



LABORATORY TRAINING

Measurement Systems Analysis

3 day course

Classroom, online or in-house

Course overview

Before a measurement can be used to control or improve anything, the measurement system itself has to be shown capable, and a surprising proportion are not. This course covers assessing them. Delegates work through resolution and discrimination, bias and linearity studies, stability over time, and repeatability and reproducibility studies for both variable and attribute measurement. The gauge study is run and analysed on real data, and the results interpreted against the decisions the measurement supports rather than against a fixed threshold. The course closes on improving a system that fails, which is usually a matter of procedure, training or fixturing rather than a new instrument.

What you will learn

- Assess resolution and discrimination against the tolerance being measured
- Conduct bias, linearity and stability studies
- Run and analyse a repeatability and reproducibility study
- Assess attribute measurement systems as well as variable ones
- Interpret results against the decisions the measurement supports
- Diagnose whether a failure is instrument, procedure, training or fixturing
- Improve a measurement system that has been shown incapable

Who should attend

- Quality engineers and laboratory quality staff
- Metrologists and calibration technicians
- Manufacturing and process engineers
- Inspection supervisors
- Continuous improvement practitioners

Course outline

- 01 Why a measurement system must be assessed before it is trusted
- 02 Resolution and discrimination
- 03 Bias and linearity studies
- 04 Stability over time
- 05 Repeatability and reproducibility studies
- 06 Attribute measurement system analysis
- 07 Interpreting results against the decision at stake
- 08 Improving a system that fails

Upcoming dates

Dates	Venue	Format	Fee per delegate
5 to 7 September 2026	Kigali, Rwanda	Classroom	R11,995
4 to 6 November 2026	Dar es Salaam, Tanzania	Classroom	R11,995
6 to 8 December 2026	Windhoek, Namibia	Classroom	R11,995
8 to 10 December 2026	Kampala, Uganda	Classroom	R11,995



Fees and how to register

Online **from R6,500** per delegate, classroom **from R11,995** per delegate, 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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