

Training Program  
on



# Greenhouse gas (GHG) Inventory for Industries and Air Quality Prediction

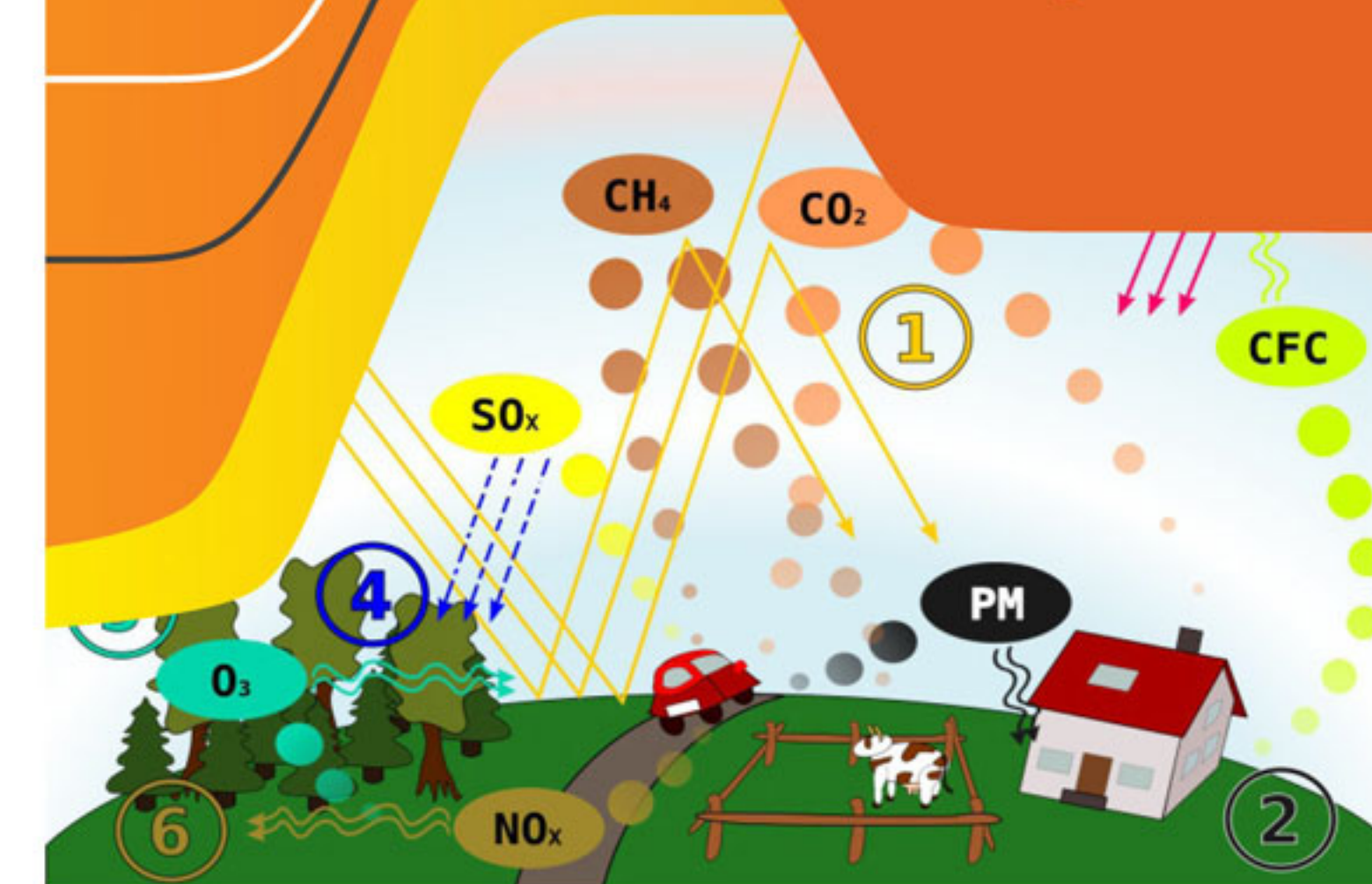
March 04-06, 2016



**Venue**  
ISM Industry Institute Interaction Facility  
NBCC Shopping Centre (2nd Floor),  
New Town, Rajarhat, Kolkata

Venue

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## Course Fees :

Rs. 15000/- per head inclusive of service tax (Rs. 8000/- per head inclusive of service tax for students from academic and research) which will include of course materials, tea and working lunch. The participants have to make their own lodging arrangement at Kolkata.

## Nomination & Payments :

The nomination letter should reach the coordinator on or before 18<sup>th</sup> January, 2016 (e-mail/post) along with course fee through DD, RTGS in favour of "Registrar, Indian School of Mines, Dhanbad-826004"

## Bank Details :

CANARA BANK  
Branch : Saraidhela, Dhanbad  
A/c No : 0986101009746  
IFSC Code : CNRB0000986  
RTGS : CNRB 0000986  
MICR 826015003.

A copy of e-payment transaction details is requested to be sent to the course coordinator. ISM, Dhanbad, being an educational institute, is exempted from Income Tax. PAN No. of ISM: AAI 0686D; Service Tax Reg. No. DNB/05/ISM/2001.

## Weather

Kolkata is having a mild cold weather during January.

### Contact Details

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(Coordinator)

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Organized by

Department of Environmental Science and Engineering  
Indian School of Mines,  
Dhanbad 826004, Jharkhand, India





## Course Content :

- Carbon foot printing, carbon credit and associated legislative issues.
- Environmental consequences of GHG.
- Emission estimation methods and brief description of key source categories.
- Contribution of GHGs in air quality.
- Industrial processes related with GHG emission, fate and transport of GHG.

## About the Course :

Carbon emission from industries is a matter of global concern nowadays. In last 50 years per capita carbon emission in India has increased 5 folds. Increment of CO<sub>2</sub> not only contributes in climate change as a GHG, but also increases the average amount of water vapor in air which further increases air temperature in local as well as in global scale through positive feedback mechanism. About 31% of the global carbon emission occurs due to transmission, and distribution of electricity and about 21% comes from other industries. Many actions to mitigate the present GHG scenario are being taken on global platforms like Kyoto protocol. First round commitments of Kyoto protocol are the first initiative taken within the UN Framework Convention on Climate Change (UNFCCC). It strongly suggested anthropogenic sources to bring down the GHG emission 5.2% below their corresponding levels of emissions as it was in 1990 plus/minus the reduction commitment of the country. In order to comply with the global as well as national standards of GHG emission, development of emission inventory for the anthropogenic sources like energy sectors, mining industries, construction industries etc. are of utmost importance.

Developing GHG inventory is an immensely important strategy in prediction of air quality. As a major source of GHG emitters, industries of every level carry responsibilities to keep its surroundings as much pollution free as possible. Prediction of air quality using modeling and simulation tools is an essential step for this.

The aim of this training program is to provide a comprehensive knowledge towards the detailed understanding of the present scenario of GHG emission and air quality from perspective of environmental welfare and industrial development. The widely used procedures for developing GHG inventory and prediction of air quality will be discussed in depth which will be beneficial to the planners, decision makers and management personnel of different industries.

## About the department

The Department of Environmental Science & Engineering is created out of existing Centre of Mining Environment (Established in 1987 as center of excellence in the field of mine environment by the Ministry of Environment and Forests, Govt. of India) at Indian School of Mines in June 2007 with the commencement of a regular B.Tech. program in Environmental Engineering under IIT-JEE (first of its kind offered by any national institute). Apart from B.Tech. in Environmental Engineering, department is also offering M.Tech. in Environmental Science & Engineering from 1991 and Ph.D. in Environmental Science and Engineering from inception in 1987. Department is well equipped with state of art laboratory in all the components of environment. Department is also offering services to industry in form of Research and Consultancy. Department successfully completed various ministry sponsored R&D projects, provided guidelines for making rules & regulation and answers to parliament questions. Department is also running Information system (ENVIS center on Environmental Problems of Mining) sponsored by Ministry of Environment, Forest & Climate Change.

## About the institute :

The Indian School of Mines was formally opened on 9th December 1926, by Lord Irwin, the then Viceroy of India to address the need for trained manpower related to mining activities in the country with disciplines of Mining and Applied Geology. In 1967 it was granted the status of a deemed to be university under Section 3 of UGC Act, 1956. Since its establishment, ISM has undergone considerable expansion of its activities, and presently it can be considered as a total technology education institute. The departments of Petroleum Engineering and Applied Geophysics were established in 1957. The departments of Mechanical Engineering and Mining Machinery Engineering, Fuel and Mineral Engineering, Management Studies, and Electronics and Instrumentation Engineering were added in 1975-1977. The Centre of Mining Environment, the Computer Centre, the Centre of Longwall Mine Mechanisation, and the departments of Applied Chemistry, Applied Physics, and Applied Mathematics were established between 1975 and 1987. The department of Computer Science and Engineering was added in 1997. The expansion of the institute into a total technology institute was further accelerated with the establishment of the Department of Electrical Engineering in the year 2005, the Department of Environmental Science and Engineering in 2006, Department of Chemical Engineering in 2010 and the Department of Civil Engineering in 2012.

## Date :

March 04-06, 2016

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## Participants :

Executives engaged in industries, maintenance, planning, environmental management, academic, research etc.