

## National Measurement Institute



# LIQUID-IN-GLASS THERMOMETRY COURSE

This one-day course will provide calibration and quality control technicians with the skills required to calibrate liquid-in-glass thermometers in accordance with NATA and 17025 requirements.

The course covers essential knowledge of the theory and practice of temperature measurements using liquid-in-glass thermometers and application of the necessary precautions and corrections to achieve required measurement accuracy.

### **Course Objectives**

The course provides participants with knowledge and skills to:

- use the appropriate calibration procedure and perform periodic in-house checks
- identify various sources of error that affect temperature measurements
- report measurement and calibration results in accordance with industry standards, including legal requirements for traceability

#### **Course Outline**

The topics covered include:

- the basic principles of measurement and metrological traceability
- the principles of operation and construction of liquid-inglass thermometers
- different types of liquid-in-glass thermometers
- intrinsic problems: total versus partial immersion, temporary depression and secular change
- calibration of liquid-in-glass thermometers
- calibration workshop
- uncertainty of measurement estimation to ISO GUM¹
- reporting measurement results in accordance with NATA and ISO 17025 requirements
- use and general care of thermometers





#### **Course Details**

#### **Dates / Venue**

Available dates and locations can be found on our website.

#### Fee / Inclusions

Check the NMI website for the current pricing, which includes lunch and refreshments and a copy of the Monograph 9: Liquid-in-Glass Thermometry

#### Time

Face-to-face course will start at 9 am and will finish by 5 pm

#### **Related courses**

Course name	Duration
Temperature measurement	3-day
Humidity measurement	1-day
Testing temperature-controlled enclosures	1-day

#### **In-house Options**

Training may be carried out at your premises for groups of 6+ on a fee for service basis. Consultancies provide advice regarding specific measurement issues or training in advanced measurement techniques. More information is found on our website.

#### **Contact Us**

Phone (02) 8467 3796, or send an email to training@measurement.gov.au. For more information about the National Measurement Institute, visit our website.