

DESIGN/IMPLEMENTATION OF COMPUTERIZED PROJECT CONTROL SYSTEM (PCS)

"Building Integrated Digital Solutions for Real-Time Project Monitoring, Reporting & Control"

Schedule

Date	Venue	Fees (Face-to-Face)
22 - 26 Jun 2026	Dubai, UAE	USD 3495 per delegate

► **Available delivery methods:** Face-to-Face & Online Training

Introduction

Project success today relies on real-time data visibility, integrated control systems, and streamlined processes. A Computerized Project Control System (PCS) enhances transparency, reduces manual error, and allows proactive decision-making across project planning, execution, and closure phases. This intensive 5-day course provides the technical knowledge and hands-on practice needed to design, configure, and implement a PCS using industry best practices and tools.

Participants will explore control system architecture, scope-cost-schedule integration, software selection criteria, and implementation challenges. Real-world simulations and case studies will help translate concepts into deployable digital project control frameworks.

Objectives

By the end of this course, participants will be able to:

- Understand the architecture and components of a computerized PCS
- Design a project control framework integrating time, cost, and performance metrics
- Select and configure project control software based on user and project needs
- Manage data flows and reporting structures across planning, execution, and forecasting
- Implement automation, dashboards, and alerts to enhance project control

Why Attend

- Learn how to digitize project monitoring and control with practical tools
- Understand PCS structure, lifecycle, and integration across departments
- Reduce delays and cost overruns by using real-time data visibility
- Acquire the skills to lead PCS implementation initiatives in your organization
- Gain hands-on experience with PCS design templates, KPIs, and reporting logic

Target Audience

This program is designed for:

- Project controllers, project managers, and planning engineers
- IT professionals supporting project systems and reporting
- Cost engineers, schedulers, and performance analysts
- EPCM consultants and construction managers
- Anyone involved in project governance or digital transformation

Individual Benefits

Key competencies that will be developed include:

- Designing integrated cost-schedule-progress dashboards
- Mapping system architecture for multi-project environments
- Building user-friendly input templates and reporting interfaces
- Applying forecasting models and earned value techniques
- Implementing alerts and automation features for real-time control

Organizational Benefits

Upon completing the training course, participants will demonstrate:

- Faster reporting cycles with reduced manual effort
- Greater alignment of project execution with budgets and timelines
- Improved early warning systems and corrective action tracking
- Seamless collaboration between planning, finance, and execution teams
- A scalable PCS framework ready for cross-project deployment

Instructional Methodology

The course follows a blended learning approach combining theory with practice:

- Strategy Briefings - PCS architecture, implementation lifecycle, system standards
- Case Studies - PCS successes and failures across capital-intensive projects
- Workshops - Design your own PCS dashboard, reporting logic, and workflows
- Peer Exchange - Group discussions on software integration and field challenges
- Tools - PCS templates, KPIs, interface blueprints, alert matrix samples

Course Outline

Training Hours: 7:30 AM - 3:30 PM Daily Format: 3-4 Learning Modules | Coffee breaks: 09:30 & 11:15 | Lunch Buffet: 01:00 - 02:00

Day 1: Foundations of Project Control Systems

- Module 1: Introduction to PCS - Purpose and Components (07:30 - 09:30) • Objectives, evolution, and benefits of computerized PCS
- Module 2: System Architecture and PCS Workflow Mapping (09:45 - 11:15) • Data inputs, outputs, control points, integration
- Module 3: Key Project Control Functions (11:30 - 01:00) • Progress tracking, change management, earned value
- Module 4: Workshop - Map a PCS Workflow for Your Project (02:00 - 03:30) • Identify modules, users, reports, and control checkpoints

Day 2: Time, Cost & Scope Integration

- Module 5: Schedule Management and Data Inputs (07:30 - 09:30) • Linking Primavera/MSP schedules to PCS
- Module 6: Cost Control and Budget Tracking (09:45 - 11:15) • Cost codes, baselines, actuals, forecasting logic
- Module 7: Work Breakdown and Coding Structures (11:30 - 01:00) • WBS, CBS, OBS, resource libraries
- Module 8: Workshop - Build a Control Structure Template (02:00 - 03:30) • Develop integrated WBS-CBS-OBS mapping

Day 3: System Design, Interfaces & KPIs

- Module 9: System Configuration and Customization (07:30 - 09:30) • Screen design, access control, data entry interfaces
- Module 10: Key Performance Indicators and Alerts (09:45 - 11:15) • Earned value, SPI/CPI, performance thresholds
- Module 11: Dashboard Reporting and Visual Analytics (11:30 - 01:00) • Designing visual reporting tools and drill-down features
- Module 12: Workshop - Design a Live Project Dashboard (02:00 - 03:30) • Select KPIs and create graphical displays

Day 4: PCS Implementation and Integration

- Module 13: Software Selection and Vendor Management (07:30 - 09:30) • Evaluation criteria, integration capabilities
- Module 14: PCS Implementation Lifecycle and Risks (09:45 - 11:15) • Planning, piloting, rollout, post-implementation review
- Module 15: Integration with ERP, Document Control, and Procurement (11:30 - 01:00) • Linking PCS to SAP, Oracle, or document systems
- Module 16: Workshop - Draft a PCS Implementation Plan (02:00 - 03:30) • Timeline, phases, stakeholder roles

Day 5: Forecasting, Automation & Final Design

- Module 17: Forecasting Models and Variance Analysis (07:30 - 09:30) • To-complete performance index (TCPI), Monte Carlo basics
- Module 18: Alerts, Triggers, and Automation Logic (09:45 - 11:15) • Custom alerts, deviation thresholds, escalation
- Module 19: PCS Health Check and Maturity Assessment (11:30 - 01:00) • Audit checklists, maturity models, gap analysis
- Module 20: Final Workshop - Present Your PCS Design (02:00 - 03:30) • Group presentations and expert feedback

Certification

Participants will receive a Certificate of Completion in Design/Implementation of Computerized Project Control System (PCS), confirming their capability to design, deploy, and manage integrated PCS frameworks for enhanced project control, performance, and decision-making.

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