BOOST
THE LEADING TRAINING PROVIDER

Project & Contract Management

Critical Path Method (CPM) in Project Scheduling

Course Introduction

(CPM)

The Critical Path Method (CPM) is a vital project management tool used to plan, schedule, and control complex projects efficiently. By identifying critical and non-critical tasks, CPM allows project managers to prioritize resources, predict timelines, and ensure timely project delivery.

This course provides a comprehensive understanding of CPM principles, techniques, and applications, equipping participants with the skills needed to optimize project schedules and enhance decision-making.

Target Audience

- Project Managers
- Project Coordinators
- Operations Managers

Learning Objectives

- Understand the fundamentals and importance of the Critical Path Method in project scheduling.
- Identify critical paths and calculate project timelines using CPM techniques.
- Develop project schedules with activity sequencing and duration estimation.
- Apply float analysis to identify and manage project risks effectively.
- Utilize software tools to create and manage CPM-based schedules.
- Analyze and optimize schedules to ensure project efficiency and on-time delivery.

Course Outline

- **DAY 01**

  Introduction to Project Scheduling and CPM

  - Overview of project scheduling techniques
  - History and development of CPM
  - Key concepts and terminologies (e.g., activities, dependencies, milestones)
  - Benefits and limitations of CPM
  - Case studies: Real-world applications of CPM

- **Day 02**

  Building the CPM Network Diagram

  - Steps to create a CPM network diagram
  - Identifying project activities and dependencies
  - Types of relationships (Finish-to-Start, Start-to-Start, etc.)
  - Drawing precedence diagrams
  - **Workshop:** Constructing a basic network diagram

- **Day 03**

  Calculating the Critical Path

  - Forward and backward pass calculations
  - Determining the earliest and latest start/finish times
  - Identifying the critical path and project duration
  - **Float analysis:** Total float vs. free float
  - **Hands-on exercise:** Critical path calculation

- **Day 04**

  Advanced CPM Applications

  - Resource leveling and allocation
  - Incorporating constraints into CPM schedules
  - Managing schedule risks with CPM
  - Monitoring and controlling project schedules

- Software tools for CPM (e.g., MS Project, Primavera)
- **Workshop:** Developing a CPM schedule using software tools

• **Day 05**

Optimizing and Managing Project Schedules

- Techniques for schedule optimization
- Crashing and fast-tracking methods
- Reviewing and updating CPM schedules
- **Case study:** Solving scheduling challenges in a complex project
- **Final project**: Creating and presenting a CPM-based schedule

Confirmed Sessions

FROM	TO	DURATION	FEES	LOCATION
April 14, 2025	April 18, 2025	5 days	4250.00 $	UAE - Dubai
July 14, 2025	July 18, 2025	5 days	4950.00 $	England - London
Dec. 22, 2025	Dec. 26, 2025	5 days	4250.00 $	UAE - Dubai