



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 Sampling And Analysis For Quality Testing Training

Manufacturing, Engineering and Technology / Fabrication and Extraction

Unit Standard 110182 · NQF Level 3 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the practical skills and theoretical knowledge required to collect, handle, and analyze water samples for quality testing. Participants will learn to apply standard methods for physical, chemical, and microbiological analysis, ensuring compliance with South African water quality standards and regulations.

Category	Manufacturing, Engineering and Technology
Subfield	Fabrication and Extraction
Unit Standard	110182
Accreditation	SAQA Accredited · NQF Level 3 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply appropriate sampling techniques to collect representative water samples from various sources.
- Analyze water samples for physical, chemical, and microbiological parameters using standard methods.
- Evaluate test results against South African water quality guidelines and interpret their significance.
- Implement proper sample preservation, storage, and transport procedures to maintain sample integrity.
- Demonstrate competence in using field and laboratory equipment for water quality testing.
- Document and report sampling and analysis results accurately in accordance with quality management systems.

WHO SHOULD ATTEND

- This course is designed for environmental health practitioners, laboratory technicians, water treatment plant operators, and quality assurance personnel who are responsible for water sampling and analysis in municipal, industrial, or consulting settings.

COURSE OUTLINE

Day 1: Fundamentals of Water Sampling and Quality Testing

- Introduction to water quality: sources, uses, and contamination pathways
- South African water quality legislation and standards (SANS 241, DWAF guidelines)
- Types of water samples: grab, composite, and passive sampling
- Sampling equipment: bottles, samplers, and field meters
- Sample preservation, handling, and chain of custody
- Physical parameters: temperature, turbidity, pH, conductivity
- Chemical parameters: dissolved oxygen, hardness, alkalinity
- Microbiological indicators: total coliforms, E. coli

Day 2: Sampling Procedures and Field Analysis Techniques

- Sampling plan development: frequency, locations, and parameters
- Quality assurance/quality control (QA/QC) in sampling
- Surface water sampling: rivers, dams, and streams
- Groundwater sampling: boreholes and wells
- Wastewater and effluent sampling techniques
- Field analysis: pH, conductivity, dissolved oxygen, turbidity meters
- Field test kits: chlorine residual, hardness, iron, nitrate
- Sample labeling, preservation, and transport to laboratory

Day 3: Laboratory Analysis, Data Interpretation, and Reporting

- Laboratory safety and good laboratory practice (GLP)
- Titrimetric analysis: alkalinity, hardness, chloride
- Spectrophotometric analysis: ammonia, phosphate, nitrate
- Microbiological analysis: membrane filtration, multiple tube fermentation
- Quality control: blanks, duplicates, spikes, and control samples
- Data validation and interpretation using SANS 241 limits
- Report writing: format, data presentation, and recommendations
- Case studies: common water quality issues and troubleshooting

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 **6 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 17,900.00	R 17,900.00
1	In-House	R 23,300.00	R 23,300.00
1	On-Campus (Pretoria)	R 26,800.00	R 26,800.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	05 Aug 2026	On-Campus	Dubai, UAE
03 Aug 2026	05 Aug 2026	On-Campus	Johannesburg, South Africa
04 Aug 2026	06 Aug 2026	On-Campus	Pretoria, South Africa
04 Aug 2026	06 Aug 2026	On-Campus	Mauritius
05 Aug 2026	07 Aug 2026	On-Campus	Cape Town, South Africa
05 Aug 2026	07 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	12 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	12 Aug 2026	On-Campus	Mauritius

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 110182) 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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