

Construction Project Scheduling

Course Code CE- 474	Credit Hours 3-0
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Course Description

This course comprises of construction project scheduling that includes: network methods, deterministic and probabilistic scheduling, resource leveling, preparation of project schedules and its use in delay claims

Text Book:

1. Callahan, T. Michael; Quackenbush, G. Daniel and Rowings, E. James. (1992). Construction Project Scheduling. McGraw-Hill, Inc.

Reference Book:

1. Barrie and Paulson. (1992). Professional Construction Management: Including C.M, Design-Construct, and General Contracting. McGraw-Hill, Inc.
2. Stevens, D. James. (1990). Techniques for Construction Network Scheduling. McGraw-Hill, Inc

Prerequisites :

ME-109 Civil Engineering Drawing

ASSESSMENT SYSTEM FOR THEORY

	Without Project (%)	With Project/Complex Engineering Problems (%)
Quizzes	15	10-15
Assignments	10	5-10
Mid Terms	25	25
Project	-	5-10
End Semester Exam	50	45-50

ASSESSMENT SYSTEM FOR LAB

Lab Work/ Psychomotor Assessment/ Lab Reports	70%
Lab Project/ Open Ended Lab Report/ Assignment/ Quiz	10%
Final Assesment/ Viva	20%

Teaching Plan

Week No	Topics/Learning Outcomes
1-2	Introduction to scheduling, its need and purpose, how scheduler determine the productivity. (Topic Added)
3	Intro: Different Scheduling methods and their efficacy in scheduling (Gantt chart, Activity on Arrow, Activity on node,

4-5	Gantt chart, Activity on Arrow, Activity on node, Precedence diagram calculations, floats and critical path, Impact of relationships and constraints on the schedule. (Topic Added)
6	(Topic Added)
(7th Week)	OHT I
7-8	Schedule compression, Least-Cost Scheduling, Time cost tradeoff problem (Topic Added)
9-10	Constrained Resource allocation to the activities based on series and parallel method under constrained and open environment, Resource Levelling using manual method. (Topic Added)
11-12	Probabilistic Models, PERT, statistical tools, probability distribution, computing PERT durations, Introduction to @ risk software. (Topic Added)
(12th Week)	OHT 2
13-14	Creation of project baseline, Updating and controlling the schedule and determining the status of the project using earned value management (cost and time). (Topic Added)
15	Scheduling in contract management and delay analysis (Topic Added)
16	4D Scheduling using BIM and Navisworks (Topic Added)
16	Development and Application of scheduling in real construction project from drawings and BOQs – case study – MS Project (Topic Added)
17-18	End Semester Exam

Practical: Nil.