

Course Number and Name												
BCE072 - CONSTRUCTION PROJECT MANAGEMENT												
Credits and Contact Hours												
3 & 45												
Course Coordinator's Name												
Mr. S.Vinoth Kumar												
Text Books and References												
REFERENCES:												
<ul style="list-style-type: none"> • Chris Hendrickson and Tung Au, Project Management for Construction – Fundamental Concepts for Owners, Engineers, Architects and Builders, Prentice Hall, Pittsburgh, 2000. • Chitkara, K.K. Construction Project Management: Planning, Scheduling and Control, Tata McGraw-Hill Publishing Company, New Delhi, 1998. • Frederick E. Gould, Construction Project Management, Wentworth Institute of Technology, Vary E. Joyce, Massachusetts Institute of Technology, 2000. • Choudhury, S, Project Management, Tata McGraw-Hill Publishing Company, New Delhi, 1988. • George J.Ritz , Total Construction Project Management - McGraw-Hill Inc, 1994. 												
Course Description												
<ul style="list-style-type: none"> • To study the elements of construction project management; consisting of owners' perspective, organization, design and construction procedures, resource utilization and cost estimation.. 												
Prerequisites						Co-requisites						
Building Construction Technology						NIL						
required, elective, or selected elective (as per Table 5-1)												
Course Outcomes (COs)												
CO1		Know the types and financing of construction and changing Environment of the industry.										
CO2		Understand the organisation of project management										
CO3		Know the design and construction process as an integrated system.										
CO4		Know the labour, material and equipment utilization										
CO5		Understand Cost Estimates and the Costs Associated with Construction Facilities.										
Student Outcomes (SOs) from Criterion 3 covered by this Course												
	COs/SOs	a	b	c	d	e	f	g	h	i	j	k
	CO1	M				L	M		M			
	CO2	M					M		M			

CO3	M					M		M		L		
CO4	M					M		M				
CO5	M					M		M				

List of Topics Covered

UNIT I THE OWNERS' PERSPECTIVE 9

Introduction - Project Life Cycle - Types of Construction - Selection of Professional Services - Construction Contractors - Financing of Constructed Facilities - Legal and Regulatory Requirements - Changing Environment of the Construction Industry - Role of Project Managers

UNIT II ORGANIZING FOR PROJECT MANAGEMENT 9

Project Management – modern trends - Strategic Planning - Effects of Project Risks on Organization - Organization of Project Participants -Traditional Designer- Constructor Sequence - Professional Construction Management - Owner-Builder Operation - Turnkey Operation - Leadership and Motivation for the Project Team

UNIT III DESIGN AND CONSTRUCTION PROCESS 9

Design and Construction as an Integrated System - Innovation and Technological Feasibility - Innovation and Economic Feasibility - Design Methodology - Functional Design - Construction Site Environment

UNIT IV LABOUR, MATERIAL AND EQUIPMENT UTILIZATION 9

Historical Perspective - Labour Productivity - Factors Affecting Job-Site Productivity - Labour Relations in Construction - Problems in Collective Bargaining - Materials Management - Material Procurement and Delivery - Inventory Control - Tradeoffs of Costs in Materials Management. - Construction Equipment - Choice of Equipment and Standard Production Rates - Construction Processes Queues and Resource Bottlenecks

UNIT V COST ESTIMATION 9

Costs Associated with Constructed Facilities - Approaches to Cost Estimation - Type of Construction Cost Estimates - Effects of Scale on Construction Cost - Unit Cost Method of Estimation - Methods for Allocation of Joint Costs - Historical Cost Data - Cost Indices - Applications of Cost Indices to Estimating - Estimate Based on Engineer's List of Quantities - Estimation of Operating Costs