PETROCHEMICAL PLANT PROJECTS COST ESTIMATION & COST CONTROL



GENTEX®
TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Introduction

Petrochemical Plant Projects Cost Estimation & Cost Control is a specialised Training Course that prepares professionals to price and control capital projects in petrochemical facilities. Participants learn to estimate process equipment, piping, structures, and instrumentation using industry methods, then control that cost through engineering, procurement, and construction. The course links estimate accuracy to project stage, because confidence changes as design develops. Furthermore, it covers contingency setting, change management, and progress measurement in one workflow. As a result, learners leave able to produce reliable estimates and defend project cost performance with evidence.

Petrochemical Plant Projects Cost Estimation & Cost Control Course Objectives

- Apply AACE International estimate classes to petrochemical project stages.
- Prepare conceptual, study, and detailed estimates for process plants.
- Use capacity factoring and equipment-driven estimating methods.
- Estimate bulk materials, piping, steel, and electrical quantities.
- Build project cost breakdown structures aligned with the WBS.
- Set contingency and escalation allowances using risk analysis.
- Control cost through commitments, accruals, and earned value management.
- Manage change orders and trends in EPC contracts.
- Monitor cost performance with earned value metrics and reporting.
- Prepare cost forecasts, cash flow, and final cost reports.

Course Methodology

- Workshop sessions built on real petrochemical project cost data.

GENTEX® TRAINING CENTER

- Guided practice with factoring, quantity-based, and detailed estimating.
- Simulation exercises on trends, change orders, and cost recovery.
- Group review of participant estimates and cost reports.
- Case studies from refinery, gas processing, and petrochemical plants.
- Template-driven action planning for immediate workplace use.

Who Should Take This Course

- Cost engineers and estimators in petrochemical projects.
- Project controls and planning engineers.
- Project managers on EPC and capital projects.
- Contracts and procurement cost specialists.
- Engineering and construction cost analysts.
- Client and consultant cost control teams.

Petrochemical Plant Projects Cost Estimation & Cost Control Course Outlines

Day 1: Cost Estimating Foundations for Process Plants

- Capital project phases and estimate maturity.
- AACE International estimate classes and accuracy ranges.
- Cost breakdown structure and WBS alignment.
- Direct, indirect, and owner costs in petrochemical projects.
- Estimating data sources and historical cost databases.
- Basis of estimate documentation.
- Currency, escalation, and location factors.

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Day 2: Estimating Methods and Discipline Quantities

- Capacity factoring and Lang factors for process units.
- Equipment-driven estimating with vendor quotations.
- Piping estimating: material take-off, isometrics, and fabrication.
- Steel structures, civil works, and foundations estimating.
- Electrical and instrumentation estimating methods.
- Bulk material and commodity escalation handling.
- Productivity, indirects, and construction overheads.

Day 3: Contingency, Risk, and Estimate Validation

- Risk identification for capital cost estimates.
- Qualitative and quantitative risk analysis.
- Contingency and management reserve determination.
- Monte Carlo simulation for cost ranges.
- Benchmarking and estimate validation techniques.
- Reconciliation of estimate to budget and funding.
- Estimate review and approval governance.

Day 4: Cost Control During Engineering and Procurement

- Cost control system setup and coding structures.
- Commitment tracking and purchase order control.
- Accruals, invoicing, and payment certification.
- Change management: trends, change orders, and claims.

- Earned value management on EPC packages.
- Cost reporting with variance and forecast analysis.
- Interface between cost, planning, and procurement.

Day 5: Cost Control During Construction and Close-Out

- Progress measurement and valuation of construction works.
- Field change and site instruction cost handling.
- Forecasting estimate at completion and final cost.
- Cash flow management and funding requirements.
- Contractor claims assessment and settlement.
- Project close-out, final account, and lessons learned.
- Building a personal cost control action plan.

Conclusion

By successfully completing Petrochemical Plant Projects Cost Estimation & Cost Control, participants will gain a disciplined approach to pricing and controlling capital projects in process facilities. They will have acquired practical skills in estimate preparation, contingency setting, commitment and change control, earned value measurement, and cost forecasting. In addition, they will know how to protect project budgets with evidence. Gentex Training Center delivers this course so professionals can apply cost engineering practice from the next working day.

FAQs for the Petrochemical Plant Projects Cost Estimation & Cost Control course

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q1 What is the "Petrochemical Plant Projects Cost Estimation & Cost Control" course about?

It is a five-day programme on estimating and controlling the cost of petrochemical plant capital projects. It covers estimate classes, factoring and detailed estimating, contingency and risk analysis, commitment and change control, earned value management, and cost forecasting.

Q2 What are the key benefits of the "Petrochemical Plant Projects Cost Estimation & Cost Control" course?

Participants prepare estimates that match project stage and hold up through engineering and construction. They detect cost drift early, control trends and change orders, and set realistic contingencies. Projects gain better funding accuracy, fewer overruns, and stronger cost governance.

Q3 What skills will I gain from the "Petrochemical Plant Projects Cost Estimation & Cost Control" course?

You will gain capital cost estimating and estimate classification, contingency and risk-based allowance setting, commitment and change cost control, and earned value measurement and cost forecasting.

GENTEX® TRAINING CENTER

GENTEX Training Center LLC | Orlando - FL, USA
Info@gentextraining.com

Q4 What tools, methods, or standards are covered in the "Petrochemical Plant Projects Cost Estimation & Cost Control" course?

The course covers AACE International estimate classes, capacity and Lang factoring, material take-off, isometric-based piping estimating, cost breakdown structures, Monte Carlo simulation, contingency and management reserve setting, commitment and accrual tracking, earned value management, trend and change order logs, and estimate at completion forecasting.

Q5 How is the "Petrochemical Plant Projects Cost Estimation & Cost Control" course applied in real-world practice?

Participants apply it by preparing basis-of-estimate documents, validating estimates against benchmarks, tracking purchase order commitments, assessing contractor claims, and forecasting final cost. Cost engineering teams use these methods on refinery, gas processing, and petrochemical plant projects.