Maintenance Planning in Mines 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

The Maintenance Planning in Mines Course is a high-impact professional development program designed to equip mining professionals with advanced competencies in predictive maintenance, asset reliability, shutdown management, digital maintenance systems, condition monitoring, operational excellence, and risk-based maintenance strategies. In today's highly competitive mining environment, organizations are adopting Industry 4.0 technologies, smart mining solutions, CMMS platforms, AI-driven maintenance analytics, reliability-centered maintenance (RCM), and preventive maintenance frameworks to improve equipment availability, reduce downtime, and optimize operational performance. Maintenance Planning in Mines Training Course provides participants with practical tools, global best practices, and real-world mining case studies to enhance maintenance planning efficiency and achieve sustainable productivity improvements.

The program focuses on modern maintenance methodologies applicable to surface and underground mining operations, emphasizing equipment lifecycle management, maintenance KPIs, root cause failure analysis (RCFA), maintenance scheduling optimization, spare parts management, reliability engineering, predictive analytics, and maintenance cost control. Participants will gain practical exposure to strategic maintenance planning models, digital transformation initiatives, safety compliance systems, and integrated maintenance management approaches used in leading mining companies worldwide. The course is structured to help organizations improve equipment reliability, increase production output, reduce operational risks, and support long-term asset sustainability.

Programme Curriculum

Maintenance Planning in Mines Training Course

Introduction

The Maintenance Planning in Mines Course is a high-impact professional development program designed to equip mining professionals with advanced competencies in predictive maintenance, asset reliability, shutdown management, digital maintenance systems, condition monitoring, operational excellence, and risk-based maintenance strategies. In today's highly competitive mining environment, organizations are adopting Industry 4.0 technologies, smart mining solutions, CMMS platforms, AI-driven maintenance analytics, reliability-centered maintenance (RCM), and preventive maintenance frameworks to improve equipment availability, reduce downtime, and optimize operational performance. Maintenance Planning in Mines Training Course provides participants with practical tools, global best practices, and real-world mining case studies to enhance maintenance planning efficiency and achieve sustainable productivity improvements.

The program focuses on modern maintenance methodologies applicable to surface and underground mining operations, emphasizing equipment lifecycle management, maintenance KPIs, root cause failure analysis (RCFA), maintenance scheduling optimization, spare parts management, reliability engineering, predictive analytics, and maintenance cost control. Participants will gain practical exposure to strategic maintenance planning models, digital transformation initiatives, safety compliance systems, and integrated maintenance management approaches used in leading mining companies worldwide. The course is structured to help organizations improve equipment reliability, increase production output, reduce operational risks, and support long-term asset sustainability.

Course Duration

5 days

Course Objectives

1. Develop advanced skills in maintenance planning and scheduling optimization for mining operations.
2. Apply predictive maintenance technologies to improve equipment reliability and performance.
3. Enhance knowledge of reliability-centered maintenance (RCM) strategies in mining.
4. Improve equipment uptime using condition monitoring and digital maintenance analytics.
5. Strengthen competencies in shutdown and turnaround maintenance management.
6. Implement effective computerized maintenance management systems (CMMS) solutions.
7. Optimize spare parts inventory and warehouse management systems.
8. Analyze equipment failures using root cause failure analysis (RCFA) techniques.
9. Improve asset utilization through equipment lifecycle management strategies.
10. Apply risk-based maintenance and safety compliance frameworks in mining operations.
11. Integrate Industry 4.0 and smart mining technologies into maintenance systems.
12. Enhance maintenance decision-making using data-driven maintenance KPIs and performance dashboards.
13. Reduce operational costs through lean maintenance and operational excellence practices.

Target Audience

1. Maintenance Planners
2. Mining Engineers
3. Reliability Engineers
4. Maintenance Supervisors and Managers
5. Plant and Equipment Engineers
6. Operations and Production Managers
7. Shutdown and Turnaround Coordinators
8. Asset Management and Technical Services Personnel

Course Modules

Module 1: Fundamentals of Maintenance Planning in Mining

- Principles of mining maintenance management
- Maintenance planning and scheduling techniques
- Preventive vs predictive maintenance strategies
- Maintenance workflow optimization
- Case Study: Improving equipment availability in an open-pit mining operation

Module 2: Reliability-Centered Maintenance (RCM)

- Reliability engineering concepts
- Failure modes and effects analysis (FMEA)
- Risk-based maintenance planning
- Equipment criticality assessment
- Case Study: RCM implementation in underground mining equipment systems

Module 3: Predictive Maintenance and Condition Monitoring

- Predictive analytics in mining maintenance
- Vibration analysis and thermography
- Oil analysis and condition monitoring systems
- IoT-enabled maintenance technologies
- Case Study: Reducing conveyor downtime using predictive maintenance tools

Module 4: Maintenance Scheduling and Shutdown Management

- Shutdown planning and execution strategies
- Resource allocation and workforce planning
- Critical path maintenance scheduling
- Maintenance backlog management
- Case Study: Successful shutdown optimization in mineral processing plants

Module 5: CMMS and Digital Maintenance Systems

- Computerized maintenance management systems (CMMS)
- Digital transformation in mining maintenance
- Maintenance KPI dashboards and reporting
- Data-driven maintenance decision-making
- Case Study: CMMS integration for fleet maintenance efficiency improvement

Module 6: Spare Parts and Inventory Management

- Strategic spare parts planning
- Inventory optimization techniques
- Warehouse and logistics coordination
- Procurement strategies for mining maintenance
- Case Study: Reducing maintenance delays through inventory optimization

Module 7: Root Cause Failure Analysis (RCFA)

- Root cause analysis methodologies

- Failure investigation techniques
- Reliability improvement strategies
- Corrective and preventive action planning
- Case Study: Failure analysis of heavy mining equipment components

Module 8: Maintenance Excellence and Continuous Improvement

- Lean maintenance principles
- Operational excellence frameworks
- Maintenance cost optimization
- Safety and environmental compliance
- Case Study: Achieving maintenance excellence through continuous improvement initiatives

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