

GUJARAT TECHNOLOGICAL UNIVERSITY
Syllabus for B. Arch
EIGHTH SEMESTER

SUBJECT NAME – CONSTRUCTION MANAGEMENT

SUBJECT CODE – 1085012

FOCUS:

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.

CONTENTS:

- 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
- 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.
- 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.
- PERT network, introduction to the theory of probability and statistics. Probabilistic time estimation for the activities for the activities of PERT Network.
- 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 financial progress.

SUGGESTED BOOKS

- 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., New Delhi, 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 Delhi 1982.
- SR.A. Burgess and G. White, “ Building production and project management”, the Construction press, London 1979