

GUJARAT TECHNOLOGICAL UNIVERSITY
BRANCH NAME: B. Arch
SUBJECT NAME – Construction Management
SUBJECT CODE – 2X85012
4th Year, Semester: VIII

Prerequisite:

There is no prerequisite for taking this course. It is assumed that students, taking this course, are interested to explore this subject.

Rationale:

To understand different management techniques suitable for planning and constructional Projects and to understand the management system for accomplishing the task efficiently in terms of both time and cost.

Teaching and Assessment Scheme:

Teaching Scheme			Credits C	Examination Marks				Total Marks	University Exam Type
Field work	Lectures	Studio		External exam		Internal exam			
				(ESE)Theory	(ESE) Viva	(PA)Theory	(PA)Viva		
01	02	01	04	NA	50	NA	50	100	VIVA

Content:

Sr. No.	Content	Total Hours*	% Weightage*
1	Project management concepts - objectives, planning, scheduling Controlling and role of decision in Project management. Traditional management system, Gantt's approach, Load chart, Progress Chart, Development of bar chart, Merits and Demerits	8	10%
2	Project Network - Events Activity, Network Rules, Graphical Guidelines for Network, Umpiring the events, Cycles, Development of Network - planning for Network Construction, Models of Network construction, steps in development of Network. Work Break down Structure, hierarchies. Concepts: critical path method - process, activity time estimate, Earliest Event time, latest allowable Occurrence time, starts / finishes time of activity, float, and critical activity and path problems.	12	20%
3	Cost model - Project cost, direct cost, indirect cost, slope curve, Total project cost, optimum duration contracting the network for cost optimization. Steps in cost optimization, updating, resource allocation- resource smoothing, and resource leveling.	16	25%
4	PERT network, introduction to the theory of probability and statistics. Probabilistic time estimation for the activities for the activities of PERTNetwork.	16	25%

5	Introduction: Creating a New project, building task. Creating resources and assessing costs, refining your project. Project Tracking-Understanding tracking, recording actual. Reporting on progress. Analyzing financialprogress.	12	20%
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*: indicative

References:

- Dr. B.C. Punmia and K.K. Khandelwal -Project planning and control with PERT/CPM, Laxmi publications, New Delhi,1987.
- Elaine Marmel, Microsoft office Project 2003 Bible, Wiley Dreamtect (P) Ltd., NewDelhi, 2004.
- Sam Kubba, “Green Construction Project Management and Cost Oversight”, Elsevier,2010.
- S.P. Mukhopadyay, “Project Management for architects and Civil Engineers”, IIT, Kharagpur 1974.
- Jerome D. Wiest and Ferdinand K. Levy, “A Management guide to PERT/CPM”, prentice hall of Indian pub. Ltd. New Delhi1982.
- SR.A. Burgess and G. White, “ Building production and project management”, the Construction press, London1979

List of Projects/Assignments*:

- Lecture and tutorial should be in presentation form and help the students to get the exposure the project management consultant latest approach as of now in big projects PMC consultant are hired and architect is the nucleus of the projects.
- Students should be given all the exposure to all documents and the working method of PMC consultant.
- They should be given some assignment based on the above coarse which help them in future but basic