IIRS Outreach Programme

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 3000+ 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 has conducted eleven workshops in 2007, 2009, 2010, 2013, 2014, 2015, 2016.2017,2018,2019,2020 and 2021 to take feedback from participating institutions to improve the quality of future courses.

Feedback session during IIRS User Interaction Meet (IUIM)-2020

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. Harish Karnatak
Course Director and Head, GIT&DL

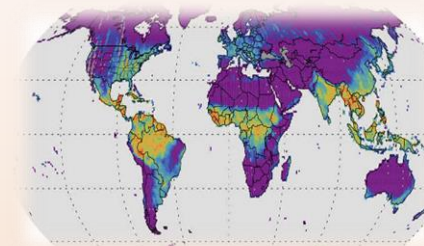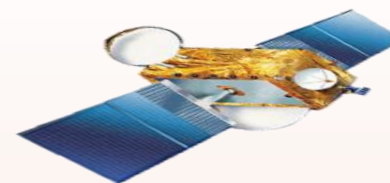**Dr. Poonam S. Tiwari**
Programme Coordinator
IIRS Outreach Programme

Ravi Bhandari
Course Coordinator
Tel: 0135-2524108

IIRS DLP Team
Mr. Janardan Vishwakarma
&
Mr. Ashok Ghildiyal
Tel: 0135-2524130
Email- *dlp @iirs.gov.in*

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

Overview of Geo-processing using Python

January 17-28, 2022

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

Today large amount of satellite imagery and geospatial data collected from different sources is available at free of cost. Satellite imagery combined with power of Geographic information System can be a great tool for supporting environmental management, disasters, global climate change, natural resources, wildlife, land cover and many other applications.

Processing this vast amount of data in time and space efficient manner and deriving useful information and knowledge from data is one of the most challenging aspect of geospatial technology.

We invite you to attend this training program on Geo-processing and visualization on web platforms. The course is scheduled from January 17-28, 2022.

Curriculum

- Overview of GIS and different geospatial data types
- Overview to Python programming using
- Introduction anaconda and Jupyter notebook
- Raster data processing, resampling and analysis
- Vector data processing and analysis
- Geo-spatial data visualization on web
- Familiarization to various open source geospatial data processing libraries e.g. GDAL, Geopandas etc.

Expected Outcome

At the end of this course participant must be able to

- Write program in python to read, write and process different raster formats.
- Write program in python to read, write and process different vector formats.
- Write program to visualize geospatial data in form of maps, images etc.

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).Technical/Scientific Staff of Central/State Government/Faculty/researchers at university/institutions are also eligible to apply for this course. Applications of participants have to be duly sponsored by university/institute and forwarded through coordinators from respective centres. Users receiving programmes under CEC-UGC/ CIET networks can also participate. Institutions on high speed National Knowledge Network (NKN).

Course Pre-requisite

- Familiarisation with Basics of Remote Sensing and GIS
- Basic knowledge of computer programming preferably in python

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 Fee

There is no course fee for attending this programme.

Course Registration

• Course updates and other details will be available on URL-
http://www.iirs.gov.in/Edusat-News/
• To participate in this programme the interested organizations/ universities/ departments/ Institutes has to identify a coordinator at their end. The identified coordinator will register online his/her Institute as nodal center in IIRS website.

• All the participants have to register online through registration page by selecting his/her organization as nodal center.

Course Funding & Technical Support

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

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.

Important links

Courses updates and other details will be available on URL – https://www.iirs.gov.in/EDUSAT-News
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)
All the participants have to register online through registration page by selecting his/her organization as nodal centre.
https://elearning.iirs.gov.in/edusatregistration/student

Award of Certificate

Working Professionals and Students: Based on 70% attendance and 40% in the online examination

**There are limited number of seats.
Registration will be done on first come first serve basis**