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

Oil & Gas Electrical Systems

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0442 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course provides comprehensive training on the design, operation, and maintenance of electrical systems in oil and gas facilities. Participants will gain the knowledge and skills to ensure safe, reliable, and efficient electrical power distribution in hazardous environments, complying with industry standards and regulations.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0442
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 relevant regulations and standards (e.g., IEC, SANS) to the design and operation of electrical systems in oil and gas facilities.
- Analyze the electrical hazards inherent in oil and gas environments and evaluate risk mitigation strategies.
- Design safe and reliable electrical power distribution systems for hazardous areas, including selection of appropriate equipment and protection methods.
- Implement maintenance and testing procedures for electrical equipment to ensure ongoing safety and performance.
- Demonstrate the correct procedures for isolation, earthing, and safe work practices on electrical systems in potentially explosive atmospheres.
- Evaluate the performance of electrical systems and recommend improvements to enhance safety and efficiency.

WHO SHOULD ATTEND

- This course is designed for electrical engineers, technicians, and supervisors working in the oil and gas industry, as well as those seeking to enter this specialized field.
- It is also suitable for maintenance personnel and safety professionals who need a thorough understanding of electrical systems in hazardous areas.

COURSE OUTLINE

Day 1: **Fundamentals of Oil & Gas Electrical Systems**

- Overview of oil and gas electrical systems: from generation to end-use.
- Electrical theory: AC/DC, voltage, current, resistance, power.
- Hazardous area classification: zones, gas groups, and temperature classes.
- Introduction to electrical equipment: transformers, switchgear, motors, and cables.
- Earthing and bonding: principles and practices.
- Protection systems: fuses, circuit breakers, and relays.
- Overview of relevant standards: SANS, IEC, and OSHA.
- Safety regulations and permit-to-work systems.

Day 2: **Advanced Applications and Practical Integration**

- Selection and installation of electrical equipment in hazardous areas.
- Protection and control systems: relays, PLCs, and SCADA.
- Electrical maintenance strategies: preventive, predictive, and corrective.
- Testing and commissioning of electrical systems.
- Troubleshooting common electrical faults.
- Reliability and availability of electrical systems.
- Case studies and best practices.
- Future trends: smart grids and digitalisation.

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	Dubai, UAE
02 Dec 2026	03 Dec 2026	On-Campus	Victoria Falls, Zimbabwe
02 Dec 2026	03 Dec 2026	On-Campus	Cape Town, South Africa
03 Dec 2026	04 Dec 2026	On-Campus	Shenzhen, China
03 Dec 2026	04 Dec 2026	On-Campus	Lagos, Nigeria
09 Dec 2026	10 Dec 2026	On-Campus	Maseru, Lesotho
09 Dec 2026	10 Dec 2026	On-Campus	Kigali, Rwanda
09 Dec 2026	10 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-0442) 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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