



MAINTENANCE MANAGEMENT TRAINING

Vibration Analysis and Condition Monitoring Practitioner

3 day course

Classroom, online or in-house

Course overview

Vibration analysis is a diagnostic discipline rather than a reporting one, and the practitioner's value is in saying which component is failing and how long it has, not in circulating a spectrum. This course builds that capability. Delegates work through vibration fundamentals, what a machine's motion tells you and the measurement decisions that determine whether it tells you anything. Transducer selection and mounting follow, since a badly mounted accelerometer invalidates everything after it. Time waveform and spectrum interpretation are covered together. Fault signatures are worked through individually: unbalance, misalignment, looseness, bent shaft, bearing defects at each stage, and gear faults. Resonance and its distinction from a forcing frequency are addressed. Phase analysis is covered. Setting alarms and trending follow. The course closes on the report that triggers a work order and on confirming a diagnosis after the machine is opened.

What you will learn

- Make the measurement decisions that determine data quality
- Select and mount transducers correctly
- Interpret time waveform and spectrum together
- Recognise unbalance, misalignment, looseness and bent shaft signatures
- Identify bearing defects by stage and diagnose gear faults
- Separate resonance from forcing frequency and apply phase analysis
- Set alarms, trend results and write a report that triggers work

Who should attend

- Condition monitoring technicians and analysts
- Vibration analysts and reliability technicians
- Maintenance engineers responsible for rotating equipment
- Mechanical fitters progressing into predictive maintenance roles
- Reliability engineers building condition monitoring programmes

Course outline

- 01 Diagnosis, not reporting
- 02 Vibration fundamentals and measurement choices
- 03 Transducer selection and mounting
- 04 Time waveform and spectrum together
- 05 Unbalance, misalignment and looseness
- 06 Bearing defect stages and gear faults
- 07 Resonance and phase analysis
- 08 Alarms, trending, reporting and confirmation

Upcoming dates

Dates	Venue	Format	Fee per delegate
18 to 20 November 2026	Johannesburg, South Africa	Classroom	R14,950
2 to 4 December 2026	Online	Online	R6,500
6 to 8 January 2027	Pretoria, South Africa	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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