances from the original cost to fix the targets, arrange the funds and material as well.

- CO 6 Compare different cost management techniques and notify the problems that might be take place during the project execution for taking appropriate decision towards smoothly and timely completion of the given project.

IV. COURSE CONTENT:

MODULE-I: INTRODUCTION (09)

Introduction and Overview of the Strategic Cost Management Process

MODULE-II: COST CONCEPTS (10)

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.

MODULE-III: PROJECT MANAGEMENT (10)

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.

MODULE-IV: COST BEHAVIOR AND PROFIT PLANNING (10)

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.

MODULE-V: QUANTITATIVE TECHNIQUES (09)

Quantitative techniques for cost management, Linear Programming, PERT/CPM, Transportation Problems, Assignment problems, Simulation, Learning Curve Theory.

V. TEXT BOOKS:

1. Robert S Kaplan Anthony A. Alkinson, Management & Cost Accounting.
2. N.D. Vohra, Quantitative Techniques in Management, Tata McGraw Hill Book Co. Ltd.

VI. REFERENCE BOOKS:

1. Cost Accounting A Managerial Emphasis, Prentice Hall of India, New Delhi.
2. Charles T. Horngren and George Foster, Advanced Management Accounting.

VII. ELECTRONICS RESOURCES:

1. https://onlinecourses.nptel.ac.in/noc16_ce02/preview
2. <http://nptel.ac.in/downloads/110101003/>

VIII. MATERIALS ONLINE:

1. Course Template
2. Tutorial Question Bank
3. Assignments
4. Model Question Paper – I
5. Model Question Paper - II
6. Lecture Notes
7. Power point presentation