



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

Mechanical and Electrical Engineering Processes and Procedures

Manufacturing, Engineering and Technology / Fabrication and Extraction

Unit Standard 243772 · NQF Level 2 · 6 Credits · 3 Days

COURSE OVERVIEW

This course equips learners with a foundational understanding of mechanical and electrical engineering processes and procedures within a corporate environment. It covers key principles, documentation standards, and workflow integration to enhance operational efficiency in engineering contexts.

Category	Manufacturing, Engineering and Technology
Subfield	Fabrication and Extraction
Unit Standard	243772
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

- Describe the key processes and procedures in mechanical and electrical engineering disciplines.
- Identify and explain the documentation and reporting standards used in engineering workflows.
- Apply basic engineering principles to interpret technical drawings and specifications.
- Demonstrate understanding of safety and compliance procedures within engineering environments.
- Analyze the role of quality assurance and control in engineering processes.
- Evaluate the impact of engineering procedures on project timelines and deliverables.

WHO SHOULD ATTEND

- This course is designed for administrative staff, junior engineers, technicians, and non-engineering professionals who interact with mechanical and electrical engineering teams and need to understand core processes and procedures.

COURSE OUTLINE

Day 1: Fundamentals of Mechanical and Electrical Engineering Processes

- Overview of mechanical and electrical engineering disciplines
- Mechanical systems: gears, bearings, shafts, and couplings
- Electrical systems: motors, generators, and control circuits
- Principles of power transmission and conversion
- Safety regulations (OHS Act, SANS codes)
- Introduction to measuring instruments (multimeters, tachometers, calipers)
- Preventative maintenance fundamentals

Day 2: Procedures for Installation, Maintenance, and Troubleshooting

- Installation procedures for pumps, conveyors, and motors
- Electrical wiring and termination standards
- Lubrication and alignment techniques
- Electrical testing: insulation resistance, continuity, and voltage checks
- Fault diagnosis: vibration analysis, thermal imaging, and circuit testing
- Work permits and lockout/tagout procedures
- Maintenance logs and reporting

Day 3: Advanced Applications and Practical Integration

- Reading mechanical assembly drawings and electrical circuit diagrams
- Coordinated maintenance of motor-driven systems
- Performance testing: load testing, efficiency calculations
- Condition monitoring: vibration, temperature, and oil analysis
- Energy management in mechanical and electrical systems
- Continuous improvement and root cause analysis
- Team-based practical assessment

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
10 Aug 2026	12 Aug 2026	On-Campus	Pretoria, South Africa
10 Aug 2026	12 Aug 2026	On-Campus	Mauritius
11 Aug 2026	13 Aug 2026	On-Campus	Abu Dhabi, UAE
11 Aug 2026	13 Aug 2026	On-Campus	Cape Town, South Africa
12 Aug 2026	14 Aug 2026	On-Campus	Durban, South Africa
12 Aug 2026	14 Aug 2026	On-Campus	Dubai, UAE
17 Aug 2026	19 Aug 2026	On-Campus	Harare, Zimbabwe
17 Aug 2026	19 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 243772) 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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