



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

Determine The Amount Of Mineral Dust And Particulate Matter In Water By Means Of A Nephelometer And Turbidimeter Respectively Training

Health Sciences and Social Services / Preventive Health

Unit Standard 120338 · NQF Level 3 · 5 Credits · 2 Days

COURSE OVERVIEW

This course equips learners with the skills to determine the amount of mineral dust and particulate matter in water using a nephelometer and turbidimeter. It focuses on accurate measurement techniques, instrument calibration, and interpretation of results to ensure water quality compliance.

Category	Health Sciences and Social Services
Subfield	Preventive Health
Unit Standard	120338
Accreditation	SAQA Accredited · NQF Level 3 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate the correct setup and calibration of a nephelometer and turbidimeter for measuring mineral dust and particulate matter in water.
- Apply standard operating procedures to collect, prepare, and analyze water samples for turbidity and suspended solids.
- Interpret nephelometric and turbidimetric readings to determine the concentration of mineral dust and particulate matter.
- Evaluate the accuracy and precision of measurements through quality control checks and corrective actions.
- Implement data recording and reporting procedures in accordance with regulatory standards.
- Analyze factors affecting measurement results, including sample handling, instrument limitations, and environmental conditions.

WHO SHOULD ATTEND

- This course is designed for water quality technicians, laboratory analysts, and environmental health practitioners working in water treatment, mining, or industrial settings where monitoring of suspended solids is required.

COURSE OUTLINE

Day 1: Foundational Concepts and Instrumentation

- Introduction to water quality parameters: turbidity, suspended solids, and particulate matter.
- Principles of light scattering and absorption in nephelometry and turbidimetry.
- Instrumentation: components of a nephelometer (light source, detector, sample cell) and a turbidimeter.
- Calibration standards: formazin polymer, primary and secondary standards.
- Step-by-step calibration procedures for nephelometer and turbidimeter.
- Operating procedures: sample handling, measurement techniques, and data recording.
- Safety protocols for handling chemicals and operating equipment.
- Practical session: calibrate instruments and measure turbidity of standard solutions.

Day 2: Advanced Applications and Quality Assurance

- Sample preparation: filtration, dilution, and preservation techniques for mineral dust and particulate matter.
- Data analysis: converting turbidity readings to suspended solids concentration using calibration curves.
- Quality assurance/quality control (QA/QC): method blanks, field duplicates, and spike recoveries.
- Interpretation of results against SANS 241 and other relevant water quality standards.
- Troubleshooting: common errors in measurement, instrument drift, and contamination.
- Maintenance: cleaning procedures, storage, and routine checks for nephelometer and turbidimeter.
- Practical session: analyze real water samples, perform QA/QC, and report results.
- Assessment: written test and practical demonstration of competency.

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 **5 NQF credits** at **NQF Level 3**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 15,400.00	R 15,400.00
1	In-House	R 20,000.00	R 20,000.00
1	On-Campus (Pretoria)	R 23,100.00	R 23,100.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	11 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	11 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	11 Aug 2026	On-Campus	Cape Town, South Africa
12 Aug 2026	13 Aug 2026	On-Campus	Abu Dhabi, UAE
12 Aug 2026	13 Aug 2026	On-Campus	Dubai, UAE
12 Aug 2026	13 Aug 2026	On-Campus	Mauritius
18 Aug 2026	19 Aug 2026	On-Campus	Pretoria, South Africa
18 Aug 2026	19 Aug 2026	On-Campus	Durban, South Africa

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 120338) 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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