



LABORATORY TRAINING

Introduction to Measurement Uncertainty

2 day course

Classroom, online or in-house

Course overview

Every measurement carries a doubt, and a result reported without it cannot support a decision about conformity. This course introduces the concept and the arithmetic. Delegates work through the difference between error and uncertainty, identifying the sources that contribute to a result, evaluating them by statistical means and by other means, and combining them into a standard and then an expanded uncertainty. The budget is built by hand on real measurements so delegates can see which contributions matter and which are noise. The course closes on reporting uncertainty in a way a customer and an assessor will both accept, and is the foundation for the applied course that follows it.

What you will learn

- Distinguish measurement error from measurement uncertainty
- Identify the sources contributing to the uncertainty of a result
- Evaluate contributions by statistical means and by other means
- Combine contributions into a standard and an expanded uncertainty
- Apply coverage factors and state a level of confidence
- Build a simple uncertainty budget for a real measurement
- Report uncertainty so a customer and an assessor both accept it

Who should attend

- Laboratory analysts and technicians
- Calibration technicians
- Quality managers in testing and calibration laboratories
- Metrologists new to uncertainty evaluation
- Anyone preparing for an ISO/IEC 17025 assessment

Course outline

- 01 Why a result without an uncertainty cannot support a decision
- 02 Error against uncertainty
- 03 Identifying sources of uncertainty in a measurement
- 04 Evaluation by statistical means
- 05 Evaluation by other means, including certificates and specifications
- 06 Combining contributions and expanded uncertainty
- 07 Building a budget on a real measurement
- 08 Reporting uncertainty on a certificate or report

Upcoming dates

Dates	Venue	Format	Fee per delegate
2 to 3 September 2026	Dar es Salaam, Tanzania	Classroom	R11,995
5 to 6 September 2026	Victoria, Seychelles	Classroom	R11,995
5 to 6 September 2026	Windhoek, Namibia	Classroom	R11,995
27 to 28 September 2026	Pretoria, South Africa	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**.

AfriScience Group | +27 61 536 6531 | info@afriscience.co.za | Pretoria, Gauteng, South Africa