Drill Core Logging Techniques 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

. Drill Core Logging Techniques Training Course emphasizes hands-on competence in core description, lithological classification, structural logging, geotechnical assessment, and QA/QC standards used in modern mining and exploration projects. Participants gain exposure to globally accepted frameworks such as geological modelling workflows, mineral deposit evaluation, and digital logging systems, ensuring alignment with current mining industry requirements.

In today’s rapidly evolving mining sector, accurate drill core logging, ore body characterization, and geoscientific data management are critical for successful exploration outcomes. This course integrates industry-grade core handling techniques, 3D geological modelling integration, and digital data capture systems, preparing learners for high-demand roles in mining geology, exploration geology, geotechnical engineering, and resource geology. The program strengthens decision-making skills in mineral exploration targeting, ore grade control, and geological database management using real-world case studies from global mining operations.

Programme Curriculum

Drill Core Logging Techniques Training Course

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Course Duration

5 days

Course Objectives

1. Master drill core logging techniques for mineral exploration accuracy
2. Understand lithology identification and rock classification systems
3. Apply structural geology interpretation in core logging
4. Develop skills in mineralization recognition and ore zone mapping
5. Implement QA/QC protocols in geological logging workflows
6. Gain proficiency in digital core logging software and GIS integration
7. Perform geotechnical logging for slope stability and mining safety
8. Interpret stratigraphy and depositional environments in core samples
9. Apply core recovery and RQD (Rock Quality Designation) analysis
10. Enhance resource estimation and mineral deposit modeling skills
11. Learn core handling, sampling, and preservation techniques
12. Strengthen data validation and geological database management
13. Integrate AI-driven geological interpretation tools and automation trends

Target Audience

1. Exploration Geologists
2. Mining Engineers
3. Geology Students & Graduates
4. Geotechnical Engineers
5. Drillers and Core Technicians
6. Resource Estimation Specialists
7. Geological Data Analysts
8. Mining Industry Professionals upskilling in digital geology

Course Modules

Module 1: Introduction to Drill Core Logging

- Core logging principles and standards
- Geological logging workflow overview
- Core orientation techniques
- Sampling protocols
- Field safety procedures
- **Case Study:** Copper exploration project core logging workflow analysis in a porphyry deposit

Module 2: Lithology and Rock Classification

- Igneous, sedimentary, metamorphic identification
- Texture and mineral composition analysis
- Rock strength indicators

- Alteration zoning
- Visual logging standards
- **Case Study:** Gold-bearing quartz reef lithology classification in underground mine

Module 3: Structural Geology in Core Logging

- Faults, folds, and fractures identification
- Dip and strike interpretation
- Shear zone analysis
- Stress indicators in core
- Structural logging symbols
- **Case Study:** Structural deformation analysis in nickel sulphide deposit

Module 4: Mineralization and Ore Logging

- Ore zone identification techniques
- Sulphide and oxide mineral recognition
- Grade control principles
- Hydrothermal alteration systems
- Mineral association mapping
- **Case Study:** High-grade iron ore body mineralization logging in banded iron formation

Module 5: Geotechnical Core Logging

- RQD and fracture frequency measurement
- Rock strength classification (RMR system)
- Stability assessment
- Ground support recommendations
- Core recovery analysis
- **Case Study:** Slope stability assessment in open-pit gold mine

Module 6: Core Handling, Sampling & QA/QC

- Core retrieval and preservation
- Sampling interval design
- Chain of custody procedures
- QA/QC sample insertion
- Contamination prevention
- **Case Study:** Diamond core sampling QA/QC in kimberlite exploration

Module 7: Digital Logging & Geological Software

- Introduction to digital logging platforms
- GIS integration for exploration data
- 3D geological modelling basics
- Database management systems
- Cloud-based geological data sharing
- **Case Study:** Digital transformation in lithium brine exploration project

Module 8: Resource Modeling & Interpretation

- Geological modeling principles

- Orebody estimation techniques
- Cross-section interpretation
- Assay data integration
- Exploration targeting strategies
- **Case Study:** Resource estimation workflow in large-scale copper porphyry system

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
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