



MAINTENANCE MANAGEMENT TRAINING

Thermography and Ultrasound for Condition Monitoring

3 day course

Classroom, online or in-house

Course overview

Infrared and airborne ultrasound find faults that vibration analysis cannot see or hear, and both are commonly bought as cameras and meters and then used to produce pictures nobody acts on. This course covers using them as diagnostic tools. Delegates work through infrared principles including emissivity, reflection and the errors they cause, camera setup and image capture that yields a comparable reading, and interpretation across electrical, mechanical and building applications. Severity criteria and reporting are covered. Ultrasound follows: leak detection, electrical discharge, steam trap testing and bearing condition, each with its technique. The course closes on integrating both into a condition monitoring programme and on the survey routes that make coverage systematic.

What you will learn

- Apply infrared principles including emissivity and reflected temperature
- Set up a camera and capture comparable, repeatable images
- Interpret thermal images across electrical, mechanical and building applications
- Apply severity criteria and write an actionable report
- Use airborne ultrasound for leaks, discharge and steam traps
- Assess bearing condition by ultrasound and apply it to lubrication
- Build survey routes and integrate both into a monitoring programme

Who should attend

- Condition monitoring technicians and engineers
- Electrical and mechanical maintenance staff
- Reliability engineers
- Energy managers surveying for losses
- Maintenance supervisors and planners

Course outline

- 01 Cameras that produce pictures nobody acts on
- 02 Infrared principles, emissivity and reflection
- 03 Camera setup and repeatable capture
- 04 Electrical and mechanical interpretation
- 05 Severity criteria and reporting
- 06 Airborne ultrasound and leak detection
- 07 Electrical discharge and steam trap testing
- 08 Bearing condition, survey routes and programme integration

Upcoming dates

Dates	Venue	Format	Fee per delegate
9 to 11 December 2026	Online	Online	R6,500
25 to 27 January 2027	Cape Town, South Africa	Classroom	R14,950
3 to 5 February 2027	Maputo, Mozambique	Classroom	USD 995
15 to 17 February 2027	Lusaka, Zambia	Classroom	USD 995



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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