



POWER AND ELECTRICAL TRAINING

Wind Turbine Technology, Operation and Maintenance

5 day course

Classroom, online or in-house

Course overview

Wind capacity is being built across Southern and East Africa faster than the workforce to maintain it, and a turbine failure is a crane hire and a long outage rather than a spanner and an afternoon. This course covers the machine. Delegates work through wind resource and the power curve that converts it to output, turbine configuration and the main components from rotor through gearbox and generator to converter and transformer, and control including pitch, yaw and the protection that shuts a machine down. Failure modes are covered by component, with the condition monitoring that predicts each. Maintenance access, working at height and lifting are addressed. The course closes on availability, performance measurement and the economics of a repair decision.

What you will learn

- Relate wind resource and the power curve to expected output
- Describe turbine configuration and the function of each main component
- Explain pitch, yaw and protection control
- Identify failure modes by component and their warning signs
- Apply condition monitoring to gearbox, generator and blades
- Plan maintenance access, height work and major component lifts
- Measure availability and evaluate a repair decision economically

Who should attend

- Wind farm operations and maintenance technicians
- Electrical and mechanical engineers on renewable plant
- Asset managers of renewable portfolios
- Utility and independent power producer staff
- Graduate engineers entering the sector

Course outline

- 01 Built faster than the workforce to maintain it
- 02 Wind resource and the power curve
- 03 Turbine configuration and main components
- 04 Drive train, generator and converter
- 05 Pitch, yaw and protection control
- 06 Failure modes by component
- 07 Condition monitoring and prediction
- 08 Access, lifting, availability and repair economics

Upcoming dates

Dates	Venue	Format	Fee per delegate
19 to 23 October 2026	Kigali, Rwanda	Classroom	USD 1,325
15 to 19 February 2027	Online	Online	R8,500
22 to 26 February 2027	Maputo, Mozambique	Classroom	USD 1,325

Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia,



Lesotho and Eswatini, and **USD 1,325** in the classroom elsewhere in Africa. In-house training is quotation on request. Book 2 or more delegates on this course and save 10%.

To register or request an in-house proposal, visit www.afrisciencegroup.com, email info@afriscience.co.za, or WhatsApp us on **+27 63 479 1136**.

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