



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

Centrifugal Gravity Concentration Process Material Separation Training

Manufacturing, Engineering and Technology / Fabrication and Extraction

Unit Standard 110195 · NQF Level 2 · 5 Credits · 2 Days

COURSE OVERVIEW

This course provides learners with the knowledge and skills required to operate centrifugal gravity concentration equipment for material separation in mineral processing. It covers the principles of centrifugal force, equipment setup, operational parameters, and safety procedures to ensure efficient and safe separation processes.

Category	Manufacturing, Engineering and Technology
Subfield	Fabrication and Extraction
Unit Standard	110195
Accreditation	SAQA Accredited · NQF Level 2 · 5 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate the principles of centrifugal gravity concentration and its application in material separation.
- Prepare and set up centrifugal gravity concentration equipment according to standard operating procedures.
- Operate the equipment to achieve optimal separation efficiency while monitoring key process parameters.
- Analyze separation performance and adjust operational variables to improve recovery and grade.
- Apply safety protocols and identify hazards associated with centrifugal gravity concentration processes.
- Evaluate the impact of feed characteristics on separation outcomes and implement corrective actions.

WHO SHOULD ATTEND

- This course is designed for plant operators, process technicians, and supervisors in the mining and minerals processing industry who are responsible for operating or overseeing centrifugal gravity concentration systems.

COURSE OUTLINE

Day 1: Fundamentals of Centrifugal Gravity Concentration

- Introduction to gravity concentration methods
- Principles of centrifugal force and sedimentation
- Types of centrifugal concentrators (e.g., Knelson, Falcon)
- Key operating parameters: rotational speed, fluidization water, bed depth
- Feed preparation: particle size, pulp density, and liberation
- Factors influencing recovery and grade
- Overview of applications in mineral processing
- Safety considerations in operation

Day 2: Operational Optimization and Troubleshooting

- Setting up and calibrating a centrifugal concentrator
- Process optimization: adjusting parameters for maximum efficiency
- Monitoring performance: mass balance, recovery, and grade calculations
- Troubleshooting: common problems and solutions (e.g., blinding, wear)
- Integration with grinding, classification, and other unit operations
- Sampling protocols and data interpretation
- Maintenance planning and wear management
- Case studies and best practices

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 2**.

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
05 Aug 2026	06 Aug 2026	On-Campus	Pretoria, South Africa
05 Aug 2026	06 Aug 2026	On-Campus	Cape Town, South Africa
05 Aug 2026	06 Aug 2026	On-Campus	Johannesburg, South Africa
11 Aug 2026	12 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	12 Aug 2026	On-Campus	Dubai, UAE
11 Aug 2026	12 Aug 2026	On-Campus	Mauritius
13 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
13 Aug 2026	14 Aug 2026	On-Campus	Pretoria, 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 110195) 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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