

# Advanced Dimensional Metrology

## Course Objectives

To obtain an in-depth understanding of Dimensional Metrology. The course built on the Basic dimensional metrology course explaining the key principles and techniques used in dimensional metrology. The traceability from the SI unit, the metre to the industry measurement is explained together with terminology used in the field of metrology. These key techniques are essential when calculating uncertainties of the measuring systems. From simple comparator measurements to complex uncertainty calculations considering error models of e.g. universal measuring machine and laser-based measuring systems.

The course is focusing on the calibration and development of dimensional instruments; e.g. Gauge Blocks comparator, Universal measuring instruments, Screw Thread calibration, Laser systems etc.

## Course Content

The course consists of modules, covering:

- Dimensional metrology from the definition of the metre, terminology, units of measurements, applications, standards and specifications.
- The principles and techniques to consider in performing dimensional measurements.
- In-depth uncertainty calculations in calibrations and measuring systems.
- The use of Comparators, laser measuring systems, universal measuring machines, round and surface texture measurement, etc.

## Course Date

7 – 11 October 2024

## Duration

5 days

## Cost

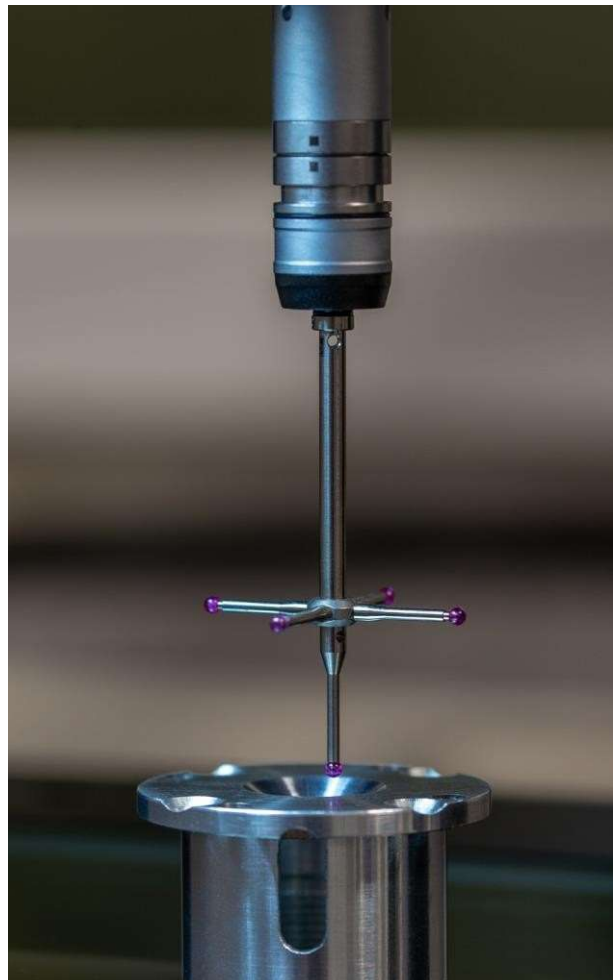
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## Who should attend?

The course is aimed at metrologists to develop their calibrations skills and understanding high accurate measuring machines and the key techniques and principles which effects these calibrations.

## Course Information

NMISA's courses are developed and narrated by experts in the field.



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