

Advanced Project Management: PMBOK 5th Edition Mastery

14 – 18 March 2027
Muscat

AGILE LEADERS
Training Center

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Overview

Senior project practitioners and PMO directors must deliver complex undertakings under strict baseline controls, tight capital constraints, and multifaceted stakeholder demands. Advanced Project Management: PMBOK 5th Edition Mastery equips experienced professionals with advanced planning processes, S-curve baseline modelling, and schedule network execution using Microsoft Project tools. Participants study structural decomposition, critical path analysis, earned value metrics, and quantitative contingency modelling grounded in the PMBOK Guide 5th Edition framework. This course is delivered by Agile Leaders Training Center.

Who Should Attend

- Senior project directors overseeing multi-phase capital or technology programmes.
- PMO heads seeking standardisation across enterprise schedule and cost baselines.
- Lead engineers transitioning from technical coordination into advanced project leadership.
- Senior cost controllers responsible for earned value integration and cash expenditure curves.
- Lead schedulers looking to optimise critical path networks and resource levelling.

Departments and Industries

This syllabus serves advanced leadership across capital-intensive, technical, and high-consequence enterprise environments.

- Enterprise Programme Management Offices EPMO
- Capital Works and Infrastructure Engineering Divisions
- Industrial Manufacturing and Plant Expansion Units
- Enterprise Systems Implementation and Corporate IT
- Corporate Strategy Execution and Portfolio Delivery Offices

Learning Objectives

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

- Construct detailed Work Breakdown Structures and network diagrams aligning with strategic deliverables.
- Calibrate critical path schedules and resource allocation matrices using Microsoft Project.
- Generate and interpret Project S-Curve models to forecast budget burn rates and cash allocations.
- Conduct quantitative uncertainty modelling to calculate contingency reserves for scope and expenditure.
- Deploy rigorous earned value indicators to detect baseline variances early during execution.

- Establish contract administration protocols and procurement control mechanisms for high-value tenders.

Course Agenda

Day 1: Strategic Alignment and Advanced Baseline Architecture

- Enterprise Strategic Frameworks: Aligning Organizational Strategy with Portfolio Delivery
- PMBOK Guide 5th Edition Framework Architecture: Deep Structural Analysis of the Process Groups
- Advanced Work Breakdown Structure Construction and Dictionary Decomposition
- Integration Protocol Design: Formulating the Master Phase Execution Charter
- Baseline Governance: Developing the Performance Measurement Baseline

Day 2: Schedule Network Construction and Microsoft Project Modelling

- Precedence Diagramming Method: Dependency Identification and Lead-Lag Optimisation
- Critical Path Method Analysis: Total Float, Free Float, and Schedule Compression
- Resource Allocation and Levelling: Balancing Labour and Equipment Constraints
- Microsoft Project Configuration: Automated Gantt Scheduling and Task Linking
- Milestone Network Finalisation: Establishing the Immutable Schedule Baseline

Day 3: Cost Engineering and Project S-Curve Analysis

- Parametric and Bottom-Up Estimating Techniques for Multi-Tier Deliverables
- Budget Formulation: Aggregating Work Package Cost Accounts into Control Accounts
- Project S-Curve Architecture: Plotting Planned Value, Actual Cost, and Expenditure Profiles
- Contingency Reserve Allocation using Quantitative Uncertainty Calculations
- Cash Flow Profiling: Aligning Billing Milestones with Capital Disbursements

Day 4: Execution Directives, Procurement, and Quality Control

- Directing Execution Work: Managing Subcontractor Interfaces and Deliverable Handover
- Procurement Administration: Conducting Bid Evaluations and Enforcing Contract Covenants
- Integrated Change Control: Operating the Change Control Board and Impact Assessment Protocols
- Quality Assurance Systems: Auditing Execution Deliverables Against Acceptance Criteria
- Stakeholder Engagement Navigation: Resolving Cross-Functional Governance Friction

Day 5: Earned Value Performance and Phase Closure Mastery

- Earned Value Performance: Computing Schedule Variance, Cost Variance, SPI, and CPI
- Forecasting Indices: Calculating Estimate to Complete and Estimate at Completion
- Variance Recovery Strategies: Crash and Fast-Track Intervention Decision Trees
- Contractual Closeout: Formal Defect Verification, Acceptance Auditing, and Asset Handover
- Organizational Lessons Learned: Archive Curation and Baseline Calibration for Future Works

Practical Exercises

Participants undertake practical scenario-based assignments to reinforce advanced control techniques and scheduling disciplines.

- Suggested activity: Build an advanced multi-tier schedule network in Microsoft Project and resolve critical path bottlenecks.
- Suggested activity: Plot a dynamic Project S-Curve to identify schedule slippage and cost overrun trends across four phases.
- Suggested activity: Perform quantitative contingency calculations to determine appropriate schedule and budget buffers.
- Suggested activity: Formulate an Integrated Change Control impact report resolving high-stakes vendor scope changes.

FAQs

What distinguishes this advanced syllabus from foundational methodology training?

This masterclass addresses advanced schedule networks, quantitative reserve calculations, S-curve modelling, and execution controls required by seasoned directors, rather than introductory lifecycle overviews.

How is Microsoft Project applied during this one-week syllabus?

Participants utilise Microsoft Project to model dependencies, level constrained resources, compress critical paths, and set formal baselines that reflect complex operational requirements.

Which PMBOK edition forms the foundational structure of this programme?

The course systematically builds upon the proven ten knowledge areas and five process group interactions formalised within the PMBOK Guide 5th Edition.

Conclusion

Participants conclude this programme equipped to lead complex execution phases with precision, utilizing disciplined planning frameworks and rigorous analytical instruments. By mastering critical path scheduling, Project S-Curve tracking, and performance baseline controls, professionals safeguard enterprise investments and ensure strategic corporate delivery.