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ABOUT THE INTEGRAL UNIVERSITY

Integral University is a NAAC accredited state private university established in 2004 and approved by UGC under section 2(f) and 12(B) of UGC act 1956. It has established its own credentials and singular reputation within a very short span of time. It has marvelous ambience and academically, lively and vibrant environment, highly conducive to higher and dedicated academic pursuits. The university is committed to generating, disseminating, and preserving knowledge. Our academic programs like engineering, medicine, science, arts, architecture and management equip students with the academic rigor and intellectual capacity to meet the corporate business challenges.

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Contact Details

Mr. Imran Ullah Khan, Mob: 8127439699
Email: iukhan@iul.ac.in

Mr. Shailendra Kumar Mob: 9450976533
Email: iukhan@iul.ac.in

Mr. Sheeba Parveen Mob: 8565920483
Email: sheeba@iul.ac.in

INTEGRAL UNIVERSITY

19TH IIRS OUTREACH PROGRAMME

on

REMOTE SENSING AND GIS APPLICATIONS IN CARBON FORESTRY

February 16 to March 10, 2017

ORGANIZED BY

Departments of Electronics & Communication Engineering

Under the aegis of

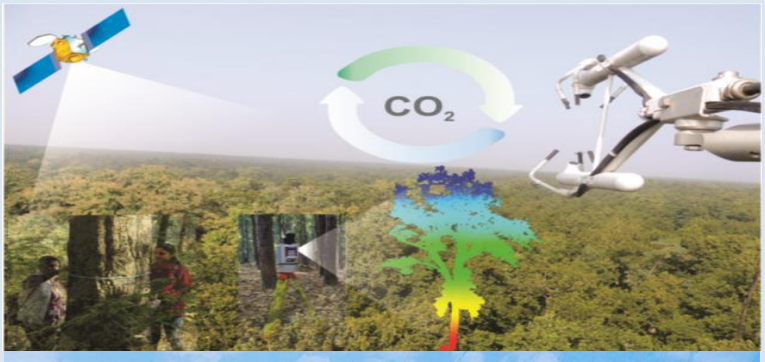
Human Resource Development Center, IU,Lucknow

In Association with

Indian Institute of Remote Sensing

Indian Space Research Organization, Department of Space,

Govt. of India, Dehradun, India



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).

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.

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).

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

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 has to register online through registration page by selecting his/her organization as nodal center.

Award of Certificate

Working Professionals: Based on70% attendance and submission of assignments.

Students: Based 70% attendance and online examination.

Integral University
Dasauli, Kursi Road
Lucknow-226026 (U.P.), India
Website: www.iul.ac.in

Department of Space
Government of India
Indian Space Research Organisation (ISRO)
Indian Institute of Remote Sensing, Dehradun

19th IIRS Outreach Programme

	Course Name	Duration	
		From	To
1	**Remote Sensing and GIS Applications in Carbon Forestry**	**16.02.2017**	**10.03.2017**

Date	Time	Lecture Topic
16.02.2017	Lecture Session **1530-1630** Interactive Session **1630-1700**	Global carbon cycle & climate change: An overview
17.02.2017		Forest based strategies for mitigating climate change
18.02.2017		**Break- Saturday**
19.02.2017		**Break- Sunday**
20.02.2017		Global Earth observation initiatives for carbon forestry
21.02.2017		Spectral signature of vegetation and factors affecting spectral response
22.02.2017		Application of satellite remote sensing in mapping and monitoring of forest cover and land use
23.02.2017		Application of satellite remote sensing in mapping and monitoring of forest carbon degradation
24.02.2017		**Break- MahaShivratri**
25.02.2017		**Break- Saturday**
26.02.2017		**Break- Sunday**
27.02.2017		Application of satellite data in forest sampling design for biomass/carbon quantification
28.02.2017		Application of optical remote sensing in forest biomass/carbon estimation
01.03.2017		Application of high resolution data for biomass/carbon inventory
02.03.2017		Application of LiDAR in mapping of forest structure and biomass/carbon estimation
03.03.2017		Application of microwave remote sensing in forest biomass/carbon estimation
04.03.2017		**Break- Saturday**
05.03.2017		**Break- Sunday**
06.03.2017		Application of eddy covariance technique in carbon flux measurement and modelling
07.03.2017		Application of satellite remote sensing in near-real time forest fire assessment and monitoring
08.03.2017		Application of satellite remote sensing in forest biomass burning and carbon emission monitoring
09.03.2017		Application of Geoweb portals and services in forestry studies
10.03.2017		Examination & Interactive discussion