



MAINTENANCE MANAGEMENT TRAINING

Predictive Maintenance and Digital Twin Technologies

3 day course

Classroom, online or in-house

Course overview

Condition monitoring programmes usually collect more data than anybody acts on, and the gap is rarely the sensors: it is that nobody defined what reading would trigger which decision. This course closes that gap. Delegates work through failure modes and which ones actually give warning, selecting monitoring techniques to match, and vibration, thermography, oil analysis and ultrasound on what each detects. Alarm limits and setting them from equipment history follow. Data collection, storage and the analysis that turns readings into a remaining life estimate are covered. Digital twins are addressed honestly: what a model can predict, what it needs to be fed, and where the value is real. Integrating findings into the maintenance plan and the work order system is covered. The course closes on proving the programme paid for itself and on sustaining it once the initial enthusiasm passes.

What you will learn

- Identify which failure modes give usable warning
- Match monitoring techniques to those failure modes
- Apply vibration, thermography, oil analysis and ultrasound
- Set alarm limits from equipment history
- Turn readings into a remaining life estimate
- Judge what a digital twin can and cannot predict
- Feed findings into the maintenance plan and prove the payback

Who should attend

- Reliability and maintenance engineers
- Plant digitalisation and automation specialists
- Maintenance managers exploring predictive programmes
- Instrumentation and control engineers
- Asset performance management analysts

Course outline

- 01 Data nobody acts on
- 02 Failure modes that give warning
- 03 Selecting monitoring techniques
- 04 Vibration and thermography
- 05 Oil analysis and ultrasound
- 06 Alarm limits from history
- 07 Remaining life estimation
- 08 Digital twins, integration and payback

Upcoming dates

Dates	Venue	Format	Fee per delegate
23 to 25 December 2026	Nairobi, Kenya	Classroom	USD 995
6 to 8 January 2027	Online	Online	R6,500
15 to 17 February 2027	Maseru, Lesotho	Classroom	R14,950
22 to 24 February 2027	Gaborone, Botswana	Classroom	R14,950



Fees and how to register

This 3 day course is **R6,500** per delegate online, **R14,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 995** 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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