



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

Electrical Cable Installation For Air Conditioning And Refrigeration Systems Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 116243 · NQF Level 2 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the knowledge and practical skills required to safely and effectively install electrical cables for air conditioning and refrigeration systems. It covers cable selection, routing, termination, and compliance with relevant South African standards and regulations.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	116243
Accreditation	SAQA Accredited · NQF Level 2 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply relevant safety procedures and regulations when installing electrical cables for air conditioning and refrigeration systems.
- Select appropriate cable types and sizes based on load requirements, environmental conditions, and SANS standards.
- Install and terminate cables correctly, ensuring proper connections and mechanical protection.
- Test and verify cable installations for continuity, insulation resistance, and polarity.
- Interpret wiring diagrams and specifications to ensure accurate cable routing and connection.
- Analyze and rectify common cable installation faults in air conditioning and refrigeration systems.

WHO SHOULD ATTEND

- This course is designed for electricians, refrigeration and air conditioning technicians, and maintenance personnel who are involved in the installation or servicing of electrical cables for HVAC-R systems.

COURSE OUTLINE

Day 1: Fundamentals of Electrical Cable Installation

- Introduction to SAQA unit standard 116243 and course outcomes.
- Electrical safety: lockout/tagout, PPE, and SANS 10142-1 wiring regulations.
- Types of cables: PVC, XLPE, SWA, and flexible cords.
- Cable sizing and current-carrying capacity.
- Reading single-line diagrams and wiring schematics.
- Cable preparation: stripping, crimping, and lugging.
- Cable routing: conduit, trunking, and cable tray installation.
- Practical exercise: Install a cable from a distribution board to a split-type air conditioner.

Day 2: Installation Techniques and Testing

- Termination methods: screw terminals, ring lugs, and quick-connect terminals.
- Cable management: cable ties, labels, and segregation of power and control cables.
- Earthing and bonding: earth electrodes, equipotential bonding, and earth leakage protection.
- Testing: insulation resistance (megger), continuity, and polarity checks.
- Fault-finding: open circuits, short circuits, and high resistance connections.
- Practical exercise: Install and test cables for a refrigeration condensing unit.
- Documentation: completion certificates and test records.

Day 3: Advanced Applications and Integration

- Control wiring: thermostats, pressure switches, and solenoid valves.
- Power wiring for compressors, fans, and pumps.
- Installation for inverter-driven systems: shielded cables and EMC considerations.
- Commissioning: sequence of operation checks and load testing.
- Troubleshooting: voltage drop, harmonics, and interference.
- Environmental considerations: cable disposal and refrigerant handling.
- Practical assessment: Install and commission a complete cable system for a packaged air conditioning unit.
- Course review and SAQA unit standard assessment preparation.

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 **6 NQF credits** at **NQF Level 2**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 17,900.00	R 17,900.00
1	In-House	R 23,300.00	R 23,300.00
1	On-Campus (Pretoria)	R 26,800.00	R 26,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
04 Aug 2026	06 Aug 2026	On-Campus	Pretoria, South Africa
04 Aug 2026	06 Aug 2026	On-Campus	Mauritius
05 Aug 2026	07 Aug 2026	On-Campus	Cape Town, South Africa
05 Aug 2026	07 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	12 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	12 Aug 2026	On-Campus	Mauritius
11 Aug 2026	13 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	13 Aug 2026	On-Campus	Cape Town, 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 116243) 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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