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).

Feedback Mechanism

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).

Remote Sensing and GIS Applications in Carbon Forestry
February 16 – March 10, 2017

Organised by
Indian Institute of Remote Sensing, Indian Space Research Organisation
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About the Course
Forests cover approximately one third of the Earth’s land surface. These have a tremendous potential to store and cycle atmospheric carbon and therefore provide an effective way to mitigate climate change. To meet the measuring and monitoring (M&M) requirements of carbon forestry project activities, it is critical to establish repeatable, objective-based, and accurate methods for estimating forest carbon pools and fluxes over large areas. Remote sensing technologies are particularly suited for mapping and monitoring of forest cover, deforestation, degradation, regrowth, carbon stock and carbon sequestration. This course will provide an overview of the latest advances in satellite and terrestrial based remote sensing and GIS technologies to support carbon forestry. The course is therefore of special interest for the foresters/professionals/researchers and students interested in learning utility of these modern technologies in the context of forest carbon monitoring (e.g. REDD+).
IIRS has successfully conducted 18 outreach programme so far with participation of over 33,000 participants from 470 Institutions/Universities spread across India.

Curriculum
- Global carbon cycle & climate change: An overview;
- Forest-based strategies for mitigating climate change;
- Global Earth observation initiatives for carbon forestry;
- Spectral signature of vegetation and factors affecting spectral response;
- Application of satellite remote sensing in mapping and monitoring of forest cover and land use;
- Application of satellite remote sensing in mapping and monitoring of forest carbon degradation;
- Application of satellite data in forest sampling design for biomass/carbon quantification;
- Application of optical remote sensing in forest biomass/carbon estimation;
- Application of high resolution data for forest biomass/carbon inventory;
- Application of LiDAR in mapping of forest structure and biomass/carbon estimation;
- Application of microwave remote sensing in forest biomass/carbon estimation;
- Application of eddy covariance technique in carbon flux measurement and modelling;
- Application of satellite remote sensing in near-real time forest fire assessment and monitoring;
- Application of satellite remote sensing in forest biomass burning and carbon emission monitoring;
- Application of Geoweb portals and services in forestry studies.

Target Participants
The course is designed for professionals engaged in forest and agro-forestry resource management, planning, REDD projects and students & researchers of Forestry, Ecology and Environmental studies. The course participants have to be duly sponsored by their university / institution and application should be forwarded through coordinators from respective Organisations/centres. Users attending programmes under CEC-UGC/ CIET / other networks can also participate. Institutions on high speed National Knowledge Network (NKN) can also participate using A-VIEW software.

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 ftp link. Video lectures will also be uploaded on YouTube Channel (http://www.youtube.com/user/edusat2004).

Course Fee
There is no course fee.

Course Registration
- Course updates and other details will be available on URL: http://www.irs.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 has to register online through registration page by selecting his/her organization as nodal center.

Course Funding & 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 support from Amrita Virtual Interactive E-learning World (A-VIEW).

Programme Reception
Programme can be received through Internet connectivity of 2Mbps or better. Following hardware and software setup is required at user end:

**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:**
- Online live access through http://live.irs.gov.in with free registration.

**Connectivity & Other configurations:**
- NKN or any other high speed internet facility (preferably without firewall, with minimum of 2 Mbps bandwidth)
- Network requirements: Port 80 and RTMP (port 1935) protocol should be unblocked from user’s computer and Firewall.

**Note:** Institutions/ universities have to bear total expenses for establishment of the classroom facility

**Award of Certificate**
**Working Professionals:** Based on 70% attendance and submission of assignments.

**Students:** Based 70% attendance and online examination.