



Accredited Africa Training Institute for Capacity Development

Unit FO409, Hatfield Plaza · 1122 Burnett St, Hatfield 0028 · Pretoria, Gauteng · South Africa

Tel: +27 12 004 8389 · Mobile: +27 65 077 6310

Email: apply@aaticd.co.za · Website: www.aaticd.co.za

COURSE BROCHURE

Hopper Clarifier Operation And Solution Clarification Training

Manufacturing, Engineering and Technology / Fabrication and Extraction

Unit Standard 110410 · NQF Level 2 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to operate a hopper clarifier effectively for solution clarification in industrial processes. It covers the principles of clarification, operational procedures, and maintenance practices to ensure optimal performance and safety.

Category	Manufacturing, Engineering and Technology
Subfield	Fabrication and Extraction
Unit Standard	110410
Accreditation	SAQA Accredited · NQF Level 2 · 6 Credits
Duration	3 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate the ability to start up, operate, and shut down a hopper clarifier according to standard operating procedures.
- Apply monitoring techniques to assess clarification efficiency and identify deviations in solution quality.
- Analyze common operational problems such as turbidity, sludge buildup, and flow variations to implement corrective actions.
- Evaluate safety hazards associated with hopper clarifier operation and apply relevant safety protocols.
- Perform routine maintenance checks and cleaning procedures to ensure equipment longevity and performance.
- Implement record-keeping practices for operational data and maintenance logs as per regulatory requirements.

WHO SHOULD ATTEND

- This course is designed for process operators, plant technicians, and maintenance personnel involved in solution clarification operations within mining, chemical, and water treatment industries.

COURSE OUTLINE

Day 1: Introduction to Hopper Clarifiers and Solution Clarification Principles

- Overview of solid-liquid separation processes
- Hopper clarifier design and construction
- Feedwell, launder, rake mechanisms, and discharge systems
- Principles of hindered settling and flocculation
- Factors affecting clarification efficiency (particle size, density, flow rate)
- Introduction to chemical dosing (flocculants, coagulants)
- Safety procedures and hazard identification
- Documentation and record-keeping basics

Day 2: Hopper Clarifier Operation and Process Control

- Start-up sequence: filling, flocculant preparation, feed initiation
- Operating parameters: feed rate, underflow withdrawal, flocculant dosage
- Monitoring tools: turbidity meters, density gauges, rake torque indicators
- Common problems: ragging, scum formation, overload conditions
- Troubleshooting: cause-and-effect analysis
- Adjusting flocculant dose for changing feed characteristics
- Shift handover and logbook practices
- Emergency shutdown procedures

Day 3: Advanced Clarification Techniques, Maintenance, and Practical Integration

- Advanced flocculant selection and optimization
- Dealing with variable feed conditions and upset events
- Maintenance schedules: rake gearbox, pump seals, launder cleaning
- Inspection of wear parts and structural integrity
- Performance metrics: recovery efficiency, underflow density targets
- Environmental and regulatory compliance
- Case studies: real-world operational challenges
- Integration of practical skills from Day 1 and 2

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 2**.

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 110410) 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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