



Accredited Africa Training Institute for Capacity Development

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

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aatikd.co.za · Website: www.aatikd.co.za

COURSE BROCHURE

Work Live On 3kv Dc Ohte Or To Clearance From Exposed Live High Voltage Electrical Equipment 3kv Dc 25 Kv And 50kv Ac Ohte And All Transmission Lines And Associated Equipment Training

Physical Planning and Construction / Civil Engineering Construction

Unit Standard 119888 · NQF Level 4 · 15 Credits · 12 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to work safely on or near live high voltage electrical equipment, including 3kV DC OHTE, 25kV and 50kV AC OHTE, and all transmission lines and associated equipment. It covers clearance procedures, live work practices, and adherence to safety regulations to prevent electrical incidents.

Category	Physical Planning and Construction
Subfield	Civil Engineering Construction
Unit Standard	119888
Accreditation	SAQA Accredited · NQF Level 4 · 15 Credits
Duration	12 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply safety procedures for working on or near live high voltage electrical equipment up to 3kV DC and 50kV AC.
- Demonstrate correct use of personal protective equipment and insulated tools for live work.
- Analyze clearance distances and implement safe working zones for OHTE and transmission lines.
- Evaluate risks associated with live high voltage work and implement control measures.
- Implement emergency response procedures for electrical incidents during live work.
- Comply with relevant South African regulations and standards for high voltage electrical safety.

WHO SHOULD ATTEND

- This course is intended for electrical technicians, linesmen, and safety personnel who are required to perform live work on high voltage equipment or maintain clearance from exposed live parts in transmission and distribution environments.

COURSE OUTLINE

Day 1: Introduction to High Voltage Electrical Systems and Safety

- Overview of high voltage systems: DC and AC.
- Voltage levels and their applications.
- Basic electrical theory: Ohm's Law, power calculations.
- Health and safety legislation: OHS Act, regulations.
- Roles and responsibilities of personnel.
- Introduction to personal protective equipment (PPE).

Day 2: Electrical Hazards and Risk Assessment

- Types of electrical hazards and their effects.
- Risk assessment methodologies.
- Hierarchy of controls: elimination, substitution, engineering controls, administrative controls, PPE.
- Safe work permits and procedures.
- Case studies of high voltage incidents.
- Emergency response planning.

Day 3: Personal Protective Equipment (PPE) and Safety Tools

- Types of PPE: gloves, mats, blankets, helmets, arc flash suits.
- Inspection and testing of PPE.
- Storage and maintenance of PPE.
- Insulating tools: sticks, clamps, testers.
- Voltage-rated tools and equipment.
- Practical demonstration of PPE use.

Day 4: Working on 3kV DC Overhead Traction Equipment (OHTE)

- Overview of 3kV DC traction systems.
- Components: catenary, contact wire, insulators.
- Safety procedures for 3kV DC.
- Isolation and earthing methods.
- Live work techniques and tools.
- Practical exercise: isolation and earthing.

Day 5: Working on 25kV AC Overhead Traction Equipment (OHTE)

- Overview of 25kV AC traction systems.
- Components: transformers, circuit breakers, overhead lines.
- Safety procedures for 25kV AC.
- Isolation and earthing methods.
- AC vs DC: key differences.
- Practical exercise: isolation and earthing.

Day 6: Working on 50kV AC Transmission Lines

- Overview of 50kV AC transmission systems.
- Components: towers, conductors, insulators, switchgear.
- Safety procedures for 50kV AC.
- Isolation and earthing methods.
- Arc flash and arc blast at 50kV.

- Practical exercise: isolation and earthing.

Day 7: Clearance Procedures and Sanction for Testing

- Clearance procedures: request, verification, issue.
- Sanction for Testing: purpose and process.
- Roles: person in charge, operator, worker.
- Communication protocols.
- Documentation: logs, permits, tags.
- Practical exercise: completing a clearance form.

Day 8: Live Work Techniques and Tools

- Live work methods: hot stick, barehand, glove.
- Approach distances and boundaries.
- Live line tools: sticks, clamps, jumper cables.
- Insulating platforms and buckets.
- Practical exercise: hot stick work on a mock line.
- Safety checks before live work.

Day 9: Earthing and Bonding Procedures

- Earthing principles: why and how.
- Temporary earthing equipment: clamps, cables, rods.
- Bonding to equalize potentials.
- Testing earthing integrity.
- Practical exercise: installing earthing on a 50kV line.
- Safety precautions during earthing.

Day 10: Emergency Response and Rescue

- Emergency response plans.
- Rescue procedures: from poles, towers, confined spaces.
- First aid: burns, shock, cardiac arrest.
- Use of rescue equipment: hooks, ropes, ladders.
- Practical exercise: simulated rescue.
- Post-incident reporting.

Day 11: Practical Assessment and Integration

- Scenario-based practical assessment.
- Planning and risk assessment.
- Obtaining clearance and sanction.
- Performing work on 3kV DC, 25kV AC, 50kV AC.
- Earthing and bonding.
- Restoration and documentation.
- Debrief and feedback.

Day 12: Final Assessment and Course Review

- Written knowledge assessment.
- Practical skills assessment.
- Review of critical safety points.
- Q&A; session.
- Course evaluation.

- Certification and next steps.

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 **15 NQF credits** at **NQF Level 4**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 41,000.00	R 41,000.00
1	In-House	R 53,300.00	R 53,300.00
1	On-Campus (Pretoria)	R 61,500.00	R 61,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
05 Aug 2026	20 Aug 2026	On-Campus	Dubai, UAE
06 Aug 2026	21 Aug 2026	On-Campus	Pretoria, South Africa
06 Aug 2026	21 Aug 2026	On-Campus	Lagos, Nigeria
07 Aug 2026	24 Aug 2026	On-Campus	Johannesburg, South Africa
10 Aug 2026	25 Aug 2026	On-Campus	Cape Town, South Africa
11 Aug 2026	26 Aug 2026	On-Campus	Dubai, UAE
12 Aug 2026	27 Aug 2026	On-Campus	Pretoria, South Africa
13 Aug 2026	28 Aug 2026	On-Campus	Abu Dhabi, UAE

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 119888) 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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