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

Power Distribution Systems

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0509 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to understand, operate, and maintain power distribution systems in industrial, commercial, and residential settings. Participants will learn to interpret single-line diagrams, perform switching operations, and apply safety regulations to ensure reliable and safe power distribution.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0509
Accreditation	SAQA Accredited · NQF Level 5 · 4 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply the principles of power distribution to identify system components and their functions.
- Analyze single-line diagrams and interpret electrical symbols to trace power flow.
- Evaluate the performance of distribution systems under various load conditions.
- Design basic switching procedures to isolate faults and ensure safety.
- Implement routine maintenance practices to enhance system reliability.
- Demonstrate compliance with relevant health, safety, and environmental regulations.

WHO SHOULD ATTEND

- This course is designed for electricians, technicians, and engineers who are involved in the installation, maintenance, and operation of power distribution systems.

COURSE OUTLINE

Day 1: **Fundamentals of Power Distribution Systems**

- Overview of the electrical power system (generation, transmission, distribution
- Components of distribution networks: substations, transformers, switchgear, feeders, and distribution lines
- Voltage levels: LV, MV, HV and typical South African standards
- Basic electrical theory: Ohm's law, power, and energy
- Earthing and neutral systems in distribution
- Introduction to protection devices: fuses, circuit breakers, and relays
- South African regulations and standards (e.g., SANS, OHS Act

Day 2: **Design, Operation, and Maintenance of Distribution Systems**

- Distribution system design: radial, ring, and mesh configurations
- Load estimation and diversity factor
- Voltage drop and power loss calculations
- Protection coordination and relay settings
- Maintenance strategies: preventive, predictive, and corrective
- Fault analysis and troubleshooting techniques
- Smart grid concepts, SCADA, and automation
- Integration of distributed generation (solar PV, wind

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 **4 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,900.00	**R 11,900.00**
1	In-House	R 16,100.00	**R 16,100.00**
1	On-Campus (Pretoria)	R 17,800.00	**R 17,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
01 Dec 2026	02 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
01 Dec 2026	02 Dec 2026	On-Campus	Cape Town, South Africa
02 Dec 2026	03 Dec 2026	On-Campus	Shenzhen, China
02 Dec 2026	03 Dec 2026	On-Campus	Lagos, Nigeria
03 Dec 2026	04 Dec 2026	On-Campus	Durban, South Africa
08 Dec 2026	09 Dec 2026	On-Campus	Maseru, Lesotho
08 Dec 2026	09 Dec 2026	On-Campus	Kigali, Rwanda
08 Dec 2026	09 Dec 2026	On-Campus	Accra, Ghana

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

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard AATICD-0509) and click **Get A Quotation**. 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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