



## DIMENSIONAL MEASUREMENT COURSE

This course presents a comprehensive overview of the fundamental principles in dimensional metrology and geometric dimensioning and tolerancing. It is suitable for people new to dimensional metrology and those seeking to improve their skills.

### Course Objectives

The course provides participants with knowledge and skills to:

- use traditional gauges and dimensional measuring equipment
- understand and apply the fundamental principles of 3D coordinate metrology
- understand and interpret geometric dimensioning and tolerancing symbols in order to perform appropriate measurements
- identify and minimise the various sources of error that can arise in dimensional metrology

### Course Outline

The topics covered include:

- the use and calibration of gauge blocks, micrometers, digital callipers and dial indicators
- geometric dimensioning and tolerancing concepts, rules and symbols, the interpretation of tolerance frames
- datums, coordinate systems, types of probes, probing strategies, getting the most from a CMM and non-contact (optical) measurements
- the effects of temperature, abbe error, cosine error and aliasing
- surface roughness and filtering



### Past attendees have said...

*“Our knowledge through this course has definitely improved and we have a better understanding of the fundamentals”*

*“I now understand our measurement capabilities and am clear on what can be measured with current equipment”*

## Course Details

### Dates / Venue

Available dates are on our [website](#).

### Fee / Inclusions

Check the NMI [website](#) for the current pricing.

Face-to-face classes include lunch and refreshments

### Time

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

### Related Courses

Course name	Duration	Dates
Introduction to Estimating Measurement Uncertainty	1-day	<a href="#">See NMI website</a>
Fundamentals of GD & T	3-day	<a href="#">See NMI website</a>

### 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](mailto:training@measurement.gov.au). For more information about the National Measurement Institute, visit our [website](#).