This two-day course presents a comprehensive overview of the fundamental principles in dimensional metrology and geometric dimensioning and tolerancing (GD&T). It is suitable for people new to dimensional metrology and those seeking to improve their skills.

**Course Objectives**

The workshop provides participants with the knowledge and skills to:

- use traditional gauges and dimensional measuring equipment
- understand and apply the fundamental principles of 3D coordinate metrology
- understand and interpret GD&T 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, dial indicators.
- GD&T concepts, rules and symbols, the interpretation of tolerance frames
- datums, coordinate systems, types of probes, probing strategies, getting the most from a CMM
- the effects of temperature, abbe error, cosine error, aliasing
- surface roughness, filtering
- estimating measurement uncertainty¹

¹Participants with limited experience in estimating measurement uncertainty would benefit from first attending the one-day Introduction to Estimating Measurement Uncertainty course.

*Past attendees have said…*

“We have acquired the necessary skills and competency for accreditation”

“I can now train my staff to avoid fundamental errors”
Course Details

Dates / Venue
Available dates are on our [website](https://www.measurement.gov.au) and the venue is NMI Melbourne, 1/153 Bertie Street, Port Melbourne, VIC 3207.

Fee / Inclusions
Check the NMI [website](https://www.measurement.gov.au) for the current pricing which includes lunch, refreshments and learning materials.

Time
The course will start at 9 am and will finish by 5 pm.

Related Courses

<table>
<thead>
<tr>
<th>Course name</th>
<th>Duration</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction to Estimating Measurement Uncertainty</td>
<td>1-day</td>
<td><a href="https://www.measurement.gov.au">See NMI website</a></td>
</tr>
<tr>
<td>Fundamentals of GD&amp;T</td>
<td>3-day</td>
<td><a href="https://www.measurement.gov.au">See NMI website</a></td>
</tr>
</tbody>
</table>

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 available on our [website](https://www.measurement.gov.au).

Contact Us
Phone (02) 8467 3796, or send an email to [training@measurement.gov.au](mailto:training@measurement.gov.au). For more information about NMI and to enrol, visit our website at [www.measurement.gov.au](http://www.measurement.gov.au).