LABORATORY TRAINING

Applied Measurement Uncertainty for Testing and Calibration Laboratories

3 day course Classroom, online or in-house

Course overview

The step from understanding uncertainty to producing a defensible budget for a real method is where most laboratories struggle, and where assessors find the most findings. This course works through it method by method. Delegates build budgets for chemical, physical and calibration measurements, handle correlated inputs, drift and resolution, and account for the contributions that come from sampling and from the reference standards used. Type A evaluation is applied to real repeatability and reproducibility data. The course also addresses proficiency testing results as an independent check on a claimed uncertainty, and closes on the calibration and measurement capability statement that a laboratory has to defend under scope.

What you will learn

- Build a defensible uncertainty budget for a specific test or calibration method
- Handle correlated inputs, drift, resolution and reference standard contributions
- Apply Type A evaluation to real repeatability and reproducibility data
- Account for sampling contributions where they apply
- Use proficiency testing results to check a claimed uncertainty
- State and defend a calibration and measurement capability
- Review an existing budget critically and find what is missing from it

Who should attend

- Laboratory analysts, metrologists and technical signatories
- Calibration laboratory staff
- Quality and technical managers
- Method development and validation staff
- Assessors and internal auditors of laboratories

Course outline

01 From concept to a budget for a real method
02 Modelling the measurement and identifying inputs
03 Type A evaluation from repeatability and reproducibility data
04 Reference standards, certificates and traceability contributions
05 Drift, resolution and correlated inputs
06 Sampling as a contribution to uncertainty
07 Checking a budget against proficiency testing results
08 Calibration and measurement capability statements
09 Reviewing an existing budget critically

Upcoming dates

Dates	Venue	Format	Fee per delegate
11 to 13 September 2026	Dar es Salaam, Tanzania	Classroom	R11,995
22 to 24 November 2026	Maseru, Lesotho	Classroom	R11,995
4 to 6 December 2026	Windhoek, Namibia	Classroom	R11,995
6 to 8 December 2026	Dar es Salaam, Tanzania	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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