



Calibration & Metrology Know-how for Testing Laboratory Personnel According to ISO/IEC 17025:2017

20 October 2026 (1-day)

Organized by

**Hong Kong Association for
Testing, Inspection and Certification Ltd.**

Website: www.hktic.org
Email: info@hktic.org
Tel.: 3652 7515

This one-day course provides training for calibration and metrology know-how to participants who work in ISO/IEC 17025 HOKLAS accredited testing laboratories. The trainer was the ex-HOKLAS Senior Accreditation Officer

Objective

This one-day course focuses on the knowledge of calibration and metrology know-how for the testing laboratory personnel on physical measurements. It provides participants fundamental knowledge and guidelines on what is calibration and metrology involved in testing and how the calibration and metrology for different testing conditions. On completion of the course, participants shall have equipped adequate knowledge to develop the calibration for the in-house testing and/or for the accreditation of the external calibrations for the physical tests.

Outline

A. Basic knowledge of calibration and metrology

- S.I. Units of international physical measurements
- Measurement traceability to the national standards
- ISO/IEC 17025:2017
- HOKLAS calibration laboratory accreditation requirements
- HOKLAS Supplementary Criteria No. 2 – Calibration requirements
- Reference measurement standards

B. Physical calibrations

- Dimensional – length and volume
- Flatness, perpendicularity & parallelism
- Caliper and micrometer
- Mass and force
- Electronic balance
- Pressure for gas, water and oil gauge
- Construction equipment
- Temperature – LIGT, electronic and thermocouple
- Oven and water bath
- Electrical – voltage, current, resistance and capacitance
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C. Measurement uncertainty based on ISO GUM Guide

- Definitions

- Fundamentals of the concept of MU
- Steps in evaluation of measurement uncertainty

D. Sources of uncertainty

- Sampling
- Environment
- Operator
- Equipment
- Repeatability
- Reproducibility
- Precision and bias
- Accuracy and uncertainty
- Error and correction

E. Step by step evaluation

- Modeling of MU
- Standard uncertainty
- Sensitivity coefficient
- Combined uncertainty
- Degree of freedom, effective degree of freedom
- Expanded uncertainty
- 95% confidence limit
- K factor where $K=2$

F. Examples and workshops on

- Calibration of balance, caliper and micrometer
- Physical and electrical measurements

Who Should Attend

This course is designed for all laboratory staff who are actively involved in calibration as well as in the quality aspects of the laboratory management including managers, supervisors, approved signatories, authorized representatives, etc.

Date

20 October 2026 (1-day)

Time

9:30am to 5:00pm

Venue

To be confirmed.

Instructors

Ir Dr. C.K. Cheung, *BSc(1st Class Honours), MSc(Imperial), DIC, MEng(HKU), DBA, MHKIE, Registered Professional Engineer Previously Senior Engineer in CEDD and Senior Accreditation Officer in HKAS HKICA Founding President ANAB, GAC, HKAS & PJLA Assessor International ISO Trainer*

No. of Participants

14 persons on a first-come-first-served basis (Priority will be given to members.)

Language

Chinese (with English course material)

Registration

1. Complete the registration form
2. Prepare a crossed cheque payable to "Hong Kong Association for Testing, Inspection and Certification Ltd." for the fee.
3. Send the completed registration form and signed cheque to the following address:

HKTIC Secretariat
1/F., CMA Building,
64-66 Connaught Road Central,
Hong Kong.

Fee

HK\$ 1,900 for HKTIC members
HK\$ 2,300 for non-members

This fee covers course notes.
(Fees will be refunded for unsuccessful registration or course cancellation).

Deadline

13 October 2026

Assessment

There will be an assessment in the form of a written examination at the end of each module. Those that pass the exam will receive a '**Certificate of Achievement**' from HKTIC. Others will receive a '**Certificate of Completion**'.

Enquiry

Email: info@hktic.org
Tel.: 3652 7515

HKTIC Organized

Calibration & Metrology Know-how for Testing Laboratory Personnel
According to ISO/IEC 17025:2017

Registration Form

Participants: Suitable for operations manager, professional and technical staff, quality manager, internal auditor, (HKAS) authorized representative, approved signatory and operator

Course Content: Please refer to the detail course outline

Date and Time: **20 October 2026**, 9:30am – 5:00pm

Venue: To be announced 2-3 days before the training via email

Participant: Dr. / Ir. / Mr. / Mrs. / Ms. / Miss _____
Name to be shown on the certificate **Full name in block letters, surname first**

Organization: _____

Position / Job Title: _____

Mobile No. / Phone: _____
Participant **Admin., HR, etc., if applicable**

Email: _____
Participant **Admin., HR, etc., if applicable**

Fee (HK\$): Please tick one HKTIC member \$1,900 ☐ Others \$2,300 ☐

Certificate (HK\$): Please tick one Physical certificate \$10 ☐ E-certificate free ☐

* CTT / CTP members could enjoy a \$200 discount.*

Payment: _____
Cheque No. **Bank** **Amount**

Receipt Recipient: Please tick one Organization ☐ Participant ☐

Mailing address: _____
 (for receiving the certificate and receipt) _____

For registration, please

- 1) email the completed registration form to info@hktic.org ;
- 2) prepare a signed crossed cheque payable to "Hong Kong Association for Testing, Inspection and Certification Ltd."; and
- 3) post the completed registration form and signed crossed cheque **on or before 9 October 2026** to HKTIC Secretariat, 1/F., CMA Building, 64-66 Connaught Road Central, Hong Kong.

For enquiry, please contact HKTIC Secretariat

Email: info@hktic.org

Tel.: (852) 3652 7515