



Model Institute of Engineering  
& Technology (Autonomous)  
Course Handout

Kot, Bhalwal, Jammu

## COURSE HANDOUT

Project Planning Management and Systems (CE-701 (B))

BE – 7th Semester

ACADEMIC YEAR (2024-25)

**Mr. Ishan Anand**

Assistant Professor

Department of Civil Engineering



Department of Civil Engineering

Model Institute of Engineering & Technology (Autonomous)

Kot Bhalwal, Jammu - 181122

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Dr. Arun K. Gupta Teaching-Learning Centre

Version 1.1

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Course Code	Course Name	Course Type	Cd	L	T	P	Marks		
							Sessional	Final Exam	Total
CE-701(B)	Project Planning Management and System	Core	3	2	1	0	50	100	150

### COURSE OUTCOMES

At the end of the course the student will be able to:	
CO1	Define a project and understand its characteristics, objectives, and scope.
CO2	Identify different types of network analysis and understand their applications in project management and other related fields.
CO3	Apply time estimates in PERT, including optimistic time, pessimistic time, and most likely time, to calculate expected time and determine project durations.
CO4	Analyze event times in project management and their relationship to project scheduling and Statistical Analysis
CO5	Perform CPM analysis to identify critical activities, determine project duration, and establish project schedules based on activity dependencies and durations.

#### Unit-I

Project: Definition, Project Management, Elements of Project Management, Methods of Project Management, Work Breakdown Structure

(8 Hours)

#### Unit-II

Network Analysis: Types, Fundamentals of Network, Activities and its types, Events and its types, Dummy Activity, Logical Relationship, Rules to draw a Network.

(8 Hours)

#### Unit-III

PERT: Discussion, Deterministic Approach and Probabilistic Approach, Time Estimates, Frequency Distribution Curve- types and Properties, Probability Distribution Curve.

(9 Hours)

#### Unit-IV

Central Limit Theorem: Statement-1, Event Times, Slack, Critical Path, Statement-2, Probability of completion of a project, Normal Distribution Curve.

(9 Hours)

#### Unit-V

CPM: Differentiate PERT & CPM, CPM Analysis, Float, Types of Floats, Relationship b/w Total Float and Free Float, Analysis in CPM, Critical Path, Time Cost Optimization- Crashing.

(9 Hours)

#### Textbooks

S.No	Name of the Books	Name of the Author	Publisher Name	Edition (Pub.Yr.)
1	PERT and CPM	L.S. Srinath	East West Press	1st (2001)

#### Reference Books

S.No	Name of the Books	Name of the Author	Publisher Name	Edition (Pub.Yr.)
1	Project planning and control with PERT and CPM' Construction	B.C. Punmia and K.K. Khandelwal S.C. Sharma	Tata Mc Graw Hill	8th (2013)



	equipment's and its management			
2	Management in construction industry	P.P. Dharwadkar	Oxford and IBH Publishing company New Delhi	15th (2022)
3	Construction Planning, Equipment's, and methods	Purifoy, R.L.	McGraw Hill.	13th (2015)

COURSE PLAN		
Unit-I Project Planning and Management		
S.No	Topics	Recommended Books
1	Definition, Project Management	Book 1, Ch.1
2	Elements of Project Management	Book 1, Ch.1
3	Methods of Project Management	Book 1, Ch.1
5	Work Breakdown Structure	Book 2, Ch.2
Unit-II Network Analysis		
8	Types, Fundamentals of Network	Book 1, Ch.2
9	Activities and its types	Book 1, Ch.2
10	Events and its types	Book 1, Ch.1
11	Dummy Activity, Logical Relationship	Book 2, Ch.2
12	Rules to draw a Network	Book 2, Ch.2
Unit-III PERT		
16	Discussion, Deterministic Approach and Probabilistic Approach	Book 2, Ch.2
17	Time Estimates Frequency Distribution Curve- types and Properties, Probability Distribution Curve	Book 2, Ch.2
Unit-IV Central Limit Theorem		
22	Statement-1, Event Times, Slack, Critical Path, Statement-2, Probability of completion of a project, Normal Distribution Curve	Book 2, Ch.3
Unit-V CPM		
29	Differentiate PERT & CPM, CPM Analysis	Book 2, Ch.8
30	Float, Types of Floats, Relationship b/w Total Float and Free Float	Book 1, Ch.8
31	Analysis in CPM, Critical Path, Time Cost Optimization- Crashing	Book 2, Ch.8

**ADDITIONAL WEB RESOURCES**

1.	IIT Madras – Project Planning and Control- Online Course: <a href="https://rb.gy/et9v6">https://rb.gy/et9v6</a>
2.	PERT and CPM by L.S. Srinath: <a href="https://rb.gy/et9v6">https://rb.gy/et9v6</a>
3	PERT: Coursera: <a href="https://rb.gy/tzaig">https://rb.gy/tzaig</a>

**GRADING AND ASSESSMENT**





- **Sessional Test:** 20 marks
- **Assignment:** 20 marks
- **Attendance:** 10 marks
- **Final Examination:** 100 marks

#### COURSE POLICIES

- **Attendance:** Minimum 75% attendance is mandatory to appear in the final examination of the course.
- **Academic Integrity:** MIET's academic integrity policies apply. Plagiarism will not be tolerated.
- **Late Submissions:** Assignments and projects must be submitted by the specified timelines.

#### FACULTY INFORMATION

- **Office Hours**  
Monday (12:05 PM - 12:55 PM)  
Friday (12:05 PM - 12:55 PM)
- **Contact Information**  
[ishan.civ@mietjammu.in](mailto:ishan.civ@mietjammu.in)