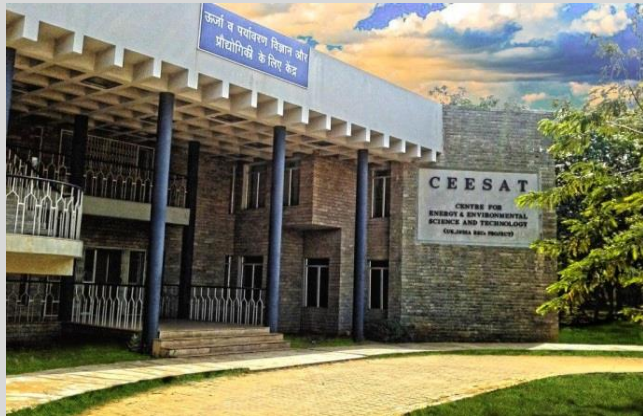


## About NIT Tiruchirappalli

The National Institute of Technology (Formerly known as Regional Engineering College) Tiruchirappalli, situated in the heart of Tamil Nadu on the bank of river Cauvery, was started as a joint and co-operative venture of the Government of India and the Government of Tamil Nadu in 1964 with a view to catering needs of man-power in technology for the country. The institute aims to provide valuable resources for industry and society through excellence in technical education and research.

## About DEE



Centre for Energy & Environmental Science and Technology (CEESAT), established in 1997 is among the premier research centre's engaged in exploring the various energy opportunities in the country and is now transformed to Department of Energy & Environment. The department aims in providing energy efficient technology to industry as well as to the domestic sector. Emphasis is given to the identification of appropriate technologies for the efficient production, distribution and use of energy.

## Calibration

Any operational parameter which cannot be measured accurately cannot be monitored and controlled.

Calibration, in its purest sense, 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 level increases. Proper calibration involves use of a 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.

An error of 0.5 bar in pressure measurement of an air compressor (6-8bar) causes about 5% energy loss and an error of 1°C in temperature measurement of an evaporator causes energy loss up to 3%.

Hence regular calibration of industrial instruments used for measurements such as pressure, temperature, voltage and current leads to energy savings besides maintaining the quality of the product.

Calibration facilities are established in DEE with a vision to provide necessary calibration service to industries.



## Electrical Calibrator:

**DC Voltage:** 0 to  $\pm 1020\text{V}$  (min.):  $\pm 15\text{ppm}$  of Setting or better

**DC Current:** 0 to  $\pm 20.5\text{A}$  (min.) (Continuous):  $\pm 100\text{ppm}$  of Setting or better

**AC Voltage:** 0-1020V:10Hz to 500kHz (best) $\pm 150\text{ppm}$  of Setting or better

**AC Current:** 29 $\mu\text{A}$  to 20.5A (min.) (continuous): 10Hz to 30 kHz (best),  $\pm 0.1\%$  of Setting or better

**Capacitance:** 220pF to 110mF (min.) :  $\pm 0.75\%$  of Setting or better

**Power DC:** Voltage-33mV to 1000 V; Current- up to 20A; uncertainty-  $\pm 0.1\%$

**Power AC:** Voltage range- 33mV to 1000 V; Current Range- upto 20A Uncertainty-  $\pm 0.1\%$  of output at 20A

**Frequency:** 0.01Hz to 1 MHz (min) Best Uncertainty:  $\pm 25\text{ppm}$  of setting or better



## Temperature Calibrator:

**Temperature Range (Source 1):** 33°C to 650°C with stability of  $\pm 0.05^\circ\text{C}$  at 650°C

**Temperature Range (Source 2):** 300 °C to 1200 °C with stability of  $\pm 0.1^\circ\text{C}$  at 1200°C

## Pressure Calibrator:

**Pressure Range 1:** LP Range: 1 to 35 Kg/cm<sup>2</sup>  
HP Range: 20 to 700 Kg/cm<sup>2</sup> with accuracy  $\pm 0.008\%$  of reading

**Pressure Range 2:** -850 mbar to 20 bar with accuracy 0.025% full span

## Program Details

This workshop on “Necessity of Calibration for Industries” will focus on the requirement of calibration of instruments being used in industries.

Sessions will be handled by experts from M/S Fluke and NABL accredited calibration laboratories.

Theoretical sessions will be followed by demonstration of the instruments.

## Date to Remember

**Deadline for submitting advance copy through mail: 24<sup>th</sup> SEPTEMBER 2014**

## Eligibility

Persons from industries are eligible. Teachers and research scholars are also eligible.

## How to Register

Candidates have to register by sending an email to:

[dinesh.tnau@gmail.com](mailto:dinesh.tnau@gmail.com)

[dineshkumar@nitt.edu](mailto:dineshkumar@nitt.edu)

Contact No. : +919566346567

## Registration Fee

Rs. 100 (for Faculty and Research scholars)

Rs. 200 (for Industrial persons)

Registration fees can be transferred to the following account:

Bank Name & Branch: SBI, NIT Trichy

A/C No.: 10023882946

IFS Code: SBIN0001617

MICR Code: 620002009

## Organizing Committee

HOD, Faculty & Research Scholars,  
DEE, National Institute of Technology,  
Tiruchirappalli-620015

## REGISTRATION FORM

A one day workshop on  
**NECESSITY OF CALIBRATION FOR INDUSTRIES**

**26<sup>th</sup> SEPTEMBER, 2014**

Name:

Qualification:

Designation:

Department:

Organization:

Phone:

Email:

## DECLARATION BY THE APPLICANT

The above mentioned information is true to the best of my knowledge and belief. I shall attend the course for the entire duration.

Signature of Applicant

Head of the Organization / Institute

# A one day workshop on **NECESSITY OF CALIBRATION FOR INDUSTRIES**

**26<sup>th</sup> SEPTEMBER 2014**



**Sponsored by TEQIP**

**Organized By  
Department of Energy & Environment  
(DEE)  
National Institute of Technology  
Tiruchirappalli – 620015**