

**STQC DIRECTORATE**  
**ELECTRONICS TEST AND DEVELOPMENT CENTRE**  
(CENTRE FOR ELECTRONIC TEST ENGINEERING)



**Government of India**  
**Ministry of Communications and Information Technology, DeitY,**

PMC Building, 3<sup>rd</sup> & 4<sup>th</sup> floor, Behind Swapnashilpa, Survey No. 19/2,

Kothrud, Pune 4110 38

Email: [cetepu@stqc.gov.in](mailto:cetepu@stqc.gov.in), 9860991716

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**A Course on**  
**CALIBRATION TECHNIQUES FOR ELECTRICAL, TEMPERATURE &**  
**PRESSURE PARAMETERS (3 Days)**

**SCOPE:**

Calibration plays a vital role for establishing valid traceability for both products and the processes. Indian Industries opting for ISO 9000 accreditation are required to establish a Quality System. Quality System requirement and also the demand for export, have made “CALIBRATION” a very important aspect to the Industries.

This Course aims at developing skilled technicians/engineers who will be responsible for calibration and establishing traceability and up gradation of the same. On completion of this course, the trainees will be able to handle better day-to-day calibration jobs of Electrical parameters. They will also be acquiring knowledge for establishing calibration set-up both in terms of Hardware and Documentation. Higher stress will be laid on practical skill development with requisite theoretical backup.

**The key topics are:**

- Basic concepts of Calibration Measurement units & related standards & its Traceability.
- Metrology terms & definitions (Accuracy Stability, Sensitivity, Resolution, Precision etc.)
- Errors & Uncertainty-statistical approach Type A & Type B Uncertainty.
- DC /AC Calibration Techniques.
- Calibration of: Ammeters, Voltmeters, Digital Meters, Oscilloscopes.
- Basics of Transducers in Instrumentation Systems.
- Measurement & Calibration by Temperature sensors like Thermocouple,
- RTDS, NTCS & Rational Pyrometer.
- Pressure Transducers & their Calibration.

**WHO SHOULD ATTEND:**

Technicians / Supervisors / Engineers involved in Testing, Measurement / Calibration activities.

**COURSE FEE:**

**Rs. 8000/- + 18% GST, deposit in “BHARAT KOSH” in advance and send the scanned copy of receipt for confirmation.** ‘NO deduction of Tax at Source (TDS) is to be made from any sums payable. ETDC, Pune is exempted from TDS (IT) under section 196 of IT Act being a purely central government organisation.’

**VENUE:** CETE PMC Building, 3<sup>rd</sup> & 4<sup>th</sup> floor, Swapnashilpa Premises, Kothrud, Pune – 411 038

**COURSE TIMINGS:** 10.00 a.m. to 5.00 p.m. each day

**NOTE:** Please bring scientific calculator for exercise.

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**Amarsingh Bhaisare 9860991716**