



LABORATORY EXCELLENCE, SAFETY AND ACCREDITATION

Statistical Analysis of Laboratory Data

5 day course

Classroom, online or in-house

Course overview

This course covers the statistics a laboratory needs to develop a method, prove it works and keep it working. Delegates move from data distribution and the treatment of outliers through calibration and regression, including weighting and the limits of a linear range, into method validation parameters and how each is calculated. Measurement uncertainty is built from validation data rather than treated as a separate exercise, which is how it is done in practice. Statistical quality control and control charting follow. The course is taught entirely on real laboratory data and closes on interpreting proficiency testing performance against internal estimates of precision.

What you will learn

- Assess distribution and handle outliers defensibly
- Construct calibration curves including weighted and limited linear ranges
- Calculate validation parameters from experimental data
- Build measurement uncertainty from validation data
- Apply statistical quality control and control charting
- Compare methods and analysts statistically
- Interpret proficiency testing results against internal precision

Who should attend

- Analytical chemists and method development staff
- Laboratory quality managers
- Technical signatories
- Metrologists
- Senior laboratory analysts

Course outline

- 01 Distribution, outliers and data treatment
- 02 Calibration and regression
- 03 Weighting and the linear range
- 04 Validation parameters and their calculation
- 05 Uncertainty built from validation data
- 06 Statistical quality control and charting
- 07 Method and analyst comparison
- 08 Proficiency testing against internal precision

Upcoming dates

Dates	Venue	Format	Fee per delegate
2 to 6 November 2026	Lusaka, Zambia	Classroom	USD 1,325
28 December 2026 to 1 January 2027	Cape Town, South Africa	Classroom	R19,950
4 to 8 January 2027	Gaborone, Botswana	Classroom	R19,950
1 to 5 February 2027	Online	Online	R8,500



Fees and how to register

This 5 day course is **R8,500** per delegate online, **R19,950** in the classroom in South Africa, Botswana, Namibia, Lesotho and Eswatini, and **USD 1,325** 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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