Academy Quick Reference Guide

Courses

Introduction Course Cost Engineering

Understanding the role of a cost engineer in an organisation
- Understanding the basic definitions of cost estimation, cost control and planning
- What are sources used for cost engineering
- What determines the accuracy of your estimates
- Front End Loading
- Life Cycle Cost method
- Direct versus indirect cost

Understanding the ties between cost estimation, cost control and planning

The influence of various contract forms

Understanding the position of estimating in each phase of the lifecycle of a project
- Project Life Cycle and estimate classifications
- Desirable Project Life Cycle
- Operational phase estimating approach
- Estimating from initiation to close-out phase
- Total Cost of Ownership

Understanding the definitions within estimating Activity allowances
- Contingency and risk assessment
- Money of the Day
- Real Term / Constant Value Money
- Escalation

Understanding the principles of value Engineering
- Principles
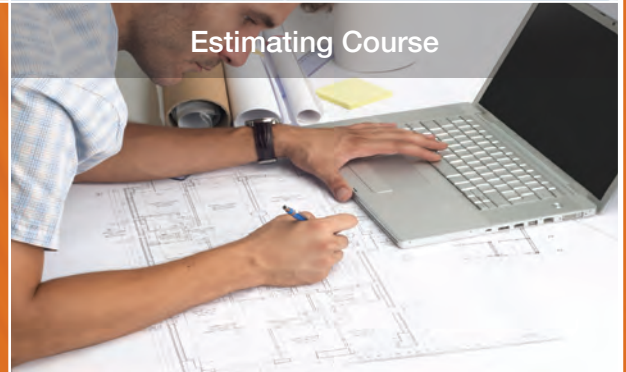- Value Engineering exercise

Estimating Course

Estimating methods
- Different approaches to estimating
- Principles of the quantitive method
- Buildup of unit rates
- Direct versus indirect

Cases: Preparing estimates by using various techniques for the following disciplines:
- Civil and structural
- Electrical
- Engineering
- Instrumentation
- Insulation
- Painting
- Piping
- Scaffolding

Factor Estimating Course

Factor estimating methods
- Introduction to factor estimating
- Advantages and disadvantages
- 0.6 exponent or power factor
- Lang and Hand methods
- Improved factor method

Quantitive estimating method
- Principles
- Advantages and disadvantages
- Using the quantitive method to estimate disciplines such as piping, structural steel, painting, insulation and civil

Estimating of equipment
- Project phases and accuracy
- Price determining parameters of equipment
- Sources of pricing

Case 1: Making a factor estimate
- Using plot, process flow and equipment list data only
- Preparing an estimate using factor estimating method

Case 2: Estimating with quantitive method
- Using project parameters only
- Preparing discipline estimates using quantitive method

Cost Control Course

Cost control as part of Project control & Project management
- Definitions
- Project control processes & objectives
- Cost engineering vs project control
- Cost control vs cost management

The Project Control Cycle
- Planning and Control Cycle
- Deming Circle = Plan-Do-Check-Act
- Project Control Cycle steps
- Project Controller vs Project Managers role
- Project Life Cycle

Budgeting, management and cost control (analysis and forecasting)
- Work Breakdown Structures
- Project Estimating & Accounts
- Baseline plan
- Cost control report
- Cost control steps
- Contingency
- Risk management

Change control principles

Cases
- Establish the Cost Baseline by recasting the estimate into a project budget
- Understanding the Control Cycle by incorporating commitments and expenditures and analysing the effects which will be reflected in the Forecast
- Understand the Control Cycle by incorporating change orders & budget shifts and analysing the effects which will be reflected in the forecast

Estimating of Engineering Course

Estimating of engineering
- Understanding the engineering activities
- Understanding the organization of engineering; disciplines and responsibilities
- What type of costs can be identified for an engineering company

The development of a project relating to engineering effort and project phases:
- Identification phase
- Definition phase
- Execution phase

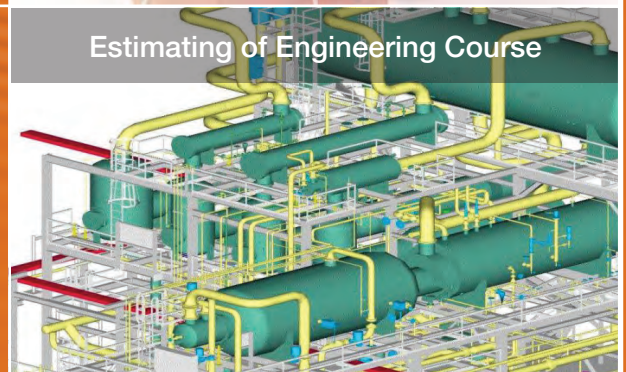- Operational phase
- Abandonment phase

Methods of estimating engineering and its related accuracy
- Percentages based
- Based on characteristic values (factored approach)
- Miller method
- Guthrie method
- Clark / Lorenzoni method
- Detailed approach per discipline; based on identified activities and deliverables

Cases
- The different estimating techniques and methods will be practiced through multiple cases

Academy Quick Reference Guide | Software Training

Introduction of the user interface
Estimating
- Working with direct and indirect costs
- Creating an estimate
  - Using assemblies
  - From a knowledgebase
  - Working on existing estimates
  - Using the advanced search and replace functionality
  - Updating your estimate according to a new contract agreement
  - Comparing your estimate

to knowledgebase values
- Interpreting the grand total screen
- Using breakdown structures
- Using revision control
- Creating a take-off sheet
- Linking files to your estimates

Reporting
- Viewing and configuring default reports
- Customizing reports

Excel Interfacing
- Import & export of Cleopatra documents

- Updating estimates with market quotes
- Using a Bill of Quantity and Material Take Off

Workflow
- Organizing estimating processes through workflow
- Configuring your workflow

Support
- Support system
- Working with support issues

All the topics listed will be accompanied by practical exercises.

Cleopatra Enterprise User Training

Advanced estimating
- Estimating direct costs
- Estimating indirect costs
- Determining allowances
- Applying escalation to estimates
- Using contingencies
- Using currency rate lists
- Understanding cost libraries
- Analyzing scenarios
- Using calculation sheets
- Defining templates

Other advanced topics
- Advanced use of the reporting module
- Customizing headers and footers for reports
- Advanced use of the import and export capabilities
- Using and configuring advanced methods for update estimates
- Defining mappings for automating estimates
- Configuring workflow for your organization

All the topics listed will be accompanied by practical exercises.

Cleopatra Enterprise Advanced User Training

Cleopatra Enterprise IT infrastructure and architecture

Updating an existing installation

Database configuration and maintenance
- DBMS Configuration
- Backup and restore database
- SQL Authentication

Configuring Cleopatra Enterprise for daily use
- Configuring projects
- Configuring user preferences
- Configuring security
  - users
  - roles
  - workgroups
- Troubleshooting

All the topics listed will be accompanied by practical exercises.

Cleopatra Enterprise Administrator Training

Understanding the knowledgebase structure
- Defining levels & components
- Defining the cost library
- Specifying a currency rate list
- The content structure
- Using breakdown structures
- Using calculation sheets

Maintaining the knowledgebase in Cleopatra Enterprise
- Search and replace
- Cost libraries
- Assemblies
- Modifying content structures

How to maintain the knowledgebase in Excel
- Export knowledgebases to Excel
- Excel structures
- Modifying in Excel and importing in Cleopatra Enterprise

Coding structure
- Why use a coding structure
- Setting up a logical coding structure
- Applying the coding structure

All the topics listed will be accompanied by practical exercises.

Cleopatra Enterprise Knowledgebase Training

Single Project Analysis
- Creating Project Analysis documents
- Combining multi-disciplinary estimates in to a single project
- Analyze benchmarks in the grand total view

Multiple Project Analysis
- Perform portfolio analysis Compare different scenarios using dashboards
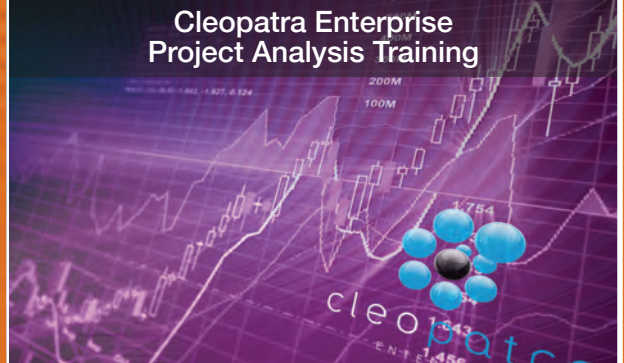- Management presentation using waterfall charts Run trend analysis

Analyze company specific metrics
- Custom filtering
- Group quantities with different cross sections
- Perform statistical analysis using pivot tables

Perform cash flow calculations
- Defining schedules
- Assigning commitment profiles
- View and compare cash flows per period (week, quarter, month, etc.)
- View cumulative distribution of cost categories against time.
- Calculate a project's midpoint

All the topics listed will be accompanied by practical exercises.

Cleopatra Enterprise Project Analysis Training

Cost Engineering

cleopatra
ENTERPRISE