



## **Petroleum Projects Cost Engineering & Cost Management CEM11**



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# Petroleum Projects Cost Engineering & Cost Management

## CEM11

### **Introduction:**

Cost Engineering has grown to become a critical aspect of project cost management.

In the petroleum industry, projects capital expenditure (CAPEX) is huge; and mostly associated with engineering design and construction.

Cost engineering as an obvious 'commercial side' of any engineering discipline and vitally so, such that costs (investment spending) must be 'engineered'.

In order to effectively manage engineering projects (by delivering them within budget & on time), it has become imperative that cost engineering principles & practice be emphasized; which is the reason for the design of this course.

This course is designed to enable participants arrive at accurate and current cost estimates through their understanding of cost analysis, cost assessment, project planning project risk assessment, and design-to-cost.

The Total Cost Management (TCM) principles as applicable to portfolio of assets & projects in the petroleum industry through project Management principles will be part of this course delivery. Emphasis will also be on Cost Analysis, Cost Estimation & Control through applicable & effective monitoring techniques.

This program is aimed at engineers, economists, planners & accountants that are in charge of cost verification, cost benchmarking and project or asset cost control and budget monitoring.

The program will be delivered in classroom setting over a five day period and will employ relevant case studies and class / group exercises in addition to exposing attendees to various frameworks, policies and acceptable global Standards as prescribed by both AACE Intn'l and ACostE of UK.

### **Course Content**

1. Cost Engineering Principles & Fundamentals.
2. Engineering Materials, Process Technological Requirements & Facilities Design and Cost Considerations for the Petroleum Industry
3. Cost Estimation:
  - Cost Estimating Methods & Processes for Capital Projects & Services (Basis of Estimate – BOE).
  - Importance of Cost Estimation to Project Feasibility, Financing Risk Management, Commercial Bid Evaluation, Project Management, Budgeting & Management Decision for Facilities Acquisition.

- Cost Estimation Methods: Stochastic or Deterministic.
  - Definitive vs. Order of Magnitude Estimates.
  - Classification of Cost Estimate.
  - Cost Estimate Quality Assurance.
  - Cost Estimation Best Practice: Cost Modelling, Validity of relevant data, Labour, Project Time Frame, Inflation, and Estimations; Technology & Uncertainties.
4. Engineering Economics
    - Economic Rates & Ratios.
    - Time Value of Money.
    - The Notion of Discounted Cash flow (DCF & IRR).
    - Opportunity Cost of Engineering Projects & Project Ranking.
    - Non-Economic Project Attributes (Corporate & Public Image, Aesthetics/Style & Colour),
    - Financing Options.
  5. Strategic Asset Management/Portfolio & Program Management:
    - Project Monitoring.
    - Project Performance Measurement.
    - Budgeted Cost vs. Work Performed.
  6. Project Cost Management
    - Cost Monitoring.
    - Cost Control & Cost Containment.
    - The Role of Project Planning & Scheduling in Cost Management.
    - Planning & Scheduling including:
      - Work Breakdown Structure.
      - Critical Path Analysis for Cost Engineering & Cost Management.
  7. Case Studies & Class Exercises.

### **Who Should Attend**

- Cost Engineers.
- Project Control Engineers & Project Managers.
- Planning Dept Engineers.
- Cost Accountants.
- Quantity Surveyors.
- Construction Engineers & Supervisors.
- Contract Management Staff.

**Venue:**

Please visit our website or contact us for details.

**Tuition:**

£3,250 + VAT

5 day program

**5 easy ways to  
register or to  
make an enquiry:**

1.Web

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