

CT010

TAILORED METROLOGY COURSES

NML offers the possibility of taking a tailored course containing short training modules on specific topics, at a foundation and intermediate level. Such modules are ideal as refresher courses, for those already working in the field who wish to extend their knowledge to other measurement areas, or for those requiring training on a specific measurement topic.

Intending participants may tailor the course to their requirements by indicating the training modules of interest to them. NML will then arrange the course for a suitable date, normally within one month of the request. Training can be provided at the NML or in-company. In the latter case, the practically based modules will require access to the company's own laboratories facilities. Participants will receive a documentation pack for each training module. The courses are normally restricted to six persons or less. It is intended to add further modules in the near future.

CT010 TAILORED METROLOGY COURSES CONT.

FOUNDATION LEVEL

Appropriate for beginners or as a refresher for those working in the field.

MODULE	SUMMARY	DURATION
1	Introduction to the concepts of measurement, measurement uncertainty and test uncertainty ratio	1 hr
2	Calibration and traceability	1 hr
3	Interpreting Instrument Accuracy Specifications	1 hr
4	Calibration Certificates and Re-calibration Intervals	1 hr

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INTERMEDIATE LEVEL – INTRODUCTORY MODULES

Participants should be familiar with the foundation level material. These modules are recommended as an introduction for each measurement field.

MODULE	FIELD	SUMMARY	DURATION
5	Mass	Units, traceability and standards in the field of mass measurement	.5 hr
6	Temp	Units, traceability and temperature scales	1 hr
7	Length	Units, traceability and standards in the field of length measurement	2 hr
8	Elect	Electrical quantities, their ranges, units and traceability	1 hr

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INTERMEDIATE LEVEL – PRACTICAL MODULES

Participants should be familiar with the foundation level material. These modules are practically based modules and include laboratory work.

MODULE	FIELD	SUMMARY	DURATION
9	Mass	Specification, use and care of mass standards (standard weights)	1.5 hr
10	Mass	Calibration of Balances	1.5 hr
11	Temp	Specification, use and calibration of thermocouples	1.5 hr
12	Temp	Specification, use and calibration of Platinum Resistance Thermometers	1.5 hr
13	Temp	Specification, use and calibration of Liquid-in-glass thermometers	1.5 hr
14	Temp	Media for temperature calibration (Liquid baths, Dry Block Calibrators, Ovens)	1.5 hr
15	Length	Calibration of mechanical hand tools (micrometers, vernier callipers, dial gauges)	2 hr
16	Length	Specification, use and calibration of gauge blocks (end standards)	2 hr

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DATES:

On Demand

DURATION:

1 day

VENUE:

NML or in-company
by arrangement

FEE:

Costs are calculated on an hourly rate. Please contact NML for further details. In the case of in-company training, travel and subsistence costs will also be incurred.

MODULE	FIELD	SUMMARY	DURATION
17	Elect	Calibration of handheld digital multimeters	1.5 hr
18	Elect	Resistance - the calibration of ohmmeters and decade resistance boxes	1.5 hr
19	Elect	DC voltage and current - the calibration of voltage and current sources	1.5 hr
20	Elect	AC Current and Voltage - definitions, sources and measuring equipment	1.5 hr
21	Elect	Use and calibration of high voltage probes and current clamp meters	1.5 hr
22	Elect / Temp	Calibration of temperature indicators by electrical simulation	1.5 hr