



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

Water Process Control

Custom Courses / Water & Environmental Management

Unit Standard AATICD-0209 · NQF Level 5 · 10 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to monitor and control water treatment and distribution processes in compliance with South African water quality standards. It covers the principles of water process control, including chemical dosing, filtration, and disinfection, as well as the operation and maintenance of equipment. Learners will be able to apply process control techniques to ensure safe and efficient water supply.

Category	Custom Courses
Subfield	Water & Environmental Management
Unit Standard	AATICD-0209
Accreditation	SAQA Accredited · NQF Level 5 · 10 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate understanding of water process control principles and the water treatment cycle.
- Apply methods for monitoring and adjusting chemical dosing, filtration, and disinfection processes.
- Analyze water quality test results and implement corrective actions to maintain compliance.
- Operate and maintain process control equipment safely and efficiently.
- Evaluate process performance and identify opportunities for optimization.
- Implement emergency procedures in response to process deviations or equipment failures.

WHO SHOULD ATTEND

- This course is designed for process controllers, water treatment plant operators, and technicians working in municipal or industrial water treatment facilities who are responsible for the day-to-day operation and monitoring of water processes.

COURSE OUTLINE

Day 1: Introduction to Water and Wastewater Systems

- Overview of water cycle and water sources
- Components of water supply systems
- Introduction to wastewater collection and treatment
- Key water quality parameters (pH, turbidity, chlorine residual, etc.)
- Role of process control in ensuring water quality
- Regulatory framework and standards (SANS 241, etc.)

Day 2: Water Treatment Processes

- Coagulation and flocculation principles
- Sedimentation and clarification
- Filtration (rapid gravity, pressure filters)
- Disinfection (chlorination, UV, ozonation)
- Chemical dosing and control
- Process control parameters (flow, pressure, turbidity, pH)

Day 3: Wastewater Treatment Processes

- Primary treatment (screening, grit removal, sedimentation)
- Secondary treatment (activated sludge, fixed film)
- Nutrient removal (nitrogen, phosphorus)
- Tertiary treatment and polishing
- Sludge treatment (thickening, digestion, dewatering)
- Process control for biological systems (DO, F/M ratio, SVI)

Day 4: Process Control Instrumentation and Automation

- Flow measurement (weirs, flumes, magnetic flow meters)
- Level, pressure, and temperature sensors
- Online analyzers (pH, chlorine, turbidity, DO)
- Introduction to SCADA and PLC systems
- Data logging and trend analysis
- Calibration and maintenance of instruments

Day 5: Operational Management and Practical Integration

- Developing standard operating procedures (SOPs)
- Troubleshooting common problems (sludge bulking, filter breakthrough)
- Emergency response and safety
- Energy efficiency and cost optimization
- Plant walkthrough: identifying control points
- Review and assessment

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 **10 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 24,200.00	R 24,200.00
1	In-House	R 31,400.00	R 31,400.00
1	On-Campus (Pretoria)	R 36,200.00	R 36,200.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
17 Aug 2026	21 Aug 2026	On-Campus	Harare, Zimbabwe
17 Aug 2026	21 Aug 2026	On-Campus	Shenzhen, China
24 Aug 2026	28 Aug 2026	On-Campus	Bangkok, Thailand
24 Aug 2026	28 Aug 2026	On-Campus	Victoria Falls, Zimbabwe
31 Aug 2026	04 Sep 2026	On-Campus	Lusaka, Zambia
31 Aug 2026	04 Sep 2026	On-Campus	London, UK

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-0209) 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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