

Measurement Uncertainty

One Training Day

What?

Learn about the approaches used to estimate uncertainties for tests and calibrations. Examine the underlying principles and concepts. Understand the requirements. Practice the methods.

Who?

For all laboratory staff who participate in the operation of the laboratory:

- Conducting testing or calibration
- Supporting laboratory activities
- Managing the laboratory quality system
- Training laboratory staff
- Managing the laboratory

How?

This day long Training Course examines the requirements and policies that underlie the need and delivery of uncertainties associated with tests and calibrations as defined by ISO/IEC 17025. Based on the system and technical requirements of that standard, including traceability of measurement. It contains easy-to-understand approaches to preparing and estimating all contributions to the overall uncertainties associated with accredited tests and calibrations.

The course contains extensive reference to the North American and international interpretation and implementation guidance documents which are used by accredited laboratories.

Syllabus

09:00-16:30

Introduction and Background

- Laboratory quality and uncertainty definitions
- Overview of measurement uncertainty
- Basic characteristics of uncertainty
- Traceability of measurement
- Calibration
- Using measurement uncertainty to establish calibration requirements

- - Break (15 minutes) - -

Basic Approaches in Estimating Uncertainty

- Data dispersion models
- Basic standard deviations
- Identifying the sources of uncertainty
- Overview of the process for estimating uncertainties of measurement

- - Lunch (1 hour) - -

Worked Examples

- - Break (15 minutes) - -

Worked Examples

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