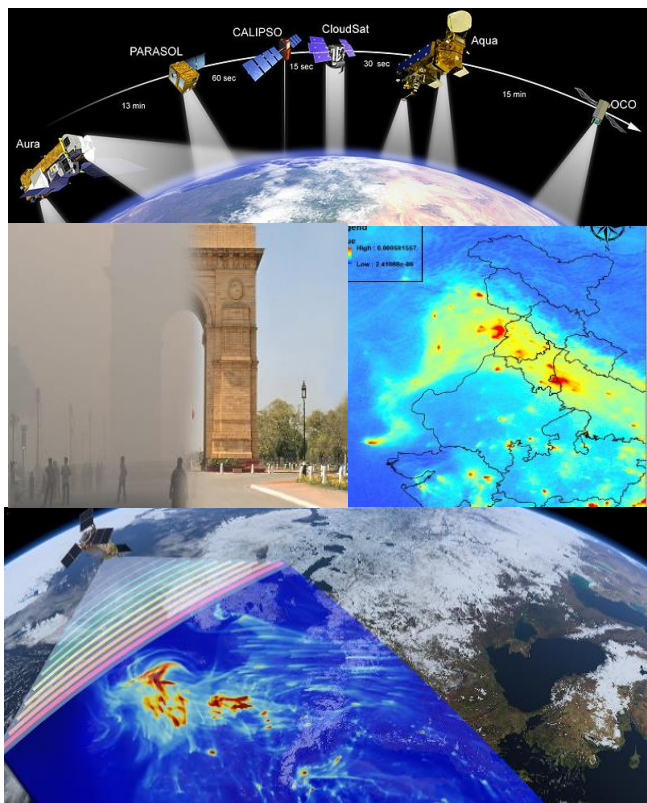


**“Breathing the Invisible: Air Pollution
Monitoring, Impacts and modelling”****October 05-09, 2026****Last date for receipt of
application: September 06, 2026****Introduction**

Air pollution is an invisible yet pervasive environmental threat that profoundly affects human health, ecosystems, climate, and sustainable development. According to recent global estimates, exposure to polluted air contributes to millions of premature deaths annually and is associated with a wide spectrum of respiratory, cardiovascular, neurological, and metabolic disorders. Understanding the complex interplay between emissions, atmospheric chemistry, meteorology, and human activities is essential for developing effective air quality management strategies. This course provides a comprehensive overview of the science of air pollution, covering the characteristics, sources, transport, transformation, and fate of major gaseous and particulate pollutants. Participants will gain insights into state-of-the-art air quality monitoring techniques using ground-based observations, satellite remote sensing, and emerging sensor technologies, along with the principles of atmospheric chemistry and chemical transport modelling used to simulate pollutant dispersion, transformation, and forecasting. The course also explores the health and environmental impacts of air pollution, advances in air quality assessment, and the role of scientific observations and modelling in supporting evidence-based policies and emission mitigation strategies. This

course bridges fundamental concepts with cutting-edge observational and modelling approaches to provide a holistic understanding of the invisible air we breathe.

Objective of the course

The overall objective of this two-week training programme is to enhance the knowledge and capacity of researchers, professionals, academicians, students, and decision-makers in understanding the science of air pollution, its sources, transport, transformation, impacts, monitoring techniques, and modelling approaches. The programme aims to provide comprehensive exposure to in-situ observations, satellite remote sensing, atmospheric chemistry, and air quality modelling, enabling participants to effectively assess air pollution, interpret observational data, and support evidence-based environmental management and policy decisions.

Course Content

- Overview on sources, sinks and chemical transformation of gaseous air pollutants.
- Satellite and in-situ monitoring of gaseous air pollutants
- Chemistry transport modeling of gaseous air pollutants

- Sources, Sinks and climatic implications of particulate matter
- Satellite remote sensing of aerosol particulate matter
- Dust aerosols- emission, transport and impact on weather & climate
- Anthropogenic Aerosols: Chemistry, observations and modeling
- Health implications of air pollutants

Number of seats

- 20 (all seats for Indian nationals only)

Eligibility and Selection Procedure

- The course is specifically aimed at users, decision-makers, researchers, and professionals working in the field of atmospheric sciences.
- Essential Qualification: M.Sc/ MTech/M.E in Earth Sci. / Appl. Geol./ Physics /Meteorology/ Atmos. Sci. /chemistry /Geography/ Mathematics/ Climate Science/ Natural Hazards/ Disaster Management / Env. Sci./ Engineering.
- Candidates nominated by the govt. organizations & professionals working in the field of Atmospheric sciences will be given preference for admission.
- Basic knowledge in mathematics and/or statistics is desirable.

How to Apply

Interested and eligible candidates can apply through the IIRS website.
<https://admissions.iirs.gov.in/coursecalender>

Course Fee

Rs. 6,500/- (Rs. 2,000: Tuition Fee + Rs. 4,500: Registration & Other Charges). Participants have to bear accommodation and food charges. Participants will be provided accommodation at IIRS hostel (Rs 120 per day subject to change as per IIRS policy). Participants may avail hostel mess facility for food (@300 per day). No accommodation will be given to the accompanying person/spouse/children either govt. or self financed candidate.

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About IIRS

The Indian Institute of Remote Sensing (IIRS), established in 1966 and functioning as a constituent unit of the Indian Space Research Organisation (ISRO), is a premier institution dedicated to education, training, research, and capacity building in geospatial technologies and their diverse applications. Recognized as a leading centre in South and Southeast Asia, IIRS offers multidisciplinary programmes tailored to the needs of working professionals, fresh graduates, researchers, academicians, and policy makers.



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