

IIRS OUTREACH PROGRAMME

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 4000+ network institutes. The beneficiaries of the programme may include:

- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Forest Resource Professionals
- State Forest Departments/Forest Training Academies
- Research Institutes
- Geospatial Industries
- NGOs

FEEDBACK MECHANISM

IIRS takes continuous feedback from participating institutions to improve the quality of future courses.

AWARDS

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1st National Symposium on Excellence in Training conducted during April 11-12, 2015 in New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



ABOUT IIRS

Indian Institute of Remote Sensing (IIRS) under Indian Space Research Organisation (ISRO), Department of Space, Govt. of India is a premier Training and Educational Institute set up for developing trained professionals in the field of Remote Sensing, Geoinformatics and GNSS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPI), founded in 1966, the Institute boasts to be the first of its kind in entire South-East Asia. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals, the Institute has enhanced its capability and evolved many training and education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS also conducts e-learning programme on Remote Sensing and Geoinformation Science (<http://elearning.iirs.gov.in>).

CONTACT DETAILS

Dr.K. Praveen Kumar
Course Director

Dr. Poonam S Tiwari
Programme Coordinator

IIRS DLP Team
Mr. Janardan Vishwakarma
&

Mr. Ashok Ghildiyal
☎ 0135-2524130
✉ dlp@iirs.gov.in

Indian Institute of Remote Sensing,
Indian Space Research Organisation
Department of Space, Govt. of India,
4-Kalidas Road, Dehradun

180th IIRS Outreach Programme

CHANDRAYAAN-1 (2008)
Moon
• Detected water molecules on the lunar surface using Moon Impact Probe (MIP)
• Mapped lunar mineralogy and elemental composition using Moon Mineralogy Mapper (M₃)
• Provided high-resolution images of the lunar surface
Confirmed presence of water on the Moon – a giant leap in lunar science

MANGALYAAN / MOM (2013)
Mars
• Studied Martian atmosphere using Marsense Sensor for Mars (MSSM)
• Measured atmospheric temperature, surface features and dynamics
• First mission to Mars on first attempt by any nation
Enhanced understanding of Mars' atmosphere and planetary evolution

CHANDRAYAAN-2 (2019)
Moon
• Mapped lunar topography, mineralogy and exosphere
• Studied lunar south pole region in detail
• Improved understanding of lunar surface composition and water-ice potential
Advanced knowledge of lunar south pole – key for future exploration

ADITYA-L1 (2023)
Sun
• Observing the Sun's corona, chromosphere and photosphere
• Studying solar winds, flares and coronal mass ejections
• Understanding space weather and its impact on Earth
Improving space weather forecasting – beneficial for satellites, communication and power grids

ASTROSAT (2015)
Multi-wavelength Astronomy
• First dedicated multi-wavelength space observatory of India
• Studied stars, galaxies, black holes, neutron stars and more
• Contributed to global discoveries in high energy astrophysics
Deepened our understanding of the universe in X-ray, UV and visible wavelengths

CROSS-CUTTING SCIENTIFIC & SOCIETAL IMPACT

- Advances in planetary science, astronomy, heliophysics and space technology
- Strengthens India's scientific capability and global collaboration
- Inspires students, promotes STEM education and innovation
- Supports long-term human exploration and sustainable use of space
- Provides knowledge that benefits communication, navigation, disaster management & more

FROM THE MOON TO MARS, FROM THE SUN TO THE STARS – ISRO IS DISCOVERING, UNDERSTANDING AND EMPOWERING.

Scientific Contributions from Indian Space Science Missions



May 18th – May 22nd, 2026

Organised by

**Indian Institute of Remote
Sensing**
Indian Space Research Organisation
Department of Space, Govt. of India
Dehradun

www.iirs.gov.in

ABOUT THE COURSE

India's space science journey from space based observations started with the success of Aryabhata and attained many milestone achievements and ground-breaking discoveries through Chandrayaan series, Mars Orbiter Mission, AstroSat, Aditya-L1 and XPoSat.

This course, "Scientific Contributions from Indian Space Science Missions", offers a deep dive into the transformative research conducted by ISRO. These missions have reshaped our understanding of lunar geology, Martian atmospheric dynamics, astronomical objects and solar phenomena. By analysing data from scientific payloads, students will gain insight into how India's cost-effective yet sophisticated approach has advanced global space science.

CURRICULUM

The course structure is spread into following broad topics of teaching on:

- Science from AstroSat
- Science from the Chandrayaan series
- Science from Aditya L1
- Science from XPoSat
- Science from Mars Orbiter Mission

COURSE FEE

There is no course fee for attending this programme.

TARGET PARTICIPANTS

The candidates who want to participate in the course should be a student of final year undergraduate course or postgraduate course (any year) of physical sciences and technology. Applications of participants have to be duly sponsored by university/institute and forwarded through coordinators from respective centres.

COURSE STUDY MATERIAL

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through e-class. Video lectures will also be uploaded on e-class (<https://www.eclass.iirs.gov.in/login>).

COURSE PRE-REQUISITES

Should be a student of final year undergraduate course or postgraduate course (any year) of physical sciences and technology.

COURSE REGISTRATION

Course updates and details:

Available at : <https://www.iirs.gov.in/Edusat-News/>

Registration through Nodal Centers:

Participants registering via nodal centers must obtain approval from the respective center coordinator. Application status can be viewed at: <https://elearning.iirs.gov.in/edusatregistration/>.

If an application remains pending, participants should contact their nodal center coordinator.

Individual Registration:

Participants registering individually are approved automatically. Login credentials for the ISRO Learning Management System (LMS) will be provided at: <https://isrolms.iirs.gov.in>

IMPORTANT LINKS

To participate in this programme the interested organisations /universities/departments/institutes have to identify coordinator at their end. The identified coordinator will register online his/her institute as nodal centre in IIRS website (<https://elearning.iirs.gov.in/edusatregistration/coordinator>)

COURSE FUNDING & TECHNICAL SUPPORT

The programme is sponsored by Indian Space Research Organisation, Department of Space, Government of India.

COURSE STUDY MATERIAL

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through IIRS e-class. Video lectures will also be uploaded on YouTube Channel (<https://www.youtube.com/@iirsoutreachdehradun>).

Video lectures will also be uploaded on e-class (<https://www.eclass.iirs.gov.in/login>).

PROGRAMME RECEPTION

Programme can be received through e-class platform of IIRS-ISRO using internet connectivity. No specific hardware/software required. However, it is recommended good internet connectivity at user end. To run the programme in class room, following hardware will be required:

- Desktop computer with web camera microphone and output speakers or laptop with microphone camera and output speaker.
- Large display screen/projector/TV.

AWARD OF CERTIFICATE

Registered through Nodal centres : Based on 70% attendance, students will be awarded a "Courses Participation Certificate."

Individual Registration: A "Course Participation" certificate will be given to everyone who devotes at least 70% of each session's hours to the course. The course participation certificate will be available for download in ISRO LMS.

There are a limited number of seats.

Registration will be done on a first-come, first-served basis.