



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

Rock Dust in Water Measurement Using Nephelometer

Health Sciences and Social Services / Preventive Health

Unit Standard 259641 · NQF Level 3 · 3 Credits · 1 Day

COURSE OVERVIEW

This course equips learners with the knowledge and skills to accurately determine the quantity of rock dust in water using a nephelometer, a critical process in mining and industrial hygiene. Participants will understand the principles of nephelometry, calibration procedures, and interpretation of results to ensure compliance with occupational health and safety standards. The course emphasizes practical application and quality assurance in water quality monitoring.

Category	Health Sciences and Social Services
Subfield	Preventive Health
Unit Standard	259641
Accreditation	SAQA Accredited · NQF Level 3 · 3 Credits
Duration	1 day
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply the principles of nephelometry to measure turbidity and quantify rock dust in water samples.
- Demonstrate correct calibration and operation of a nephelometer according to manufacturer specifications.
- Analyze measurement results to determine the concentration of rock dust and assess compliance with regulatory limits.
- Implement quality control procedures, including sample handling and instrument maintenance, to ensure accurate and reliable data.
- Evaluate potential sources of error and take corrective actions to improve measurement precision.
- Document and report findings in accordance with standard operating procedures and legal requirements.

WHO SHOULD ATTEND

- This course is designed for laboratory technicians, quality control personnel, and environmental health practitioners working in mining, quarrying, or industrial settings where rock dust measurement is required for health and safety compliance.

COURSE OUTLINE

Day 1: Fundamentals of Nephelometry and Rock Dust Measurement

- Introduction to rock dust in water: sources, impacts, and measurement importance.
- Theory of nephelometry: light scattering, turbidity, and NTU units.
- Nephelometer components: light source, detector, sample cell, and calibration standards.
- Calibration procedures: use of primary and secondary standards, zeroing.
- Measurement techniques: sample collection, handling, and measurement steps.
- Factors affecting accuracy: bubbles, temperature, stray light.
- Data interpretation: recording readings, conversion to concentration if applicable.
- Quality control: replicate measurements, control charts, and maintenance.

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

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 12,800.00	R 12,800.00
1	In-House	R 16,600.00	R 16,600.00
1	On-Campus (Pretoria)	R 19,200.00	R 19,200.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	10 Aug 2026	On-Campus	Dubai, UAE
11 Aug 2026	11 Aug 2026	On-Campus	Pretoria, South Africa
12 Aug 2026	12 Aug 2026	On-Campus	Abu Dhabi, UAE
13 Aug 2026	13 Aug 2026	On-Campus	Durban, South Africa
13 Aug 2026	13 Aug 2026	On-Campus	Mauritius
14 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
17 Aug 2026	17 Aug 2026	On-Campus	Pretoria, South Africa
18 Aug 2026	18 Aug 2026	On-Campus	Abu Dhabi, UAE

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 259641) 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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