Advanced Electrical Asset Condition Assessment Course

20 – 24 December 2026
Johannesburg

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Advanced Electrical Asset Condition Assessment Course

Ref: 977_174423 **Date:** 20 – 24 December 2026 **Location:** Johannesburg **Fees:** 6000 Euro

Overview

Advanced Electrical Asset Condition Assessment Course is a one-week course for professionals who must turn inspection, testing, operating history, and failure evidence into defensible asset decisions. Participants connect equipment scope, data quality, failure modes, diagnostic results, condition indicators, criticality, confidence, and maintenance or replacement priorities. The course resolves gaps between isolated test readings and a traceable asset condition decision through a structured assessment file. Agile Leaders Training Center delivers this electrical asset condition assessment course.

Who Should Attend

- Electrical maintenance engineers responsible for equipment condition and work priorities
- Reliability engineers who interpret inspection, testing, and failure evidence
- Asset managers who compare maintenance, refurbishment, and replacement options
- Condition-monitoring specialists who manage diagnostic data and trends
- Plant technical teams that review equipment risk and intervention plans

The course assumes participants work with electrical equipment records and maintenance evidence, while introductory electrical theory and certification preparation remain outside scope.

Departments and Industries

The course applies condition assessment across organizations that depend on electrical equipment availability and controlled maintenance decisions.

- Electrical maintenance and reliability in industrial plants and process facilities
- Asset management and engineering in utilities and generation facilities
- Facilities engineering in healthcare, transport, and data centers
- Operations and maintenance in infrastructure and commercial portfolios
- Owner engineering, technical assurance, and capital planning functions

Learning Objectives

By the end of this course, participants will be able to:

- Define an electrical asset condition assessment scope and evidence plan
- Evaluate inspection, history, and diagnostic test data quality
- Map equipment failure modes to condition indicators and tests
- Build condition ratings with confidence and exception controls
- Combine equipment condition with criticality and consequence
- Prioritize maintenance, investigation, refurbishment, and replacement actions

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Course Agenda

Day 1: Assessment Scope and Evidence

- Electrical Asset Register and Assessment Boundary Matrix
- Equipment Function, Duty, and Service Context Record
- Maintenance History and Failure Evidence Review Method
- Data Quality, Currency, and Traceability Checklist
- Condition Assessment Governance and Decision Rights Map

Day 2: Failure Modes and Diagnostic Planning

- Equipment Failure Mode and Degradation Mechanism Map
- Visual Inspection and Physical Condition Evidence Sheet
- Thermal, Electrical, Mechanical, and Oil Diagnostic Test Matrix
- Test Selection, Safety, and Limitation Review
- Baseline, Trend, and Exception Analysis Method

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Day 3: Condition Indicators and Ratings

- Condition Indicator Definition and Evidence Weighting Model
- Diagnostic Result Normalization and Threshold Register
- Asset Health Rating and Confidence Scorecard
- Conflicting Evidence and Missing Data Resolution Log
- Peer Review and Technical Challenge Checklist

Day 4: Criticality and Action Decisions

- Equipment Criticality and Consequence Assessment Matrix
- Condition-Criticality Decision Grid
- Immediate Defect, Investigation, and Monitoring Action Rules
- Maintenance, Refurbishment, and Replacement Option Table
- Risk-Based Intervention Priority and Timing Register

Day 5: Assessment Practice and Capstone

- Exercise on Asset Scope and Evidence-Gap Review
- Exercise on Failure-Mode and Diagnostic-Test Mapping
- Exercise on Condition Rating and Confidence Evaluation
- Exercise on Criticality and Intervention Prioritization
- Capstone Exercise: Electrical Asset Condition Assessment and Action File

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Practical Exercises

The course uses suggested activities that convert maintenance and diagnostic evidence into traceable asset decisions.

- Suggested activity: audit an asset register and identify condition evidence gaps
- Suggested activity: map transformer, switchgear, and cable failure modes to suitable tests
- Suggested activity: reconcile conflicting condition indicators and document confidence
- Suggested activity: present a prioritized assessment file with actions and decision rationale

FAQs

Who suits advanced electrical asset condition assessment, and what does it assume?

Maintenance, reliability, asset, and condition-monitoring professionals suit the course. It assumes practical familiarity with electrical equipment records and diagnostic evidence, while introductory theory and certification preparation remain outside scope.

How does electrical asset condition assessment differ from routine preventive maintenance?

Electrical asset condition assessment combines evidence to judge current condition, confidence, and intervention priority. Routine preventive maintenance follows planned tasks and intervals without necessarily producing the same cross-evidence condition decision.

How are diagnostic test results used in electrical equipment condition assessment?

Diagnostic test results become condition evidence after teams check test suitability, baseline, trend, limitations, and data quality. The assessment links each result to a failure mode instead of treating a single reading as a complete conclusion.

What makes an electrical asset health rating defensible?

A defensible rating uses defined indicators, traceable evidence, documented weighting, controlled thresholds, confidence, and technical review. Exceptions and missing data remain visible so decision-makers understand the limits of the rating.

How does equipment criticality affect an electrical asset condition decision?

Criticality changes the urgency and consequence of acting on a condition finding. Teams combine condition evidence with safety, operational, service, and business impacts to prioritize further testing, maintenance, refurbishment, or replacement.

Conclusion

Participants take back an Electrical Asset Condition Assessment and Action File containing scope, evidence controls, failure-mode links, condition ratings, confidence, criticality, and prioritized actions. The file changes disconnected maintenance records and test results into an auditable decision trail. Teams can update it as condition evidence changes and use it to govern interventions.