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

Steam Turbine Operations

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0504 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course equips participants with the comprehensive knowledge and practical skills required to safely and efficiently operate steam turbines in industrial settings. It covers the fundamental principles of steam turbine operation, including start-up, normal operation, shutdown, and emergency procedures, as well as performance monitoring and troubleshooting. The course emphasizes safety, regulatory compliance, and best practices to ensure optimal turbine reliability and longevity.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0504
Accreditation	SAQA Accredited · NQF Level 5 · 4 Credits
Duration	2 days
Training Method	Online, On-Campus, In-House
Certificate	Issued via AATICD LMS — verifiable online

LEARNING OUTCOMES

- Apply the fundamental thermodynamic principles governing steam turbine operation to optimize performance.
- Demonstrate safe and efficient start-up, operation, and shutdown procedures for steam turbines.
- Analyze turbine performance data to identify operational issues and recommend corrective actions.
- Implement routine maintenance and inspection schedules to ensure turbine reliability and compliance.
- Evaluate emergency scenarios and execute appropriate response procedures to mitigate risks.
- Design a basic operational checklist for steam turbine systems, incorporating safety and regulatory requirements.

WHO SHOULD ATTEND

- This course is designed for plant operators, process technicians, maintenance personnel, and engineers who are involved in the operation, monitoring, or maintenance of steam turbines.
- It is also suitable for individuals seeking to enhance their understanding of steam turbine systems for career advancement in the power generation, petrochemical, or manufacturing sectors.

COURSE OUTLINE

Day 1: **Fundamentals of Steam Turbine Operation**

- Overview of steam turbine types and applications
- Thermodynamic principles: Rankine cycle, enthalpy, entropy
- Main components: rotor, casing, blades, bearings, seals
- Auxiliary systems: lubrication, hydraulic, cooling, and steam systems
- Pre-start checks: valve alignment, gland steam, turning gear
- Start-up procedures: rolling, warming, synchronising
- Operational parameters: speed, load, temperatures, pressures
- Safety and environmental considerations

Day 2: **Advanced Operation and Troubleshooting**

- Normal monitoring: readings, trends, and performance calculations
- Load changes and frequency control
- Abnormal conditions: vibration, overheating, bearing issues
- Alarm management and emergency response procedures
- Shutdown procedures: normal, emergency, and trip
- Maintenance principles: inspections, lubrication, and overhauls
- Troubleshooting common problems: steam leaks, seal failures
- Performance analysis and efficiency optimisation

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 **4 NQF credits** at **NQF Level 5**.

PRICING (PER DELEGATE, EX-VAT)

Delegates	Training Method	Price per Delegate	Total
1	Online	R 11,900.00	**R 11,900.00**
1	In-House	R 16,100.00	**R 16,100.00**
1	On-Campus (Pretoria)	R 17,800.00	**R 17,800.00**

UPCOMING SESSIONS

Start	End	Method	Venue
01 Dec 2026	02 Dec 2026	On-Campus	Shenzhen, China
01 Dec 2026	02 Dec 2026	On-Campus	Lagos, Nigeria
02 Dec 2026	03 Dec 2026	On-Campus	Durban, South Africa
03 Dec 2026	04 Dec 2026	On-Campus	Dubai, UAE
07 Dec 2026	08 Dec 2026	On-Campus	Maseru, Lesotho
07 Dec 2026	08 Dec 2026	On-Campus	Kigali, Rwanda
07 Dec 2026	08 Dec 2026	On-Campus	Accra, Ghana
07 Dec 2026	08 Dec 2026	On-Campus	Cape Town, South Africa

Contact us if no suitable date is listed — on-demand sessions can be arranged for groups.

HOW TO GET A QUOTATION OR APPLY

1. **Get an instant quotation online:** visit www.aaticd.co.za, open the page for this course (Unit Standard AATICD-0504) and click **Get A Quotation**. 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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