



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

DCS Operations

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0440 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the practical skills and knowledge required to operate and manage distributed control systems (DCS) in industrial settings. It covers system architecture, configuration, monitoring, troubleshooting, and safety protocols to ensure efficient and safe process control.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0440
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 DCS architecture principles to identify system components and their functions.
- Configure DCS control strategies for typical process control loops.
- Monitor DCS operations and analyze process data to ensure optimal performance.
- Evaluate alarm and event management procedures to maintain safe and reliable operations.
- Design and implement basic DCS troubleshooting procedures to resolve common system faults.
- Demonstrate adherence to relevant safety and regulatory requirements in DCS operations.

WHO SHOULD ATTEND

- This course is designed for process control technicians, instrumentation engineers, and operations personnel who are responsible for the day-to-day operation and maintenance of DCS in manufacturing, petrochemical, or power generation industries.

COURSE OUTLINE

Day 1: Fundamentals of DCS Architecture and Operation

- Introduction to DCS: history, benefits, and applications.
- DCS hardware components: controllers, I/O modules, and field devices.
- DCS software: configuration, databases, and engineering workstations.
- Communication protocols: Foundation Fieldbus, Profibus, and HART.
- Operator interface: process displays, trends, and alarm management.
- Basic control concepts: feedback, feedforward, and cascade control.
- PID tuning fundamentals and loop troubleshooting.
- Safety systems: interlocks, emergency shutdown, and standard operating procedures.

Day 2: Advanced DCS Operations, Optimization, and Troubleshooting

- Advanced control strategies: model predictive control (MPC) and advanced process control (APC).
- Batch processing and recipe management.
- System diagnostics: controller redundancy, I/O faults, and network monitoring.
- Troubleshooting techniques: systematic problem-solving and root cause analysis.
- Performance optimization: data analytics, KPI tracking, and energy efficiency.
- Cybersecurity: user access control, network security, and audit trails.
- Migration and system integration: integrating DCS with MES and ERP.
- Best practices for documentation and shift handover.

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-0440) 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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