



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 Reticulation Services

Custom Courses / Water & Environmental Management

Unit Standard AATICD-0210 · NQF Level 5 · 10 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills required to operate and maintain water reticulation systems effectively and safely. It covers system components, flow principles, water quality monitoring, and routine maintenance procedures to ensure reliable water supply and compliance with South African regulations.

Category	Custom Courses
Subfield	Water & Environmental Management
Unit Standard	AATICD-0210
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

- Identify and describe the key components of a water reticulation system and their functions.
- Apply principles of water flow, pressure, and hydraulics to system operation.
- Demonstrate routine maintenance procedures for pipes, valves, pumps, and storage reservoirs.
- Implement water quality monitoring and sampling protocols in accordance with SANS 241 standards.
- Analyze system performance data to detect and report faults or inefficiencies.
- Evaluate safety risks and apply relevant occupational health and safety measures during reticulation work.

WHO SHOULD ATTEND

- This course is designed for technical personnel, maintenance teams, and supervisors involved in water distribution and reticulation services within municipal, industrial, or commercial settings.

COURSE OUTLINE

Day 1: Introduction to Water Reticulation Systems

- Overview of water reticulation: sources, treatment, distribution
- Components: pipes, valves, fittings, meters, hydrants
- Relevant SANS and SAQA standards
- Occupational health and safety in water reticulation
- Basic hydraulics: pressure, flow, head loss

Day 2: Pipe Materials, Jointing and Installation

- Pipe material properties and selection criteria
- Jointing techniques: mechanical, welded, flanged, solvent cement
- Trench excavation, shoring, and dewatering
- Bedding and backfill requirements
- Installation of valves, hydrants, and fittings
- Thrust blocks and anchorages

Day 3: Network Design and Hydraulic Principles

- Hydraulic calculations: Hazen-Williams, Darcy-Weisbach
- Pipe sizing and pressure loss analysis
- System curves and pump selection basics
- Network layout: loops vs. dead-ends
- Water demand estimation and storage sizing
- Introduction to hydraulic modeling software

Day 4: Operation, Maintenance and Troubleshooting

- Valve operation and maintenance
- Flushing programs to manage water quality
- Leak detection methods: acoustic, correlators, step testing
- Pressure management and pressure reducing valves
- Repair techniques for burst pipes and fittings
- Record keeping and reporting

Day 5: Water Quality Management and System Integration

- Water quality standards (SANS 241)
- Sampling points, techniques, and frequency
- Disinfection: chlorination, flushing, bacteriological testing
- Commissioning new mains and service connections
- Integration with reservoirs, booster stations, and treatment works
- Introduction to SCADA and telemetry

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-0210) 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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