



## LABORATORY EXCELLENCE, SAFETY AND ACCREDITATION

# 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 |
|------------------------|------------------|-----------|------------------|
| 14 to 16 October 2026  | Accra, Ghana     | Classroom | USD 995          |
| 28 to 30 October 2026  | Online           | Online    | R6,500           |
| 13 to 15 January 2027  | Lagos, Nigeria   | Classroom | USD 995          |
| 17 to 19 February 2027 | Harare, Zimbabwe | 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](http://www.afrisciencegroup.com), email [info@afriScience.co.za](mailto:info@afriScience.co.za), or WhatsApp us on **+27 63 479 1136**.

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