

ELECTRICAL (DCLF) METROLOGY – Part 1

Aim of course

This course forms the basic building block for Electrical Metrologists and for personnel who wish to gain a fundamental knowledge and background in making traceable measurements in the electrical field.

This course serves as an introduction to the fundamentals of Electrical Metrology, which is the science of accurate measurements in the following fields: DC Voltage, Resistance, DC Current, AC Voltage, AC Current, Capacitance, Inductance, Uncertainty of Measurement and general metrology fundamentals.

This course introduces the various sensors used in industry, measurement techniques as well as their calibrations against traceable standards.

Pre-Requisites for attending this course

- Measurement System (Part 1 & 2)
- Uncertainty of Measurement – Physical Measurements

Course Overview

AC and DC Voltage – Theory and Practical

Resistance – Theory and Practical

AC and DC Current – Theory and Practical

Capacitance and Inductance – Theory and Practical

Electrical temperature simulation – Theory and Practical

Measurement Uncertainty

At the end of the week, students will be able to calibrate Analogue and Digital Multi-meters, Power Supplies, Decade Resistors, Capacitors and Inductors. They will also be capable of understanding two – and four-terminal resistance, two- and three-terminal capacitance and how to use multifunction calibrators.

Course requirements

Attendees are expected to have an understanding of the basics of electricity, e.g. Voltage, Current, Ohm's Law etc

Who should attend

Calibration technicians, metrologists and physical testing laboratory personnel.

Course Duration

5 Days

Evaluation

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