

ABOUT DEE

The Department of Energy & Environment is known for its research dedicated in the field of CO₂ sequestration using microalgae, Effluent treatment using solar energy, bio energy, phyco-remediation, Computational fluid dynamics, wind energy, Solar - Thermal/ Electrical system improvements, energy efficient building design, and energy & environmental audit. The department is committed to convert its research into a technology transfer, real-time solution to the society and industry where it meets out its ultimate objective.

CALIBRATION


Any operational parameter which cannot be measured accurately, cannot be monitored and controlled. Calibration is the comparison of measured parameter of an instrument to a known standard. Calibration typically requires a Standard that has at least 10 times the accuracy of the instrument under test and it decreases as the accuracy of the instrument level increases. Proper calibration involves the use of National Institute of Standard and Technology (NIST) – traceable standard – one that has paperwork showing it compares correctly to a chain of standards going back to a master standard maintained by the National Institute of Standards and Technology.

Hidden cost and risks associated with the uncalibrated measuring device could be much higher than the cost of calibration. Therefore, it is always better to use the measuring instruments calibrated at regular intervals. Hence regular calibration of industrial instruments used for measuring pressure, temperature, voltage and current saves energy besides maintaining the quality of the product. Calibration facilities are established in DEE with a vision to provide the necessary Calibration services to the industries and academic institutions.


OBJECTIVE OF THE COURSE

- Provides a detailed description of importance of calibration.
- Participants able to understand the **error and uncertainty analysis** and its interpretation.
- Provides Hands-on training on electrical, pressure and temperature calibrator.


PRESSURE CALIBRATOR

Scope of Pressure Calibrator			
	Quantity Measured / Instrument	Range	*Calibration Measurement Capability (±)
	Pressure- (Dial, Digital Pressure Gauges/ Indicators)	4 to 35 kg/cm ² 35 to 700 kg/cm ²	0.15% rdg 0.03% rdg
	Pressure-Pneumatic (Dial, Digital Pressure Gauges/ Indicators)	2 bar to 20 bar 0 bar to -0.8 bar	0.1% rdg 0.82% rdg.

TEMPERATURE CALIBRATOR

Scope of Temperature Calibrator			
	Quantity Measured / Instrument	Range	*Calibration Measurement Capability (±)
	Temperature Sensor (RTD's and Thermocouples)	33°C to 600°C	±0.3°C
	Temperature Sensor (Thermocouples)	600°C to 1000°C	±1.8°C
		1000°C to 1200°C	±2.8°C
	Ovens and Furnace	30°C to 125°C	±1.8°C

ELECTRICAL CALIBRATOR

	DC Voltage AC Voltage @ 50Hz, 10kHz, 50kHz and 100kHz DC Current, AC Current@50Hz, 1kHz and 5kHz DC Resistance, Frequency, Capacitance Temperature Simulation – RTD, Thermocouple (J Type and K Type)
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TARGET PARTICIPANTS

Industrial personnel, Academician, Scientists, Research scholar and Interested persons.

IMPORTANT DATES

Last Date for Registration – **21.06.2019**, Confirmation of participants – **22.06.2019**
(Selection will be based on first come first served basis and experience)

HOW TO APPLY

Applicants are requested to send the details of Name, Designation and Address to cldeethebest@gmail.com for confirming their registration.

COURSE FEE

Students from academic institutions = Rs.250 +18 % Service tax

Students from NIT Trichy = Rs.150 +18 % Service tax (only Research Scholars)

Faculty from academic institutions = Rs.500 +18 % Service tax

Participants from small scale industries = Rs.150 + 18 % Service tax

Participants from industries (Govt. Sector) = Rs. 1000 + 18 % Service tax

The Demand draft should be drawn in favor of **“The Director, NIT Trichy”**

Payable at SBI NIT Trichy. (IFSC Code SBIN0001617)

ACCOMMODATION

Accommodation will be arranged inside the campus on first come first served basis and on availability.

ORGANIZING BY,

HOD, Faculty & Research Scholars,

DEE, National Institute of Technology,

Tiruchirappalli-620015

Venue – DEE, NIT Trichy.

CONTACT DETAILS

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Mr. Dinesh Kumar S (+91 9566346567)



NATIONAL INSTITUTE OF TECHNOLOGY

TIRUCHIRAPPALLI –15.

Calibration Laboratory

Department of Energy & Environment

(CL- DEE)



CC-2553

One-day Self-sponsored workshop on

Necessity of Calibration for Research and Industry Sector

25st June 2019

Organized By



Department of Energy & Environment

NIT, Trichy