# Construction Cost Engineering Training Course

Professional Development Training Course Outline

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|---|---|---|---|
| **Category** | Construction Institute | **Duration** | 5 Days |
| **Base Fee** | $1,500 USD | **Delivery Mode** | Online / On-site Hybrid |

## Course Introduction

Construction Cost Engineering Training Course is designed to equip professionals with advanced cost management, project controls, construction economics, and digital cost optimization capabilities required for modern infrastructure and building projects. In today’s competitive construction environment, organizations demand experts who can deliver accurate cost estimation, AI-driven cost forecasting, value engineering, quantity surveying excellence, and lifecycle cost analysis. This comprehensive program integrates global best practices, industry standards, and emerging technologies such as Building Information Modeling (BIM), 5D BIM Cost Management, data analytics, and automated cost control systems to improve project profitability and reduce financial risks.

The course provides practical knowledge of construction cost planning, budget optimization, procurement strategies, contract cost management, and project financial performance monitoring. Through real-world case studies, participants learn how leading organizations manage complex projects using modern cost engineering frameworks, digital transformation tools, and predictive analytics. This training empowers professionals to become strategic cost leaders capable of managing mega projects, controlling overruns, and achieving sustainable construction outcomes.

## Programme Curriculum

**Construction Cost Engineering Training Course**

**Introduction**

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**Course Duration**

5 days

**Course Objectives**

1. Develop advanced construction cost engineering skills aligned with global industry standards.
2. Master digital cost estimation techniques using modern tools and technologies.
3. Understand AI-powered cost forecasting and predictive project analytics.
4. Apply effective quantity surveying and measurement methodologies.
5. Improve accuracy in construction budgeting and cost planning.
6. Implement 5D BIM cost management workflows for integrated project delivery.
7. Learn advanced value engineering and cost optimization strategies.
8. Manage project cost control systems for large-scale construction projects.
9. Analyze construction contracts, claims, and commercial risks.
10. Apply earned value management (EVM) for project performance tracking.
11. Develop expertise in lifecycle cost analysis and sustainability costing.
12. Enhance decision-making through construction data analytics and reporting dashboards.
13. Build leadership capabilities in strategic cost management and project profitability improvement.

**Target Audience**

1. Construction Cost Engineers
2. Quantity Surveyors
3. Project Managers
4. Construction Managers
5. Estimators and Cost Consultants
6. Civil Engineers and Structural Engineers
7. Procurement and Contract Professionals
8. Real Estate Developers and Infrastructure Leaders

**Course Modules**

**Module 1: Fundamentals of Construction Cost Engineering**

- Principles of **modern construction cost management**
- Role of cost engineers in project success and profitability
- Construction economics and financial decision-making
- Cost engineering lifecycle from concept to completion
- Industry standards and global best practices

- **Case Study:** Cost planning approach used in a major international airport expansion project to improve budget accuracy.

**Module 2: Construction Cost Estimation and Budget Planning**

- Advanced **construction cost estimating techniques**
- Quantity take-off methods and measurement standards
- Parametric estimating and historical cost databases
- Digital estimation workflows and automation
- Developing reliable project cost baselines
- **Case Study:** High-rise commercial development project where improved estimation reduced initial budget variance.

**Module 3: Quantity Surveying and Cost Measurement**

- Advanced quantity surveying principles
- Bill of Quantities (BOQ) preparation
- Material and labor cost analysis
- Measurement standards and valuation techniques
- Cost reporting and commercial documentation
- **Case Study:** Infrastructure project quantity optimization that achieved significant material cost savings.

**Module 4: Cost Control, Monitoring, and Project Performance**

- Construction cost control frameworks
- Earned Value Management (EVM) applications
- Cost variance analysis and corrective actions
- Real-time project cost dashboards
- Managing cost overruns and financial risks
- **Case Study:** Large-scale transportation project using EVM to recover schedule and budget performance.

**Module 5: BIM, AI, and Digital Cost Engineering**

- Introduction to **5D BIM cost management**
- BIM-based quantity extraction and cost integration
- AI applications in cost prediction
- Construction data analytics and visualization
- Digital transformation strategies for cost teams
- **Case Study:** BIM-enabled hospital construction project improving design coordination and cost accuracy.

**Module 6: Value Engineering and Cost Optimization**

- Principles of value engineering methodology
- Function analysis and cost-benefit evaluation
- Sustainable construction cost optimization
- Reducing lifecycle costs through smart design
- Innovation strategies for cost-efficient delivery
- **Case Study:** Green building project applying value engineering to reduce operational expenses.

**Module 7: Contracts, Procurement, and Commercial Cost Management**

- Construction contract cost implications
- Procurement strategies and supplier evaluation
- Managing variations, claims, and disputes
- Risk allocation and commercial controls
- Cost management under international contracts
- **Case Study:** Mega infrastructure project where contract optimization improved financial outcomes.

**Module 8: Advanced Cost Engineering Leadership and Future Trends**

- Strategic cost management for mega projects
- Predictive analytics and future cost forecasting
- Sustainable construction economics
- Global trends in construction cost engineering
- Leadership skills for cost engineering professionals
- **Case Study:** Smart city development project using digital cost management strategies for long-term success.

## Training Methodology

This course employs a participatory and hands-on approach to ensure practical learning, including:

- Interactive lectures and presentations.
- Group discussions and brainstorming sessions.
- Hands-on exercises using real-world datasets.
- Role-playing and scenario-based simulations.
- Analysis of case studies to bridge theory and practice.
- Peer-to-peer learning and networking.
- Expert-led Q&A sessions.
- Continuous feedback and personalized guidance.

**Register as a group from 3 participants for a Discount**

**Send us an email: info@fineskilltrainingcenter.org or call** *+254769199797*

***Certification***

*Upon successful completion of this training, participants will be issued with a globally- recognized certificate.*

***Tailor-Made Course***

*We also offer tailor-made courses based on your needs.*

**Key Notes**

**a.** The participant must be conversant with English.

**b.** Upon completion of training the participant will be issued with an Authorized Training Certificate

**c.** Course duration is flexible and the contents can be modified to fit any number of days.

**d.** The course fee includes facilitation training materials, 2 coffee breaks, buffet lunch and A Certificate upon successful completion of Training.

**e.** One-year post-training support Consultation and Coaching provided after the course.

**f.** Payment should be done at least a week before commence of the training, to Fineskill Training Center account, as indicated in the invoice so as to enable us prepare better for you.

## Upcoming Scheduled Sessions

| Start Date | End Date | Location | Price |
|---|---|---|---|
| **23 Nov 2026** | 27 Nov 2026 | Online | $1,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $1,500 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $3,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $3,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $6,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $4,500 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $6,000 |
| **23 Nov 2026** | 27 Nov 2026 | Physical | $6,000 |

Ready to enroll or request a customized program? Book online or contact us:

**Register Online Now**

Email: info@fineskilltrainingcenter.com | Website: www.fineskilltrainingcenter.com