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

Wind Energy Technology

Custom Courses / Energy, Oil and Gas

Unit Standard AATICD-0484 · NQF Level 5 · 4 Credits · 2 Days

COURSE OVERVIEW

This course provides participants with a comprehensive understanding of wind energy technology, including the principles of wind resource assessment, turbine design, operation, and maintenance. It aims to equip learners with the skills to evaluate wind energy projects and contribute to the sustainable energy sector in South Africa.

Category	Custom Courses
Subfield	Energy, Oil and Gas
Unit Standard	AATICD-0484
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 principles of wind energy conversion and aerodynamics to assess wind turbine performance.
- Analyze wind resource data and evaluate site suitability for wind energy projects.
- Design a basic wind turbine system, selecting appropriate components and configurations.
- Implement safety and operational procedures for wind turbine installation, commissioning, and maintenance.
- Evaluate the economic and environmental impacts of wind energy projects, including grid integration and sustainability.
- Demonstrate the ability to troubleshoot common wind turbine faults and propose corrective actions.

WHO SHOULD ATTEND

- This course is designed for engineers, technicians, project managers, and energy professionals seeking to specialize in wind energy technology.
- It is also suitable for individuals transitioning into the renewable energy industry.

COURSE OUTLINE

Day 1: **Fundamentals of Wind Energy and Turbine Components**

- Overview of wind energy: history, global and South African status.
- Wind characteristics: speed, direction, turbulence, and wind shear.
- Wind resource assessment: measurement, data analysis, and wind maps.
- Anatomy of a wind turbine: tower, nacelle, rotor blades, gearbox, generator, and control systems.
- Basic aerodynamics: lift and drag, blade design, and power extraction.
- Energy conversion: mechanical to electrical, grid integration basics.
- Environmental and social considerations: noise, visual impact, bird and bat interactions, and community benefits.

Day 2: **Wind Turbine Operation, Maintenance, and Safety**

- Occupational health and safety: risk assessment, confined spaces, working at heights, and electrical safety.
- Maintenance strategies: preventive, predictive, and corrective maintenance.
- Inspection techniques: visual, thermographic, oil analysis, and vibration analysis.
- Common failures and troubleshooting: blade damage, gearbox issues, yaw misalignment, and electrical faults.
- SCADA systems: data acquisition, monitoring, and control.
- Performance assessment: power curve analysis and capacity factor.
- Regulatory framework: South African Renewable Energy Independent Power Producer Procurement Programme (REIPPPP), OHS Act, and relevant standards.

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-0484) 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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