Petrochemical Plant Projects Cost Estimation & Control

6 – 10 June 2027
Online



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Ref: 321555_163591 **Date:** 6 – 10 June 2027 **Location:** Online **Fees:** 2700 GBP

Why This Course

Petrochemical plant projects are capital-intensive, technically complex, and highly sensitive to cost overruns. Accurate cost estimation and disciplined cost control are critical to safeguarding profitability, ensuring project viability, and maintaining stakeholder confidence.

This intensive 1-week program equips project engineers, cost estimators, planners, and finance professionals with the methodologies, analytical tools, and practical techniques required to manage costs effectively across the full project lifecycle. Through real-world case studies and hands-on exercises, participants will gain the confidence to produce reliable estimates and implement robust cost control systems.

What You'll Learn and Practice

By attending this course, you will:

- Apply industry-recognized cost estimation methodologies tailored to petrochemical projects.
- Develop accurate cost estimates across conceptual, FEED, and EPC stages.
- Implement structured cost control systems to manage budgets and performance.
- Conduct risk analysis and contingency planning to mitigate cost uncertainty.
- Utilize industry-standard tools and data systems for estimation and control.

The Program Flow

Day 1: Introduction to Cost Estimation in Petrochemical Projects

- Overview of petrochemical plant projects and cost drivers
- Types of cost estimates and associated accuracy ranges
- Cost estimate classification systems AACE, ANSI
- Key technical and commercial factors influencing project costs

Day 2: Cost Estimation Methodologies

- Factor estimating methods and practical applications
- Parametric estimating techniques
- Quantity take-off and unit rate estimating
- Resource-based estimating for labor, materials, and equipment



Day 3: Advanced Cost Estimation Techniques

- Monte Carlo simulation for cost risk analysis
- Estimating costs in brownfield vs. greenfield projects
- Life cycle cost analysis for petrochemical facilities
- Applying value engineering to optimize project costs

Day 4: Cost Control Strategies

- Developing project budgets and cost baselines
- Earned Value Management EVM principles and performance tracking
- Change management and cost impact assessment
- Progress measurement, forecasting, and variance analysis

Day 5: Tools and Best Practices

- Overview of industry-standard cost estimation and control software
- Managing cost databases and historical data
- Benchmarking and performance improvement
- Integrated case studies and hands-on practical exercises

Individual Impact

- Ability to prepare accurate and defensible cost estimates for petrochemical projects.
- Stronger control over budgets through structured monitoring and forecasting techniques.
- Enhanced confidence in managing cost risks and contingencies.
- Practical expertise in applying professional tools and best practices.

Organizational Impact

- Improved project cost predictability and reduced overruns.
- Stronger financial governance and reporting accuracy.
- Better-informed investment decisions through reliable cost data.
- Enhanced competitiveness in bidding and project execution.

Training Methodology

- Practical estimation workshops using real project scenarios.
- Case studies from petrochemical plant projects.
- Risk simulation exercises and budget tracking simulations.
- Group discussions focused on lessons learned and industry best practices.



Beyond the Course

Participants will leave ready to:

- Develop comprehensive cost estimates across all project phases.
- Implement proactive cost control and performance monitoring systems.
- Apply risk-based approaches to improve estimate reliability.
- Support strategic decision-making with accurate financial analysis.

