



DIMENSIONAL METROLOGY – PART 1

Aim of Course

This course is designed to provide an introduction to the field of dimensional metrology. It covers the basic terms and definitions required by personnel involved in the use and calibration of various basic length measuring devices. It is recognized that many of these instruments are used in manufacturing environments such as the automotive industry and therefore the use of these devices is emphasized.

Those planning to attend this course are also encouraged to consider attending the Measurement System course before this one in order to maximize the learning experience.

Pre-Requisites for attending this course

- Introduction to Measurement (strongly recommended)

Course Overview

- Introduction to length measurements
- Standards
- Surface plates
- Choice of instrument
- Slip gauges and length bars
- Dial indicators
- Comparators
- Bench micrometers and fiducial indicator
- Roundness
- Surface finish
- Hardness
- Engineering drawings
- Plane geometry and trigonometry
- The sine bar
- Taper measurement
- Microscopes
- Optical projection
- Castings
- Gauge tolerance
- Gauging principles and design
- The determination of measuring accuracy

Who should attend?

(Dimensional) Calibration technicians, inspectors and quality control personnel

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.

January 2018

National Laboratory Association
South Africa
PO Box 298 • Persequor Park • 0020
1 De Havilland Crescent • Persequor
Technopark • Pretoria • South Africa
Tel: +27(0)12 349 1500 • Fax: +27(0)12 349 1501
www.nla.org.za