



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

Coal Handling Systems Operation And Maintenance Training

Manufacturing, Engineering and Technology / Manufacturing and Assembly

Unit Standard 114456 · NQF Level 3 · 11 Credits · 8 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills to safely and efficiently operate and maintain coal handling systems in industrial settings. It covers key principles of coal handling, including system components, operational procedures, and preventive maintenance techniques, ensuring compliance with South African health and safety regulations.

Category	Manufacturing, Engineering and Technology
Subfield	Manufacturing and Assembly
Unit Standard	114456
Accreditation	SAQA Accredited · NQF Level 3 · 11 Credits
Duration	8 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Apply safe operating procedures for coal handling systems in accordance with relevant legislation and standards.
- Analyze the functionality and interrelationship of key components within a coal handling system.
- Implement routine maintenance schedules to ensure optimal system performance and reliability.
- Demonstrate correct techniques for troubleshooting common operational issues in coal handling equipment.
- Evaluate risks associated with coal handling operations and apply appropriate control measures.
- Design a basic preventive maintenance plan for a coal handling system.

WHO SHOULD ATTEND

- This course is designed for plant operators, maintenance technicians, and supervisors involved in coal handling operations within power generation, mining, or heavy industrial environments.

COURSE OUTLINE

Day 1: Introduction to Coal Handling Systems and Safety

- Overview of coal handling systems: purpose and components.
- Coal characteristics: types, moisture, size, and calorific value.
- Safety in coal handling: lockout/tagout, dust control, fire prevention.
- Personal protective equipment (PPE) requirements.
- Plant layout: conveyors, crushers, stockpiles, reclaimers.
- Introduction to relevant SANS and OHS Act regulations.

Day 2: Conveyor Systems and Belt Operation

- Conveyor belt types and construction.
- Drive systems: motors, gearboxes, pulleys.
- Idlers, rollers, and belt support structures.
- Belt tensioning and tracking adjustments.
- Start-up and shut-down sequences.
- Safety devices: pull cords, belt sway switches, speed sensors.

Day 3: Crushing and Screening Equipment

- Types of crushers: jaw, impact, and roll crushers.
- Crusher setting adjustment and tramp iron protection.
- Vibrating screens: types, deck configurations, screen media.
- Screen efficiency and troubleshooting.
- Dust suppression systems for crushers.
- Lubrication and maintenance schedules.

Day 4: Stockpile Management and Reclaiming Systems

- Stockpiling methods: cone, chevron, windrow.
- Stacker operation: slewing, luffing, travel.
- Reclaimer types: bucket wheel, portal, bridge.
- Blending strategies and quality control.
- Temperature monitoring and fire prevention.
- Dust control during stacking and reclaiming.

Day 5: Plant Auxiliary Systems and Equipment

- Dust collection systems: bag filters, cyclones.
- Water spray systems for dust suppression.
- Magnetic separators: overhead and drum types.
- Metal detectors and tramp iron removal.
- Coal sampling: mechanical samplers, sample preparation.
- Weigh feeders and belt scales: calibration and accuracy.

Day 6: Maintenance Procedures and Troubleshooting

- Preventive maintenance planning and checklists.
- Conveyor belt splicing and repair.
- Bearing replacement and alignment.
- Crusher wear parts inspection and replacement.
- Troubleshooting conveyor jams, spillage, and slippage.

- Condition monitoring: vibration analysis, thermography.

Day 7: Electrical and Control Systems

- Motor control centres (MCCs) and starters.
- Variable frequency drives (VFDs) for conveyors.
- Programmable logic controllers (PLCs): inputs/outputs, logic.
- SCADA interfaces and operator panels.
- Alarm management and fault finding.
- Emergency stop circuits and safety interlocks.

Day 8: Integrated Operations, Shift Handover, and Assessment

- Shift handover procedures and logbook entries.
- Start-up sequence coordination between sections.
- Shut-down procedures and post-shutdown checks.
- Emergency response drills (fire, spill, injury).
- Simulated plant operation exercise.
- Final written assessment and practical evaluation.

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

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 30,700.00	R 30,700.00
1	In-House	R 39,900.00	R 39,900.00
1	On-Campus (Pretoria)	R 46,000.00	R 46,000.00

UPCOMING SESSIONS

Start	End	Method	Venue
03 Aug 2026	12 Aug 2026	On-Campus	Johannesburg, South Africa
04 Aug 2026	13 Aug 2026	On-Campus	Mauritius
05 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
06 Aug 2026	17 Aug 2026	On-Campus	Dubai, UAE
07 Aug 2026	18 Aug 2026	On-Campus	Pretoria, South Africa
07 Aug 2026	18 Aug 2026	On-Campus	Lagos, Nigeria
10 Aug 2026	19 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	19 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 114456) 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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