

*A Three-day International Training Course*  
on  
**AMBIENT AIR AND STACK EMISSION:  
MONITORING, ANALYSIS, DATA INTERPRETATION  
AND MANAGEMENT**

**25 – 27 February, 2019**  
**Venue : Dubai**



*Organized by :*

***Ecotech Instruments***  
***Centre for Calibration Services***

***K- 127, UPSIDC, Site-V, Kasna, Greater Noida- 201310, (UP) India***

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## Technology at its best



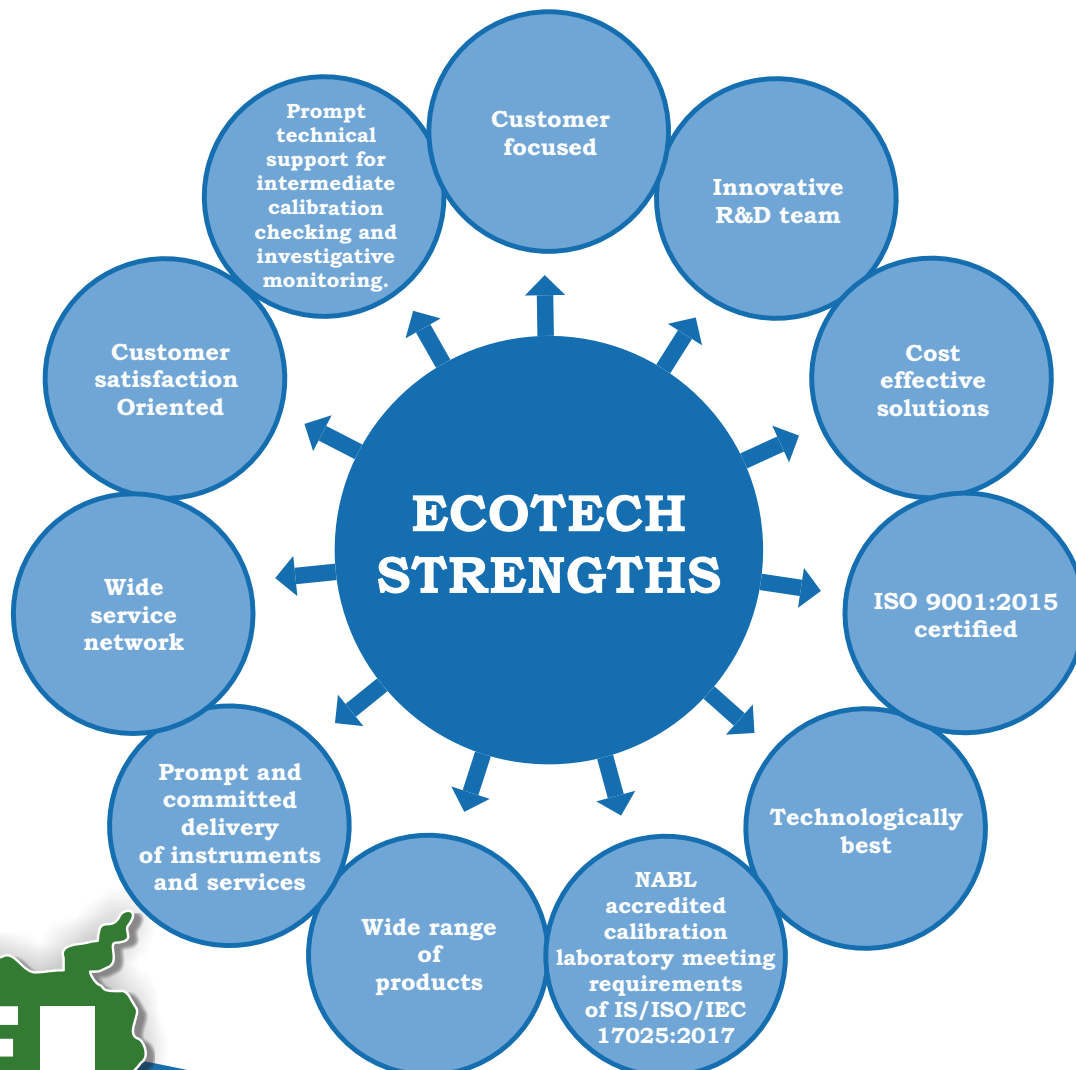
### **Providing quality Air Pollution Monitoring Instruments and its support services to Industries, Consultants, Institutes, R&D organizations and Regulators.**

Ecotech has been established in year 2009 by Dr. Rajendra Prasad, who has a wide domain of expertise in the field of Air Pollution monitoring and management. Ecotech Instruments is now one of the leading company in the designing, manufacturing and servicing of air pollution monitoring instruments in India. His dedicated honest work has taken the company to astounding heights. Ecotech Instruments is committed to excellence in every aspect of business such as engineering, manufacturing and calibration.

Ecotech's unmatched dedication to total quality and after sales support ensures that Ecotech Instruments are delivered for best reliable results. Ecotech accommodates a team of experienced staff, who efficiently undertaken every task related to the production, research & development, quality control, marketing & after sales services. Their unified efforts have enabled Ecotech in creating a celebrated niche in the wide-spread marketplace. Ecotech's management system is ISO 9001-2015 certified and calibration services are accredited by NABL as per IS/ISO/IEC 17025:2017. NABL has also recognized the knowledge and experience of Dr. Rajendra Prasad by appointing him the Technical Assessor for audits of Testing and Calibration Laboratories as per 17025:2017.

**Ecotech Instruments a combination of knowledge, experience and dedication**

### **ECOTECH STRENGTHS**



# AMBIENT AIR AND STACK EMISSION: MONITORING ANALYSIS, DATA INTERPRETATION AND MANAGEMENT



The training course is intended to develop confidence and competence among various groups who are responsible for Ambient Air and Source Emission Monitoring. Air pollution monitoring is an important scientific and regulatory task which requires trained and skilled manpower. Any error in monitoring which involves, sampling, scientific calculations and interpretation of data may lead to erroneous decision making.

This training course is specifically designed for middle-level field and laboratory staff (technicians, scientists and engineers) involved with ambient air and stack emission monitoring. The course, in addition to class room learning of fundamentals, has a strong component on hands-on operation and maintenance of instruments used for ambient air and stack monitoring. The faculty for the course is drawn from experienced persons from reputed institutions. The focus is also on following the standard operating procedures laid down by various regulatory agencies including USEPA.

A strong component in the training is to clear the doubts and concepts that should ensure that trainees are confident about the procedure and can interpret the results and can prepare technical reports. The trainees will be exposed to the state-of-the-art instruments used internationally.

Ecotech, the organizing company under the leadership of Dr. Rajendra Prasad, represents a group of professionals committed to the cause of protection of environment and has pioneered the development of instruments for air pollution and meteorological monitoring in India. Ecotech team has already organized similar courses all over India and has trained over thousand professionals.

Ecotech is a regular member in Bureau of Indian Standard (BIS) committees and also on the panel of National Accreditation Board for Testing and Calibration Laboratories (NABL) as technical assessors. Ecotech is putting efforts in such trainings by sharing knowledge and experience with participants so that reliable data can be generated. To specifically impart the training to the professionals from UAE, Oman, and Bahrain, Ecotech is organizing this three-day training course at Dubai for benefit of air pollution monitoring professionals working in this field.

Besides in-house Ecotech professionals, a few requisite experts from regulatory agencies, universities and other academic institutions and consultants, will give the classroom lectures and hands-on training.





# Outlines

## Course Contents

### 1. INTRODUCTION

- Basics of Air Pollution
- Sources of Air Pollution
- Definition of terms, units

### 2. Air Quality Measurement Instrumentation required to meet air quality standard.

- Sampling for PM<sub>2.5</sub> & PM<sub>10</sub>
- Sampling techniques and analysis of Gaseous Pollutants SO<sub>2</sub>, NO<sub>x</sub>, NH<sub>3</sub>, and O<sub>3</sub>
- Sampling Techniques and Analysis of Benzene and CO.

### 3. Stack Emission Monitoring for Reliable Measurements of SO<sub>2</sub>, NO<sub>x</sub>, CO and Particulate Matter

### 4. Laboratory Preparation for reliable sampling and analysis

- Laboratory Preparation & Gravimetric Analysis of filters for PM<sub>2.5</sub> & PM<sub>10</sub> particulates
- Latest analysis Methods of SO<sub>2</sub>, NH<sub>3</sub>, O<sub>3</sub>, NO<sub>x</sub> and Benzene

### 5. Meteorology

- Basics of Meteorology
- Windrose Diagram
- Mathematical Modelling to predict incremental concentration

### 6. Quality Assurance and Calibration

- Precautions required during sampling and analysis
- Calibration of air pollution monitoring instruments to meet requirement of intermediate checks.
- Accreditation tips for Laboratories to meet requirement of ISO 17025:2017
- Uncertainty Calculation

### 7. Data Presentation

- Data Interpretation and Report Preparation.

### 8. Recent Development in Air Pollution Monitoring Instrumentation to meet the new standard regulatory requirements.



## Eligibility and Course Fee



Middle-level technicians, scientists and engineers working with accredited independent laboratories and in industries who have been designated for tasks related to air pollution monitoring in their respective organizations shall be eligible to participate in this course. The maximum number of participants is 30 on first come first basis. Please send your nominations at the earliest.

The fee for this 3-day course is Dirham 2000 which includes: training material (lectures and best practices notes), working lunch, morning and evening tea.

A rebate of 200 Dirham per participant shall be applicable to organization who own Ecotech products and obtaining technical services from centre for calibration services. services. Organizations deputing more than two participants shall be eligible for additional rebate of 200 Dirhams per participant.

### Key Resource Professionals

#### **Dr. Bhaskar Kura**

PhD, P.E.

**Professor Civil & Environmental Engg.**

**University of New Orleans**

New Orleans, LA 70148, USA

#### **Dr. Mukesh Sharma**

PhD Civil & Environmental Engg.

**Professor**

**Centre for Environmental Science and Engg.**

Indian Institute of Technology Kanpur

Kanpur – 208016 (UP) INDIA

#### **Dr. Rajendra Prasad**

PhD Chemical Engg.

**IIT Roorkee**

**CEO, Ecotech Instruments**

Greater Noida (UP) INDIA

#### **Dr. Pramod Kumar Mittal**

PhD Chemistry

**Ex. Faculty & Consultant**

**Sultan Qaboos University,**

Muscat, Oman

#### **Dr. Lokendra Upadhyaya**

PhD Environmental Chemistry

**Head of Calibration Lab**

**Ecotech Centre for Calibration Services**

Greater Noida (Uttar Pradesh) India

#### **Mr. Smarath**

B Tech Mechanical Engg.

**Technical Manager Calibration Lab**

**Ecotech Centre for Calibration Services**

Greater Noida (UP) India

Contact:

#### **Dr. Pramod Kumar Mittal**

Program Coordinator

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## Products and Services



### **Air Pollution Monitoring Instruments :**

Ecotech is an expert in air pollution monitoring and management and with this expertise, Ecotech manufactures and supply full range of air pollution monitoring instruments viz. ambient air monitoring instruments, stack emission monitoring instruments, meteorological instruments, Indoor and work zone monitoring instruments and calibrators.

### **Calibration :**

Ecotech offers calibration of air pollution monitoring instruments under NABL scope through its division Ecotech Centre for Calibration Services which has been accredited by NABL in the field of Fluid Flow, Thermal, Mechanical and Electro-technical Calibration since 2011.



### **Training :**

Ecotech regularly organize comprehensive and hands on training programs at its training centre or at customer place to build competence and confidence among the professionals engaged in the field of air pollution monitoring. In these programs, participants are trained for carrying out reliable air pollution monitoring as per standard monitoring protocol.

- Investigative Air Pollution Monitoring, Dispersion Modelling, Sodar studies and LDAR Monitoring Programmes for refineries are undertaken on regular basis.
- Performance evaluation of ESP and other Air Pollution Control Systems.
- Annual Maintenance Contract for air pollution monitoring instruments.
- Ecotech has also contributed in preparation of air pollution monitoring test methods as a member of BIS committee.



## Course Conducted Photographs



**SOME PHOTOGRAPHS OF EARLIER COURSES CONDUCTED**





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