

It is our great pleasure to announce the Short-Term Course (STTP) on “Air Pollution: Monitoring, Modelling, and Decision Making” (APM<sup>2</sup>DM) jointly organized by the Civil Engineering & Chemical Engineering Department, MANIT Bhopal, from 5-9<sup>th</sup> June 2024.

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**About MANIT Bhopal:**

Maulana Azad National Institute of Technology (M.A.N.I.T), Bhopal is one of the pioneering engineering institutes of the country which has contributed many outstanding engineers. It is named after the great scholar, educationist, and the first education minister of the Government of India, Maulana Abul Kalam Azad. It was established in the year 1960. Currently, the institute is conducting 09 UG, 30 PG programs, and Ph.D. programs in all the disciplines of engineering and applied sciences and also conducting an M.B.A. program with the help of about 280 competent faculty members. Special attention is given to interdisciplinary application-oriented research to bridge the gap between academicians and industry professionals.

**About NCAP and NKN:**

Air pollution is one of the most difficult challenges faced by our country today. India’s commitment to clean and pollution-free air is well reflected in the National Clean Air Programme (NCAP), launched in 2019 by the Ministry of Environment, Forest and Climate Change (MoEF &CC). The focus is a collaborative and participatory approach involving different stakeholders (from the ministry to the common people) to reduce air pollution in the country. Atmospheric aerosol measurement and source appointment (SA) studies are important for understanding the sources of particulate matter, pollution outflow, and large-scale regional impacts. Thus, SA studies are necessary to formulate and implement the mitigation and management plans for air quality improvement.

National Knowledge Network (NKN) and institutes of Repute (IoR) have been set up by MoEF &CC to provide technical assistance and knowledge support at the National, State, and City levels under NCAP for implementing action plans to improve the air quality. NKN has been formed with a vision to build local technical capacities to create a larger pool of institutes of support activities under NCAP. NKN also has an objective to create adequate capacity in the states/UTs to support future air quality management efforts.

MANIT entered into a tripartite Memorandum of Understanding with the MoEF &CC and Madhya Pradesh Pollution Control Board Committee (MPPCBC) to work together to combat air pollution and to meet the objectives of the NCAP in Madhya Pradesh. MANIT has been designated as IoR under NCAP and is serving as a technical partner to MPPCBC.

**SHORT-TERM TRAINING PROGRAM  
ON  
AIR POLLUTION: MONITORING, MODELLING, AND  
DECISION MAKING**

(5-9<sup>th</sup> June, 2024)

**Chief Patron**

**Prof. K.K. Shukla, Director, MANIT Bhopal**

**Patron**

**Prof. Mukesh Sharma, Professor, IIT Kanpur  
(Honorary member of WHO’s Technical Advisory Group  
Geneva, Switzerland)**

**Coordinators**

**Dr. A.K. Sharma**

**Dr. S. Suresh**

**Dr. H.L.Tiwari**



**Jointly organized by Civil Engineering and Chemical  
Engineering Department**

**Maulana Azad National Institute of Technology, Bhopal  
(An Institute of National Importance under Ministry of  
Education, GOI). [www.manit.ac.in](http://www.manit.ac.in)**

## ABOUT STTP

To meet the objectives of NCAP, this STTP addresses the capacity building of PM<sub>x</sub> chemical speciation and source apportionment studies for decision-making, that are required to be conducted in all the non-attainment cities of India. Primary knowledge of chemical composition and methods of chemical speciation is important to identify sources of pollution. This training program is going to be a blend of in-class, theory-based training, and hands-on operational training. The primary focus will remain on the techniques used for chemical speciation and source apportionment of Particulate Matter. The tutorials by eminent scientists will provide a clear understanding of the importance of a particular chemical component along with an in-depth stepwise method of analysis using instrumentation and analytical techniques. Hands-on-training on available equipment for sampling and analysis will give attendees a good understanding of methods.

### Overall objectives of the training program

- To provide fundamental knowledge about air pollution, non-attainment sources, and their harmful to the atmosphere, health, and other organisms
- To develop GIS-based emission inventories, framework, applications, and practical implications
- To provide conceptual knowledge on the method of chemical speciation and source apportionment of particulate matter, dispersion models, receptor models, and other most relevant models, carrying capacity.
- To impart hands-on training on required instrumentation and analytical techniques for chemical speciation and source apportionment of aerosols.
- To disseminate knowledge on post-analysis data interpretation, multivariate statistical tools, and satellite and metrological data analysis.
- Mitigation measures and strategical plan for control measure of air pollution

This training is intended for teachers and students to learn about air pollution while in the classroom and at home. Also, this STTP on air pollution is proposed to exchange information on new dimensions in such application areas.

In view of above, the Department of Civil and Chemical Engineering, MANIT Bhopal jointly organizes STTP on “Air Pollution: Monitoring, Modelling, and Decision Making”. The faculty for the STTP will be experienced professionals from I.I.T’s, N.I.T’s, and Industrial Experts in relevant fields.

### CONTENTS

The major areas of the STTP are:

- Gaseous and particulate air pollutants
- Knowledge of air speciation samplers
- Air pollutants-based measurement techniques (Organic Carbon analyzers thermal/optical reflectance, transmission, and thermal manganese oxidation, energy dispersive X-ray fluorescence
- Meteorology and dispersion modeling
- Receptor Modeling
- Mobile sources
- Indoor air
- Effects on plants, materials, humans, and animals
- ArcGIS, AERMOD & CMB8.0 software
- Carrying capacity and multi-source simulation model
- Environment planning and management

### REGISTRATION

Participants	Amount
Diploma/UG/PG/PhD Students	Rs. 500/-
Faculty of Academic Institutes and R&D organization	Rs. 1000/-
From Industry	Rs. 1500/-

Registration forms are available on the Institute website [www.manit.ac.in](http://www.manit.ac.in).

The completed registration form may be sent along with the Demand Draft payable in favour of “Director, MANIT Bhopal”, payable at S.B.I, MANIT Bhopal Branch. The last date for application is 30<sup>th</sup> May 2024.

Details of Money-Transfer by net-banking:

Account Name: Director MANIT Bhopal

Bank Name: State Bank of India

Bank Address: MANIT (MACT) Bhopal

Account No. 10020150107

IFSC Code: SBIN0001608

In net banking money transfer please clearly mention the narration in the remark column as “Registration fee for APM<sup>2</sup>DM2024” otherwise it will be difficult to trace the money transfer and receipt may not be issued.

## SHORT TERM TRAINING PROGRAM ON

### AIR POLLUTION: MONITORING, MODELLING, AND DECISION MAKING

(5-9<sup>th</sup> June, 2024)

### Registration Form (online/offline/spot)

Name of the Candidate (Capital letters):

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Address: .....

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Fax: .....

Phone: (R)..... (O) .....

(with STD code)

E-mail: .....

Qualification: .....

Present Position: .....

.....

Relevant Experience: .....

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### PAYMENT DETAILS:

Bank Name: .....

Amount: ..... DD no: .....

Date: .....

Date:

Signature of Applicant