



Training on Measurement Uncertainty Calculation

Measurement results are incomplete without a statement of uncertainty. This practical and comprehensive training program equips participants with the knowledge and skills to evaluate and report measurement uncertainty in accordance with international standards such as International Organization for Standardization (ISO) and the International Bureau of Weights and Measures (BIPM) Guide to the Expression of Uncertainty in Measurement (GUM).

Participants will gain hands-on experience in uncertainty estimation, budgeting, and reporting to meet accreditation requirements such as ISO/IEC 17025.

COURSE HIGHLIGHTS

Module 1 – Introduction to Metrology

Measurement principles • Traceability • Accuracy vs. precision

Module 2 – Fundamentals of Uncertainty

Concepts • Sources • Probability distributions

Module 3 – Uncertainty Evaluation

Type A & Type B • Standard deviation • Sensitivity coefficients

Module 4 – Combined & Expanded Uncertainty

Propagation law • Coverage factor (k) • Confidence levels

Module 5 – Uncertainty Budget

Budget structure • Practical examples • Spreadsheet exercises

Module 6 – Compliance & Reporting

ISO/IEC 17025 • Statement of conformity • Decision rules

Who Should Attend?

- Laboratory technicians and analysts
- Calibration engineers
- Quality managers
- ISO/IEC 17025 laboratory personnel
- Metrology professionals

Training Approach

- Instructor-led presentations
- Practical calculation exercises
- Real-life case studies
- Group discussions

What You will Gain?

- Understand fundamental metrology concepts and terminology
- Identify sources of measurement uncertainty
- Classify Type A and Type B uncertainties
- Calculate standard and expanded uncertainty
- Develop and interpret uncertainty budgets
- Apply the GUM method step-by-step
- Report uncertainty in compliance with ISO/IEC 17025

PARTICIPANTS WILL RECEIVE A CERTIFICATE OF COMPLETION IN MEASUREMENT UNCERTAINTY CALCULATION UPON SUCCESSFUL COMPLETION OF THE TRAINING.

2-Day Intensive Program



Training @Calibratech.onmicrosoft.com



019 - 7726441