IIRS Outreach Programme
The IIRS Outreach Programme, which started in 2007 with 12 universities/institutions, has now grown substantially. Currently, 410 universities/institutions spread across India covering 29 States and 2 union territories are networked with IIRS. The beneficiaries of the programme include:
- Central/State/Private Universities & Academic Institutions
- Central & State Government Organisations/Departments
- Research institutes
- Geospatial Industries
- NGOs

Feedback Mechanism

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 GPS 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 & education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS outreach program is popular across India. So far, 17 programmes have been conducted benefiting 30,000 participants.

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

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Basics of Remote Sensing,  
Geographical Information System &  
Global Navigation Satellite System  
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Indian Space Research Organisation  
Department of Space, Govt. of India  
Dehradun

www.iirs.gov.in
About the Course

The use of Remote Sensing, Geographical Information System, Global Navigation Satellite System and associated geospatial technologies is increasing rapidly, creating an urgent demand for trained manpower. IRS utilizes the Ku-Band facility of INSAT-4CR, an ISRO Satellite and Internet, for conducting Distance Learning Programme to primarily complement the educational programmes of the Indian Universities. The target group includes students at undergraduate/postgraduate level and faculty/researchers at different universities/institutions. Under its Outreach Programme, IRS has established its own Teaching and Uplinking facility in the campus under national beam coverage of ISRO satellites, connecting numerous classroom end users. Internet bandwidth is also used as an alternative option. IRS has successfully conducted 17 such courses so far with participation of over 30,000 students from 410 institutions. This programme can be received live using A-VIEW e-learning tool developed by Amrita University in internet environment with login permission. Course participation has increased with the option of A-VIEW software as it has also enabled participation of many who do not have the SIT facility.

Curriculum

The course is divided into 4 modules:

- Remote Sensing and Digital Image Analysis
- Global Navigation Satellite System
- Geographical Information System
- RS and GIS Applications

The topics include:

- Basic Principles of Remote Sensing, Earth Observation Sensors and Platforms, Spectral Signature of different land cover features, Image interpretation
- Thermal & Microwave Remote Sensing
- Digital Image Processing: Basic Concepts of Rectification and Registration, Enhancement, Classification and accuracy assessment techniques

Introduction to GPS and GNSS, receivers, processing methods, errors and accuracy
- GIS, data bases, topology, spatial analysis and open source software’s.
- RS & GIS Applications: Agriculture and Soil, Forestry and Ecology, Geoscience and Geohazards, Marine and Atmospheric Sciences, Urban and Regional Studies and Water Resources

Course study materials like lecture pdf, lecture video, lecture notes, open source software, practical data & handouts of practical lecture etc. will be made available through IRS ftp site and lecture videos are uploaded in YouTube Channel (http://www.youtube.com/user/edusat2004)

Sponsors & Technical Support

The programme is sponsored by National Natural Resources Management System – Standing Committee on Training and Education (SC-T), Indian Space Research Organisation, Department of Space, Government of India and is conducted with due technical help from Satellite Communications & Navigation Programme (SCNP), ISRO; Development and Educational Communication Unit (DECU), ISRO and A-VIEW, Amrita University, National Mission on Education through Information and Communication Technology

Programme Receptions

NKN/ NMEICT Institutions/ other Institutions / Universities may participate in IRS Outreach Programme by using any one of the following setups:

Option-I: A-VIEW Internet based streaming

Hardware Requirements:
- High end Computer/Laptop (Windows OS)
- Good quality web camera
- Headphone with Microphone
- Speakers
- Large Display Screen (Projector or TV)

Software and Internet Requirements
- Web based - https://live.aview.in
- National Knowledge Network or any other high speed internet facility (Preferably without firewall, bandwidth 2 mbps minimum)
- Network requirements Port 80 and RTMP (port 1935) protocol should be unblocked from users’ computer

Option-II: (Web Browser Based)

URL: http://live.irs.gov.in (required Flash player and JRE at user end)
- User registration and activation through email
- Participate through live two way web casting.

Note: University/Institute/College have to bear total expenses for establishment of classroom facility

Target Participants

- Student of undergraduate course/ Postgraduate course (any year).
- Technical/ Scientific Staff of Central/ State Government Ministries/Departments
- Faculty / researchers at university / institutions are also eligible to participate in this course.

Applications of participants have to be duly sponsored by their university/institution/College/Ministry/Departments and forwarded through coordinators from respective centres. Institutions on high speed National Knowledge Network (NKN) can also participate using A-VIEW software.

Course Registration

Online registration is open through URL: http://irs.gov.in/edusat-news/, the online registration is mandatory. No hard copy application will be accepted.
- There is no course fee.

Award of Certificate

Based on 70% attendance and must secure minimum 40% marks in all qualifying online examinations.