

COST ANALYSIS, ESTIMATION & CONTROL FOR OIL & GAS CAPITAL PROJECTS

FAC007

COURSE DESCRIPTION

Managing the complexity of major capital projects in today's oil and gas industry landscape has never been more challenging or critical. Global demand for commodities continues to drive substantial capital investment within the sector. Developing effective cost estimation and control strategies in the project development phase plays a vital role in the success of an overall project management plan. Project history and the subsequent statistics tend to suggest that between 50% to 100% of capital projects overrun. It is important to know the completeness and the accuracy ranges for capital project estimates.

euCI's estimation and Cost Control Fundamentals for Oil & Gas Capital Projects course focuses on the practical skills and methods needed in estimation to improve project and operating performance across the oil and gas industry. Key project and operations considerations to be covered include planning, estimating, modelling, organizing and controlling resources and schedules. The goal is to optimize project performance and quality.

The skills taught are industry specific and can be widely applied at upstream, downstream, and corporate levels. Designed to provide comprehensive coverage of the fundamentals of estimating for process industries, this course will review many subtle as well as advanced estimating concepts. The estimating process will be covered from both the contractor and owner's point of view.

Attendees will recognize critical components to consider in various project estimates. Key components of the course include all factors that affect the final cost of building oil and gas infrastructure. This includes overall planning, scoping, and engineering, as well as environmental considerations, construction, and management of the total project.

COURSE GOAL

To enhance the participants' Knowledge, Skills and abilities necessary to to understand the techniques and methods of cost analysis, estimation and control for oil & gas capital projects.

COURSE OBJECTIVES

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

- Discuss the planning process and considerations and establish familiarity with estimating terminology.
- Outline and examine the variety of overall project considerations and different estimate classifications.
- Review project economics and financial parameters.
- Explain environmental challenges and impacts on costs and timelines.

- Analyze material costs.
- Review different estimate methodologies.
- Illustrate the make-up of a complete estimating package and how to present it.
- Identify issues around and become familiar with mega-project estimates.
- Discuss the view points and challenges of owner vs. contract vs. engineering.

WHO SHOULD ATTEND

- Project managers, estimators, and contract managers.
- Supervisors and project team members involved in planning, implementing, supervising and directing.
- Supply chain and cost accounting professionals.
- Facility engineers and plant operators.
- Project developers that need an understanding of formulating project costs.
- Consultants and engineering firms that work within the upstream and midstream sectors of the oil and gas industry.
- Corporate and asset managers involved in oil and gas asset management.
- Regulatory agency staff.
- Owner project teams.

COURSE DURATION

5 Working Days

COURSE OUTLINES

Part 1: Estimating Fundamentals

1. Introductions and skill Level Assessment

- Terminology and Overview of Definitions and understanding the Language of estimates.
 - Cost estimate.
 - Accuracy.
 - Confidence level.
 - Contingency.

2. Estimate Classifications and Types

- Review of technical and project deliverables for each.
- Look at AACe international estimate classification.
- Primary and secondary cost estimate characteristics.

3. Estimate Components and structuring the estimate

- Code of accounts and relationships between work breakdown structure, project breakdown structure, and cost breakdown structure.

4. Overview of estimating Methodologies

- Differences and characteristics of conceptual versus detailed estimates.

5. Examination of Detailed estimating

- Topics such as take-off, equipment estimating.

6. Costing/Pricing/Adjustments/Allowances

- Productivity, material costs, wage rates, design allowances, MTO allowances.

7. Risk Analysis/Contingency

- Estimate accuracy, items covered and not covered by accuracy.
- Management reserve.
- event driven risk.
- Contingency probability.

Part 2: Presenting and understanding the Estimate

1. Estimating Plan

- Why is the estimating plan important.
- What should be included and why.

2. Presenting the estimate/Basis of estimate Document

- What should be included in an estimating package.
- What should be included in the basis of estimate and why.
- Why the basis of estimate is a vital document in the estimating package.

3. Estimate – Schedule Integration

- Why a comprehensive integration between the project estimate and the project schedule makes for more successful projects and reduces project surprises.

4. Estimate Review / Validation

- Difference between estimate review and estimate validation.
- Different types of reviews at different stages of the estimating process.

5. Importance of Project History

- How the possession of project history helps to produce more accurate estimate and more successful projects.

6. Mega-Project Considerations

- Because of size, costs and strategic importance to an owner, there are details and technical considerations that estimators must account for in these special, large scale project.