

COORDINATE MEASURING MACHINE (CMM) – LEVEL 1



Background

The National Laboratory Association – South Africa has secured the rights to present a European recognized training course in coordinate metrology using Co-ordinate Measuring Machines (CMM's). This course combines internet-based learning with practical hands-on training. The NLA-SA is very proud to be a full member of the CMTrain Organisation.

Aim of Course

The course is based on the European concept for training in coordinate metrology (CMTrain) using a CMM and is manufacturer as well as product independent.

In the level 1 course, you will learn the principles of length metrology as well as the basics of coordinate metrology specifically.

In addition, you will learn how to prepare a measurement task and how to reliably and accurately conduct these tasks using a CMM.

Pre-Requisites for attending this course

The participants should have basic knowledge to work with a computer. Basic knowledge in the handling of the Internet is advantageous but not strictly required.

Course Overview

- Measurands and units in coordinate metrology
- Location in plane
- Location in space
- Geometric features
- Geometric links
- Fundamentals of metrology and testing
- Basic elements of a CMM
- Preparation of measurements on CMM
- Stylus configuration and qualification
- Measurements with a CMM
- Evaluation of measurements and statistics
- Accuracy
- Basics - Quality Management

Who should attend?

Persons who want to enter the field of coordinate metrology or measurement technicians who have worked in this field for a long time and want to refresh and broaden their knowledge. The course provides a well-structured and manufacturer independent basis for achieving this objective.

The training is also recommended for workers who are involved in the production chain for example, the design team, job preparation or the production-line.

The course provides attendees with a better understanding of the relationship between development, design, manufacturing and measuring technique, especially in the field of coordinate metrology.

Course Methodology and Duration

The training is presented with a blended approach, combining both online material as well as a final hands-on workshop at the conclusion of the course.

Duration of the training: 8 weeks (~70 h) plus a two-day workshop and final examination

Kick-off-day - The training starts with a kick-off day where the course, concept and learning platform are introduced to the attendees.

e-Learning - During the course of 6 to 8 weeks the attendees learn in their own time over the Internet. The average time needed to complete the course is about 8 weeks. During this time, the attendees will be supported by the facilitator.

Workshop - After the e-learning phase a two-day practical workshop is conducted. At the end of the workshop the participants write an exam and on passing a certificate is issued.

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