











Calibration

CPI003

Calibration

Calibration is a key component in all systems where instruments are used to collect measurements for the purpose of assessing the reliability and capability of manufacturing operations, testing products against specification in laboratories, and determining compliance with environmental and regulatory requirements. The accuracy of such measurements is dependent on regular calibration of the measuring instruments. The calibration requirements in standards such as ISO 9001 must be complied with in the relevant industrial sectors.

Duration & Price

Duration: 1 day

Public Virtual Training: €395

Delivery mode: This programme is available In-Company, and via Public Virtual Training

Dates & Locations

Date Venue

12 May 2025 Virtual Book Date

In-Company Training

Please contact us for more information on our In-Company training options

What's covered?

- General introduction to calibration and its objectives
- Explanation of terminology used e.g. Precision, Accuracy, Traceability, Metrology, Measurement Uncertainty
- Selection of measurement tools, gages and instruments and interpretation of accuracy statements
- Dealing with non-conforming instruments
- Exercises calculating the Tolerance Accuracy Ratio TAR
- Exercises calculating the Tolerance Uncertainty Ratio TUR
- Interpretation of calibration certificates
- Examples of Instrument calibration
- Questions and Answers on most commonly used instruments
- Developing a calibration system interpretation, evaluation and traceability to calibration standards

There will be substantial time devoted to discussion on the management and administration of the calibration system, in particular on the procedures and systems that it is necessary to have in place to meet the requirements of the ISO 9001 standard and other quality system standards, and how to deal with quality audits on calibration. The first part of the course is devoted to technical issues to do with calibration, while the latter part of the course deals with management and administration issues. The course does not include actual demonstrations of instrument calibration.

Who should participate?

- Staff who perform calibration
- Staff responsible for the management and administration of the calibration system

What will I learn?

Participants achieve the following learning outcomes from the programme;

- Develop a calibration system procedures in accordance with ISO 9001, ISO/TS 16949 or FDA (device) requirements
- Demonstrate understanding of measuring instrument terminology such as bias, accuracy, precision, resolution, repeatability, traceability, uncertainty of measurement
- Choose the instruments that require inclusion in the calibration system
- Select appropriate calibration intervals

How do we train and support you?

Course Manual

Delegates will receive a very comprehensive course manual, which explains the terminology of calibration and includes information on the commonly used measuring instruments and the standards used to calibrate them. The manual also includes details of the calibration requirements of the international quality assurance standards, such as ISO 9001, and provides information on how to meet these requirements when developing a calibration system.

Tutors



Albert Plant View Profile



Grainne Heneghan View Profile

What Our Learners Say

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