



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

Drill Application and Operation

Law, Military Science and Security / Sovereignty of the State

Unit Standard 230049 · NQF Level 3 · 8 Credits · 5 Days

COURSE OVERVIEW

This course equips learners with the knowledge and skills required to safely and effectively operate a drill in a workplace environment. It covers the correct selection, preparation, use, and maintenance of drilling equipment, ensuring compliance with occupational health and safety standards. By the end of this course, learners will be able to demonstrate the application of a drill in various industrial contexts.

Category	Law, Military Science and Security
Subfield	Sovereignty of the State
Unit Standard	230049
Accreditation	SAQA Accredited · NQF Level 3 · 8 Credits
Duration	5 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS – verifiable online

LEARNING OUTCOMES

- Demonstrate knowledge of drill types, components, and their applications in different materials.
- Apply correct procedures for selecting, preparing, and inspecting a drill and its accessories.
- Operate a drill safely and efficiently, adhering to workplace health and safety regulations.
- Perform basic maintenance and troubleshoot common drilling issues.
- Evaluate the quality of drilled holes and identify defects or deviations.
- Implement proper housekeeping and storage practices for drilling equipment.

WHO SHOULD ATTEND

- This course is designed for operators, artisans, and technicians who use drills as part of their daily work in industries such as construction, mining, manufacturing, and maintenance.
- It is also suitable for supervisors seeking to ensure safe drilling practices within their teams.

COURSE OUTLINE

Day 1: Introduction to Drilling and Safety

- Overview of drilling applications in mining, construction, and geotechnical work.
- Types of drilling methods: rotary, percussion, and diamond drilling.
- Key components of a drill rig: power unit, feed system, drill string, and bit.
- Personal protective equipment (PPE) and site safety requirements.
- Hazard identification and risk assessment for drilling operations.
- Pre-start inspections and documentation.
- Emergency procedures and first aid basics.
- Introduction to drilling fluids and their functions.

Day 2: Drill Rig Setup and Operation

- Site preparation and rig positioning.
- Leveling and stabilizing the drill rig.
- Drill control functions: rotation, feed, and hoist.
- Assembling the drill string: rods, couplings, and bits.
- Selecting the appropriate drill bit for rock/soil conditions.
- Starting the drill: engaging rotation and feed.
- Monitoring drilling parameters: penetration rate, torque, and fluid pressure.
- Shut-down sequence and securing the rig.

Day 3: Advanced Drilling Techniques and Troubleshooting

- Techniques for hard rock, soft ground, and fractured formations.
- Handling deviations: straightness and alignment.
- Stuck pipe: causes and freeing methods.
- Bit wear: recognition and replacement criteria.
- Managing drilling fluid properties: viscosity, density, and filtration.
- Troubleshooting mechanical and hydraulic issues.
- Adjusting feed pressure and rotation speed.
- On-the-fly maintenance: greasing, tightening, and inspections.

Day 4: Drilling Data Recording and Quality Control

- Drilling logs: depth, rate, fluid loss, and sample intervals.
- Measuring and recording hole deviation.
- Core recovery and handling procedures.
- Sampling techniques for geotechnical and mineral exploration.
- Quality checks: hole diameter, straightness, and cleanliness.
- Reporting incidents and non-conformances.
- Shift handover procedures.
- Team communication and coordination.

Day 5: Practical Integration and Assessment

- Full cycle practical: site setup, drilling, data recording, and rig breakdown.
- Simulated stuck pipe scenario: diagnosis and resolution.
- Bit change exercise under time constraints.
- Logging and reporting a completed hole.
- Final assessment: written test and practical demonstration.

- Course review and feedback.
- Certification requirements and next steps.
- Q&A; session.

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

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 23,000.00	R 23,000.00
1	In-House	R 29,900.00	R 29,900.00
1	On-Campus (Pretoria)	R 34,500.00	R 34,500.00

UPCOMING SESSIONS

Start	End	Method	Venue
10 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Abu Dhabi, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
10 Aug 2026	14 Aug 2026	On-Campus	Cape Town, South Africa
10 Aug 2026	14 Aug 2026	On-Campus	Mauritius
17 Aug 2026	21 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	21 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 230049) 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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