Predictive Maintenance using ERP Data Training Course

Professional Development Training Course Outline

Category	Enterprise Resource Planning (ERP)	**Duration**	5 Days
Base Fee	$1,500 USD	**Delivery Mode**	Online / On-site Hybrid

Course Introduction

In today’s competitive industrial landscape, leveraging data for operational excellence is no longer optional it’s imperative. Predictive Maintenance using ERP Data empowers organizations to anticipate equipment failures, reduce unplanned downtime, and optimize asset utilization. Predictive Maintenance using ERP Data Training Course integrates ERP-driven insights with advanced predictive analytics, IoT connectivity, and machine learning models, enabling maintenance professionals, operations managers, and data analysts to transform raw enterprise data into actionable maintenance strategies. Participants will gain a deep understanding of real-time data extraction, trend analysis, and performance monitoring from ERP systems to drive operational efficiency, minimize costs, and enhance decision-making.

This course is designed for professionals seeking to embrace Industry 4.0 standards, smart manufacturing practices, and AI-driven maintenance strategies. Through hands-on sessions, case studies, and interactive workshops, participants will explore predictive algorithms, KPI tracking, and risk-based maintenance planning using ERP datasets. By the end of this program, learners will be equipped to implement proactive maintenance schedules, reduce downtime, and extend the lifecycle of critical assets, positioning their organization as a leader in data-driven maintenance optimization.

Programme Curriculum

Predictive Maintenance using ERP Data Training Course

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Course Duration

5 days

Course Objectives

1. Understand the fundamentals of Predictive Maintenance and its impact on operational efficiency.
2. Analyze ERP data for maintenance insights and actionable recommendations.
3. Apply machine learning algorithms to forecast equipment failures.
4. Integrate IoT sensors with ERP systems for real-time monitoring.
5. Develop risk-based maintenance strategies to minimize downtime.
6. Optimize asset lifecycle management using predictive analytics.
7. Create KPIs and dashboards for maintenance performance monitoring.
8. Implement condition-based maintenance models using ERP data.
9. Utilize data visualization tools for trend analysis and decision-making.
10. Reduce maintenance costs through data-driven planning.
11. Identify critical assets and prioritize maintenance interventions.
12. Conduct root cause analysis for recurrent equipment issues.
13. Enhance organizational digital transformation initiatives with ERP-driven predictive insights.

Target Audience

1. Maintenance Managers
2. Operations Managers
3. Production Engineers
4. ERP Analysts
5. Data Scientists in Manufacturing
6. Reliability Engineers
7. Plant Managers
8. IT Professionals supporting ERP systems

Course Modules

Module 1: Introduction to Predictive Maintenance

- Definition and benefits of predictive maintenance
- Maintenance strategies
- Industry 4.0 and smart manufacturing context

- ERP data relevance in predictive maintenance
- Case Study: Downtime reduction in a chemical plant

Module 2: Understanding ERP Data for Maintenance

- Key ERP modules
- Data extraction and integration techniques
- Maintenance work order analysis
- Historical maintenance data cleaning
- Case Study: Leveraging SAP PM data for predictive insights

Module 3: Predictive Analytics and Machine Learning Basics

- Overview of machine learning algorithms
- Regression, classification, and anomaly detection
- Time-series forecasting for equipment failure
- Feature selection and data preprocessing
- Case Study: Predicting motor failures in a manufacturing unit

Module 4: IoT Integration with ERP Systems

- Sensors and IoT device connectivity
- Real-time monitoring of asset health
- Data streaming into ERP systems
- Alerts and predictive triggers
- Case Study: IoT-enabled predictive maintenance in a power plant

Module 5: Condition-Based and Risk-Based Maintenance

- Difference between condition-based and risk-based approaches
- Identifying critical assets and failure modes
- Risk prioritization matrices
- Maintenance scheduling optimization
- Case Study: Risk-based maintenance planning in automotive manufacturing

Module 6: KPI Development and Dashboarding

- Key maintenance KPIs
- ERP dashboard configuration
- Real-time monitoring of predictive alerts
- Data visualization for actionable insights
- Case Study: KPI-driven decision-making at a steel plant

Module 7: Root Cause Analysis and Continuous Improvement

- Identifying recurring failures
- 5 Whys, Fishbone Diagram
- Linking root causes with ERP maintenance data
- Continuous improvement loops
- Case Study: Reducing repetitive downtime in a food processing plant

Module 8: Implementation Strategy and Digital Transformation

- Roadmap for predictive maintenance adoption
- Change management and stakeholder alignment
- ERP customization for predictive analytics
- ROI measurement and benefits tracking
- Case Study: Digital transformation in predictive maintenance at a pharmaceutical company

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

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