

# Force Metrology

## Course Objectives

At the end of the course, attendees should:

- Have a good understanding of the fundamentals of force metrology principles and force measurements
- Be able to analyse force calibration data and build uncertainty budget
- Be familiar with various force calibration methods and force generating and measuring instrumentation
- Understand verification techniques and method validation for quality assurance

## Course Content

The course will cover the following topics:

- Fundamentals of force measurements.
- Strain gauge theory.
- Uncertainty of force of Measurements.
- Calibration of force transducers.
- Calibration of readouts for force measurements.
- Verification of force machines.
- Force calibration methods.
- Force procedure development and method validation.
- Practical work.

## Course Date

11-15 September 2023

## Duration

5 days

## Cost

R10 000

## Who should attend?

The course is aimed at:

- Metrologists and quality coordinators to assist them to develop their skills and knowledge of force measurement principles.
- Operators and technicians, who may be responsible for force machines/equipment but require training in the operation and maintenance.

## Course Information

NMISA's courses are developed and presented by experts in the field. This course is designed to offer the attendees a comprehensive introduction to Force metrology theoretical and practical aspects. The format of the training is in person at NMISA training facilities for a duration of 5 days. All the necessary materials for the training will be provided. Attendees will be required to only bring their own calculator.

