



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

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COURSE BROCHURE

Medium High Voltage Network Inspection Maintenance Repair Fault Finding Training

Physical Planning and Construction / Electrical Infrastructure Construction

Unit Standard 113881 · NQF Level 4 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills required to inspect, maintain, repair, and perform fault finding on medium high voltage (MV/HV) networks up to 33 kV. It covers safe work procedures, regulatory compliance, and diagnostic techniques to ensure network reliability and personnel safety.

Category	Physical Planning and Construction
Subfield	Electrical Infrastructure Construction
Unit Standard	113881
Accreditation	SAQA Accredited · NQF Level 4 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply safe working procedures and relevant legislation when inspecting, maintaining, and repairing MV/HV networks.
- Analyze network faults using systematic diagnostic methods and appropriate test equipment.
- Evaluate the condition of MV/HV components (cables, switchgear, transformers) through visual and electrical inspection.
- Demonstrate correct isolation, earthing, and testing procedures before commencing maintenance or repair work.
- Implement corrective actions to restore network functionality following fault identification.
- Design a preventive maintenance schedule based on network condition and operational requirements.

WHO SHOULD ATTEND

- Electrical technicians, artisans, and engineers responsible for the operation, maintenance, and repair of medium high voltage electrical networks in industrial, commercial, or utility environments.

COURSE OUTLINE

Day 1: Introduction to Medium High Voltage Networks and Safety

- Overview of MHV systems (11kV to 33kV)
- Network components: transformers, switchgear, cables, insulators
- Safety regulations: OHS Act, SANS 10089, SANS 10142-1
- Hazard identification and risk assessment
- PPE requirements and usage
- Emergency procedures and first aid

Day 2: Inspection and Maintenance Techniques

- Visual inspection of overhead lines and substations
- Thermal imaging for hot spots
- Insulation resistance testing
- Maintenance of switchgear and transformers
- Lubrication and cleaning procedures
- Record keeping and reporting

Day 3: Fault Finding and Diagnosis

- Types of faults: short circuit, earth fault, open circuit
- Fault location methods: time domain reflectometry, bridge methods
- Testing equipment: multimeters, meggers, relay test sets
- Analyzing protection relay indications
- Step-by-step fault diagnosis process
- Case studies of typical faults

Day 4: Repair and Restoration Procedures

- Isolation and earthing procedures
- Repair of cables: jointing, termination
- Replacement of insulators and surge arrestors
- Transformer tap changer maintenance
- Switchgear repair and adjustment
- Live-line maintenance principles and tools

Day 5: Practical Integration and Assessment

- Simulated network inspection and maintenance exercise
- Fault scenario simulation and resolution
- Documentation and reporting of work completed
- Review of key concepts and Q&A;
- Written and practical assessment

ASSESSMENT & CERTIFICATION

Delegates are assessed through exercises and a final test. A mark of **50% or above** earns an **AATICD Certificate of Completion**, issued digitally with a unique verification code. This course carries **8 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 23,000.00	R 23,000.00
1	In-House	R 29,900.00	R 29,900.00
1	On-Campus (Pretoria)	R 34,500.00	R 34,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
17 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Pretoria, South Africa

Contact us if no suitable date is listed – on-demand sessions can be arranged for groups.

HOW TO GET A QUOTE OR APPLY

- 1. Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard 113881) and click **Get A Quote / Apply**. Select your training method and number of delegates – your quotation is generated immediately and emailed to you with the course brochure attached.
- 2. Apply by email:** send the course title, your preferred training method (Online, In-House or On-Campus Pretoria), the number of delegates and your preferred dates to apply@aaticd.co.za – our team will reply with a formal quotation.
- 3. Apply by phone or WhatsApp:** call +27 12 004 8389 or WhatsApp +27 65 077 6310 and we will prepare your quotation and reserve your seats.
- 4. Confirm your booking:** accept the quotation and settle the invoice. As soon as payment is confirmed your delegates are enrolled and receive their AATICD LMS login details by email, along with joining instructions for their chosen training method.

Group discounts apply automatically – the more delegates you enrol, the lower the price per delegate. No payment is required to request a quotation.

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