Cost Estimation in Mining Training Course

Professional Development Training Course Outline

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

Course Introduction

Cost Estimation in Mining is a critical discipline that drives profitability, project feasibility, capital allocation, operational efficiency, and investment decision-making across the mining value chain. In an industry shaped by volatile commodity prices, rising operational costs, ESG compliance pressures, and digital transformation, accurate cost estimation has become a strategic capability rather than just a technical function. Cost Estimation in Mining Training Course is designed to equip professionals with advanced knowledge in mining economics, cost modeling, budgeting techniques, financial forecasting, and risk-based estimation frameworks using modern tools and global best practices.

The course integrates real-world mining scenarios including open-pit and underground operations, drilling and blasting, material handling, processing, logistics, and closure costs. Participants will gain hands-on expertise in CAPEX and OPEX estimation, life-of-mine costing, activity-based costing (ABC), cost benchmarking, and probabilistic cost analysis. With strong alignment to industry standards and digital mining trends such as AI-driven cost analytics and data-based decision systems, this program ensures participants can deliver accurate, defensible, and optimized cost estimates for mining projects globally.

Programme Curriculum

Cost Estimation in Mining Training Course

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Course Duration

5 Days

Course Objectives

1. Master Mining Cost Estimation Techniques & Frameworks
2. Apply CAPEX and OPEX Modeling in Mining Projects
3. Develop Life-of-Mine Financial Planning Models
4. Implement Activity-Based Costing (ABC) in Mining Operations
5. Use Data-Driven Cost Analysis & Predictive Analytics
6. Evaluate Commodity Price Impact on Cost Structures
7. Integrate Risk and Uncertainty in Cost Estimation Models
8. Perform Benchmarking Against Global Mining Standards
9. Build Cash Flow Forecasting & Investment Appraisal Models
10. Optimize Mining Operational Efficiency through Cost Control
11. Apply Digital Mining and AI-Based Cost Estimation Tools
12. Assess Sustainability and ESG Cost Implications in Mining
13. Strengthen Strategic Decision-Making for Mine Feasibility Studies

Target Audience

1. Mining Engineers
2. Cost Engineers & Estimators
3. Project Managers in Mining
4. Financial Analysts in Resources Sector
5. Mine Planners and Geologists
6. Operations Managers in Mining Companies
7. Consultants in Mining and Energy Sector
8. Graduate Engineers & Technical Professionals entering Mining Industry

Course Modules

Module 1: Fundamentals of Mining Cost Estimation

- Overview of mining cost structures (CAPEX, OPEX)
- Cost classification in surface and underground mining
- Introduction to estimation standards and methodologies
- Cost drivers in mining operations
- Case Study: Cost breakdown of an open-pit gold mine project

Module 2: Capital Expenditure (CAPEX) Planning

- Equipment acquisition and infrastructure costing
- Plant and processing facility cost estimation
- Engineering, procurement, and construction (EPC) costs
- Depreciation and capital recovery models
- Case Study: CAPEX planning for a copper mine development

Module 3: Operating Expenditure (OPEX) Analysis

- Mining cycle operational costs
- Labor, energy, maintenance, and consumables
- Cost per ton analysis and optimization
- Productivity-linked cost structures
- Case Study: Reducing OPEX in an iron ore mining operation

Module 4: Life-of-Mine Cost Modeling

- Mine life planning and production scheduling
- Discounted cash flow (DCF) analysis
- Net Present Value (NPV) and IRR applications
- Long-term cost forecasting methods
- Case Study: Life-of-mine model for a coal mining project

Module 5: Risk & Uncertainty in Cost Estimation

- Probabilistic cost modeling techniques
- Sensitivity analysis and scenario planning
- Monte Carlo simulation in mining costs
- Risk-adjusted decision making
- Case Study: Risk analysis in a platinum mining project

Module 6: Digital Mining & Cost Analytics

- AI and machine learning in cost prediction
- Big data analytics for mining operations
- Digital twins for cost simulation
- Automation impact on cost structures
- Case Study: AI-driven cost optimization in a lithium mine

Module 7: ESG and Sustainability Costing

- Environmental compliance costs
- Mine closure and rehabilitation costing
- Carbon footprint and emission-related costs
- Sustainable mining economics
- Case Study: ESG cost integration in a nickel mining project

Module 8: Benchmarking & Global Best Practices

- International cost benchmarking standards
- Competitor cost analysis in mining sector
- KPI development for cost efficiency
- Continuous improvement frameworks

- Case Study: Benchmarking cost efficiency in Australian vs African mines

Training Methodology

- 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

Start Date	End Date	Location	Price
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