



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 Substation Operations

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0512 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course provides comprehensive training for electrical substation operations, focusing on safe and efficient management of substation equipment and systems. It equips learners with the skills to operate, monitor, and maintain substations in line with industry standards and safety regulations.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0512
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 safety protocols and procedures to ensure safe substation operations.
- Analyze substation configurations and identify key components and their functions.
- Implement switching procedures and isolation techniques to maintain system integrity.
- Demonstrate proficiency in monitoring and controlling substation equipment using SCADA systems.
- Evaluate fault conditions and respond appropriately to minimize downtime and hazards.
- Design routine maintenance schedules to optimize substation reliability and lifespan.

WHO SHOULD ATTEND

- This course is designed for electrical technicians, operators, and engineers seeking to enhance their competence in substation operations.
- It is also suitable for maintenance personnel and supervisors responsible for substation safety and performance.

COURSE OUTLINE

Day 1: Fundamentals of Substation Operations

- Introduction to substation types and configurations
- Main components: transformers, circuit breakers, isolators, busbars, CTs, VTs
- Electrical safety: lockout/tagout, earthing, PPE, and arc flash
- Substation control systems and SCADA basics
- Switching procedures and operational documentation
- Protection relays and their functions
- Inspection routines and condition monitoring
- Emergency response and first response actions

Day 2: Advanced Operations and Fault Management

- Advanced switching: load transfer, paralleling, and de-energizing
- Protection coordination and relay settings
- Fault analysis: types, detection, and recording
- Maintenance planning: preventive, predictive, and corrective
- Outage management and isolation planning
- Permit-to-work and sanction-for-test procedures
- Incident investigation and root cause analysis
- Emerging technologies: digital substations and smart grids

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 15,400.00	R 15,400.00
1	On-Campus (Pretoria)	R 17,800.00	R 17,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
01 Oct 2026	02 Oct 2026	On-Campus	Mombasa, Kenya
01 Oct 2026	02 Oct 2026	On-Campus	London, UK
05 Oct 2026	06 Oct 2026	On-Campus	Kigali, Rwanda
05 Oct 2026	06 Oct 2026	Online	—
06 Oct 2026	07 Oct 2026	On-Campus	Mbabane, Eswatini
06 Oct 2026	07 Oct 2026	On-Campus	Lusaka, Zambia
07 Oct 2026	08 Oct 2026	On-Campus	Bangkok, Thailand
07 Oct 2026	08 Oct 2026	On-Campus	Nairobi, Kenya

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 AATICD-0512) 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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