

# DIMENSIONAL METROLOGY – PART 2



## Aim of Course

This course is designed to build on Part 1 and is focused on the calibration of all devices which rely on the Dimensional Calibration laboratory for traceable measurements. A major goal of this course is to provide laboratory staff already employed in a SANAS Accredited laboratory with the necessary background and skills to enable them to gain a wider and more comprehensive background in the calibration and use of dimensional instruments. There is a strong emphasis on how to evaluate Uncertainties of Measurement in the Dimensional field.

## Pre-Requisites for attending this course

- Introduction to Measurement (strongly recommended)
- Method Validation (Calibration) (strongly recommended)
- Dimensional Metrology – Part 1
- Uncertainty of Measurement – GUM (Physical)

## Course Overview

- Traceability in Dimensional Metrology
- Error sources in dimensional metrology; thermal expansion, alignment, elastic compression, etc.
- Uncertainty Estimation
- Form measurements; Roundness and Surface Texture
- Laser Interferometers (depending on attendees)
- Procedures and Certificates

Practical Examples will cover the following:

- A: Calibration of Gauge blocks by comparison
- B: Calibration of a Micrometer
- C: Calibration of flatness of a Surface table
- C: Calibration of a Screw Plug gauge
- D: Calibration of an Angle block with a Sine bar

## Who should attend?

(Dimensional) Calibration technicians and metrologists

## Course Duration

5 Days

## Evaluation

Daily tests and the passing of a final examination are required in order to successfully complete this course.

The examination will be written approximately two weeks after the completion of the course.



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