

SYMBIOSIS INTERNATIONAL (Deemed University)

Symbiosis Institute of Geoinformatics, Pune

NAAC 5.1.3- Following Capacity development and skills enhancement initiatives are taken by the institution Soft skills Language and communication skills Life skills (Yoga, physical fitness, health and hygiene) Awareness of trends in technology

File Name: 5.1.3_SIG_16-17_Capability enhancement

Sr. No	Details of Documents	No of Pages
1.	Technology trends – Report	10
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SYMBIOSIS INSTITUTE OF GEOINFORMATICS

Symbiosis International (Deemed University)

(Established under section 3 of the UGC Act, 1956 vide notification No. F.9-12/2001-U3 Govt. of India)

Re-accredited by NAAC with 'A' grade

Founder : Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

16/02/2017

Remote Sensing and GIS Applications in Carbon Forestry

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 the modern technologies in the context of forest carbon monitoring (e.g. REDD+).

IIRS has successfully conducted outreach programme in SIG and other participants from Institutions/Universities spread across India through Virtual Interactive E-learning World.



IIRS Outreach Programme

The IIRS outreach programme, which started in 2007 with 12 universities/ institutions has now grown substantially. Currently, 470 universities / institutions spread across India covering 30 States and 2 Union Territories are networked with IIRS. The beneficiaries of the programme may include:

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

Feedback Mechanism

IIRS has conducted six workshops in 2007, 2009, 2010, 2013, 2014, 2015 and 2016 to take feedback from participating institutions to improve the quality of future courses.



Seventh outreach programme feedback session during IIRS User Interaction Meet (IUIM)-2016

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>).

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IIRS DLP Team

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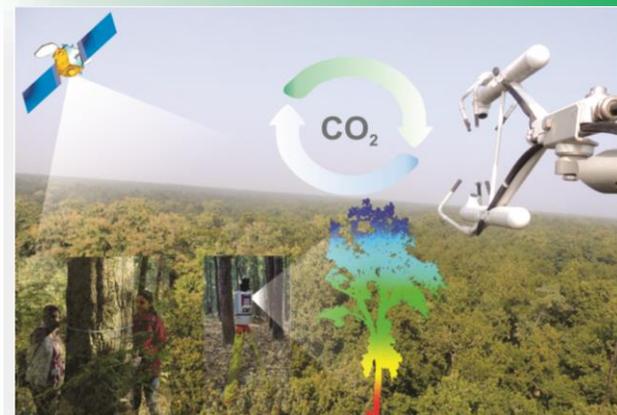
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Indian Institute of Remote Sensing,
Indian Space Research Organisation
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Nineteenth IIRS Outreach Programme



Remote Sensing and GIS Applications in Carbon Forestry

February 16 – March 10, 2017



Dr. (Prof.) T. P. Singh
Director



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

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.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.

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 set-up 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

- Desktop based: A-VIEW software (free to download from www.aview.in or IIRS ftp link: <ftp://ftp.iirs.gov.in>)
- Online live access through <http://live.iirs.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.



डॉ. ए. सेंथिल कुमार/ Dr. A. Senthil Kumar
निदेशक/Director

सं.: आई.आई.आर.एस. /एडुसेट/2017
दिनांक: 04 जनवरी 2017
No.: IIRS/EDUSAT/2017
Date: 04 January 2017

विषय: 16 फरवरी 2017 से "सुदूर संवेदन, भौगोलिक सूचना प्रणाली का कार्बन वानिकी में अनुप्रयोग" पर प्रारम्भ होने वाले 19^{वें} आई.आई.आर.एस. आउटरीच कार्यक्रम की घोषणा के संबंध में।

Sub: Announcement of Nineteenth IIRS Outreach Program on "Remote Sensing and GIS Applications in Carbon Forestry" commencing from February 16, 2017

महोदय/महोदया,
Sir/ Madam,

भारतीय सुदूर संवेदन संस्थान (भा.सु.सं.सं.) भूस्थानिक प्रौद्योगिकी के उपयोगार्थ शिक्षण, प्रशिक्षण तथा क्षमता संवर्धन को समर्पित इसरो का एक महत्वपूर्ण संस्थान है। इस संस्थान द्वारा अब तक 18 उपग्रह एवं इंटरनेट आधारित आउटरीच पाठ्यक्रम संचालित किए जा चुके हैं। इन पाठ्यक्रमों से लगभग 470 भारतीय विश्वविद्यालयों/ संस्थानों के करीब 33,000 से अधिक प्रतिभागी लाभान्वित हुए हैं। इसी कार्यक्रम को आगे बढ़ाते हुए हम सहर्ष 19^{वें} आई.आई.आर.एस. आउटरीच कार्यक्रम को प्रारंभ करने की घोषणा करते हैं। 16 फरवरी, 2017 से प्रारम्भ होने वाला यह कार्यक्रम "सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली के कार्बन वानिकी में अनुप्रयोग" पर आधारित है। यह कार्यक्रम कार्यरत पेशेवर तथा छात्रों हेतु लक्षित है। यह कार्यक्रम प्रतिभागियों को अपने कार्यस्थल पर रहते हुये ज्ञान को समृद्ध करने का एक अन्ूठा अवसर प्रदान करेगा।

Indian Institute of Remote Sensing (IIRS) is a premier Institute of ISRO which is engaged in training, education and capacity building on use of geospatial technologies for natural resources monitoring and disaster management support services in the country since last five decades. The institute has so far conducted 18 Satellite and Internet based Outreach Programmes, benefitting more than 33,000 participants from 470 Indian universities/ institutions/user Departments/user ministries in India. We have now the pleasure of announcing the nineteenth IIRS Outreach Programme targeted to working professionals and students on "Remote Sensing and GIS Applications in Carbon Forestry" commencing from February 16 to March 10, 2017. This online programme will provide a unique opportunity to the learners to enhance their knowledge by attending the course at their respective working places.

वन आवरण समस्त पृथ्वी का लगभग एक तिहाई क्षेत्र है जिसमें वन क्षेत्रों में वातावरणीय कार्बन को इकठ्ठा तथा परिक्रमण करने की जबरदस्त क्षमता है जिसके कारण जलवायु परिवर्तन को कम करने में सहायता मिलती है। कार्बन वानिकी संबंधित गतिविधियों की मापन एवं निगरानी आवश्यकताओं को पूरा करने के लिए पुनरावर्तनीय, उद्देश्य आधारित एवं सटीक तरीकों को स्थापित करने की आवश्यकता है जिसके द्वारा बड़े क्षेत्रों में वन कार्बन पूल तथा अपशिष्टों का आकलन किया जा सके। सुदूर संवेदन प्रौद्योगिकी विशेष रूप से वन आवरण, वनों की कटाई, ह्रास, पुनर्विकास, कार्बन स्टॉक और कार्बन जब्ती के मानचित्रण और निगरानी के लिए अनुकूल हैं। यह पाठ्यक्रम कार्बन वानिकी के समर्थन हेतु उपग्रह और स्थलीय आधारित सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली प्रौद्योगिकी में नवीनतम प्रगति का एक सिंहावलोकन प्रदान करेगा। वन कार्बन निगरानी के संदर्भ में इन आधुनिक तकनीकों की उपयोगिता को सीखने हेतु इच्छुक फोरेस्टर/पेशेवर/शोधकर्ता/एवं छात्रों हेतु यह पाठ्यक्रम अत्यधिक रुचिकर होगा। इस पाठ्यक्रम में कार्बन चक्र, वन आधारित रणनीति, सुदूर संवेदन एवं भौगोलिक सूचना प्रणाली का वन अवक्रमण की निगरानी हेतु उपयोग, वन बायोमास / कार्बन अनुमान जैसे विषय शामिल हैं।



T. P. Singh

Dr. (Prof.) T. P. Singh
Director

Contd....2

foresters/professionals/researchers and students interested in learning utility of these modern technologies in the context of forest carbon monitoring (e.g. REDD+). The course will include topics based on carbon cycle, forest based strategies, application of remote sensing and GIS for monitoring forest degradation, forest biomass/carbon estimation etc.

उक्त पाठ्यक्रम की घोषणा सम्बन्धी विवरणिका अवलोकनार्थ तथा आपके मंत्रालय/विभाग/संगठन/संस्थान/ विश्वविद्यालय में प्रचार-प्रसार हेतु संलग्न है। इस पाठ्यक्रम में भारत सरकार तथा राज्य सरकार मंत्रालयों तथा विभागों में कार्यरत समस्त पेशेवर तथा शैक्षणिक समुदाय के शिक्षक/शोधकर्ता तथा अन्य पेशेवर भाग ले सकते हैं। कार्यक्रम में भाग लेने के इच्छुक प्रतिभागी संस्थान की वेबसाइट <http://www.iirs.gov.in/EDUSAT-News> के द्वारा पंजीकरण कर सकते हैं।

A copy of the course contents of this online programme is enclosed herewith for your kind perusal and wider circulation in your Ministry/ Department/ Organization/ University/ Institute. The course is open for all the professionals working in various Ministries and Department of Government of India (Central and State), University/Institutional Faculty/Professors, Researchers, other working professionals and students.

इस निःशुल्क ऑनलाइन पाठ्यक्रम में एब्यू सॉफ्टवेयर के द्वारा तथा इंटरनेट का उपयोग करते हुए भाग लिया जा सकता है। पंजीकृत सहभागियों के उक्त ऑनलाइन कार्यक्रम से जोड़ने हेतु भारतीय सुदूर संवेदन संस्थान (इसरो) प्रत्यय पत्र/ प्रयोक्ता आईडी/ पासवर्ड उपलब्ध करवाएगा। पाठ्यक्रम के समाप्तोपरान्त भारतीय सुदूर संवेदन संस्थान (इसरो) सफल प्रतिभागियों को प्रमाण पत्र भी प्रदान करेगा।

The course can be attended **without any cost** through **Internet** using A-View Software which is freely available (www.aview.in) for download. IIRS/ISRO will provide credentials to receive this programme online for registered participants. The Certificate of participation will be awarded to all the participants on successful completion of the programme.

उक्त प्रसंग में और जानकारी हेतु आप डॉ॰ सरनाम सिंह, पाठ्यक्रम निदेशक ([email:sarnam@iirs.gov.in](mailto:sarnam@iirs.gov.in)), डॉ॰ हितेन्द्र पडलिया, पाठ्यक्रम समन्वेता, [दूरभाष: 0135-2524176, मो: 9411193962, ईमेल: hitendra@iirs.gov.in], डॉ॰ पूनम एस॰ तिवारी, कार्यक्रम समन्वेता, आई॰आई॰आर॰एस॰ आउटरीच कार्यक्रम [दूरभाष: 0135-2524115 (कार्यालय), मो: +91 9410924417, ईमेल : poonam@iirs.gov.in], डॉ॰ हरीश कर्नाटक, प्रमुख, जियोवेब सेवाएँ, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग [दूरभाष: 0135-2524332 (कार्यालय), मो: +91 9456565523, ईमेल: harish@iirs.gov.in], एडुसेट स्टुडियो नियंत्रण कक्ष [श्री जनार्दन विश्वकर्मा एवं श्री अशोक घिल्डियाल] दूरभाष: 0135-2524130, ईमेल: edusat2004@gmail.com और dlp@iirs.gov.in] से संपर्क कर सकते हैं अथवा संस्थान की वेबसाइट <http://www.iirs.gov.in/EDUSAT-News> देख सकते हैं।

In case if you need any further information about the programme, please feel free to contact- **Dr. Sarnam Singh**, Course Director ([email:sarnam@iirs.gov.in](mailto:sarnam@iirs.gov.in)), **Dr. Hitendra Padalia**, Course Coordinator [Ph. 0135-2524176, M:9411193962 or email- hitendra@iirs.gov.in] or **Dr. Poonam S. Tiwari**, Programme Coordinator IIRS Outreach Programme [Ph. 0135-2524115 or email- poonam@iirs.gov.in] or **Dr. Harish Karnatak**, Head, Geoweb Services, IT & Distance Learning Department [Ph.: 0135-2524332 (off.), email: harish@iirs.gov.in, EDUSAT Studio/Control Room [Shri Janardan Vishwkarma & Shri Ashok Ghildiyal] Ph.: 0135-2524130, email: edusat2004@gmail.com or dlp@iirs.gov.in or visit IIRS website [http //www .iirs.gov in/Edusat-News](http://www.iirs.gov.in/Edusat-News) for further details.

With regards and best wishes,

Yours sincerely,

आ. सेंटिल कुमार

(A. Senthil Kumar)

Encl: Course Schedule



T.P.S.
Dr. (Prof.) T. P. Singh
Director



**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	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		Interactive Session 1630-1700	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		



Dr. (Prof.) T. P. Singh
Director



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Department of Space

Government of India

Indian Space Research Organisation (ISRO)

Indian Institute of Remote Sensing, Dehradun 19th IIRS Outreach Programme - Exam

List of participants

Sr no.	Registration No.	Name	Prgramme Name	Batch	PRN
1	2017197785	Arpan Giri	M.Sc.	2016-18	16070241011
2	2017197789	Sneha Roy	M.Sc.	2016-18	16070241058
3	2017197795	Ankita Vashisht	M.Sc.	2016-18	16070241007
4	2017197796	Sarvesha Bhandarkar	M.Sc.	2016-18	16070241013
5	2017197811	Palmu Bhutia	M.Sc.	2016-18	16070241037
6	2017197813	Mitali Kota	M.Sc.	2016-18	16070241032
7	2017197815	Indranil Rakshit	M.Sc.	2016-18	16070241018
8	2017197817	Shreya Srivastava	M.Sc.	2016-18	16070241056
9	2017197820	Bratati Golui	M.Sc.	2016-18	16070241015
10	2017197822	Kirti Girdhar	M.Sc.	2016-18	16070241024
11	2017197823	Emily Laskar	M.Sc.	2016-18	16070241017
12	2017197824	Rushikesh Veer	M.Sc.	2016-18	16070241062
13	2017197833	Srinitya Ananthraman	M.Sc.	2016-18	16070241059
14	2017197877	Shruti Goel	M.Sc.	2016-18	16070241057
15	2017197888	Anmol Kanwar	M.Sc.	2016-18	16070241008
16	2017197894	Kankana Chakraborty	M.Sc.	2016-18	16070241022
17	2017197895	Anasua Chakraborty	M.Sc.	2016-18	16070241006



Dr. (Prof.) T. P. Singh
Director



SYMBIOSIS INSTITUTE OF GEOINFORMATICS

Symbiosis International University

(Established under section 3 of the UGC Act, 1956 vide notification No. F.9-12/2001-U3 Govt. of India)

Accredited by NAAC with 'A' grade

Founder: Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

Department of Space

Government of India

Indian Space Research Organisation (ISRO)

Indian Institute of Remote Sensing, Dehradun 19th IIRS Outreach Programme - Exam

List of participants

Sr no.	Registration No.	Name	Prgramme Name	Batch	PRN
18	2017198064	Madhurjya Dutta	M.Sc.	2016-18	16070241026
19	2017198092	Rushiraj Mungase	M.Sc.	2016-18	16070241033
20	2017198428	Md Haque	M.Sc.	2016-18	16070241029
21	2017198524	Prolay Bag	M.Sc.	2016-18	16070241044
22	2017198526	Ishani Choudhury	M.Sc.	2016-18	16070241019
23	2017198579	Kaushik Das	M.Sc.	2016-18	16070241023
24	2017199057	Pravarta Mulay	M.Sc.	2016-18	16070241042
25	2017199073	Rachel Lyngdoh	M.Sc.	2016-18	16070241045
26	20171910030	Aarti Jadhav	M.Sc.	2016-18	16070241020
27	20171910769	Anamika Kanjilal	M.Sc.	2016-18	16070241005
28	20171910992	Saurabh Sable	M.Sc.	2016-18	16070241050
29	20171911002	Sanjana Rajan	M.Sc.	2016-18	16070241051
30	20171911012	Akshay Gund	M.Sc.	2016-18	16070241003
31	20171911033	Rizwan Khan	M.Sc.	2016-18	16070241049
32	20171911051	Shubhangi Patil	M.Sc.	2016-18	16070241040
33	20171911065	Chetan Sharma	M.Sc.	2016-18	16070241016



Dr. (Prof.) T. P. Singh
Director



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



नामांकन सं०/ Enrollment No. : EDU192017121147

बहिःपरिसर संपर्क/विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

यह प्रमाणित किया जाता है कि **ब्रतती गोलुई**, सिम्बायोसिस इंस्टिट्यूट ऑफ जियोइन्फॉर्मेटिक्स, पुणे, महाराष्ट्र को यह प्रमाणपत्र **“सुदूर संवेदन तथा भौगोलिक सूचना प्रणाली का कार्बन वानिकी में अनुप्रयोग”** पर आधारित ऑनलाइन पाठ्यक्रम पूरित करने पर प्रदान किया गया है। उक्त पाठ्यक्रम इस संस्थान द्वारा 16 फरवरी, 2017 से 10 मार्च, 2017 तक संचालित किया गया।

This is to certify that **Bratati Golui** from **Symbiosis Institute Of Geoinformatics, Pune, Maharashtra** has been awarded this certificate for having completed the course on **“Remote Sensing and GIS Applications in Carbon Forestry”** conducted by this institute during February 16, 2017 to March 10, 2017.

दिनांक/ Date: 24-05-2017
देहरादून/ Dehradun
समन्वयक,
विश्वविद्यालय/संस्थान
Coordinator
University/ Institution

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Geoweb Services, IT & Distance Learning
Department, IIRS

समूह निदेशक,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Director, Geospatial Technologies &
Outreach Programme Group, IIRS

निदेशक,
आई.आई.आर.एस.
Director, IIRS





भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING

भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



नामांकन सं०/ Enrollment No. : EDU192017121148

बहिःपरिसर संपर्क/विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

यह प्रमाणित किया जाता है कि **संजना राजन**, सिम्बायोसिस इंस्टिट्यूट ऑफ जियोइन्फॉर्मेटिक्स, पुणे, महाराष्ट्र को यह प्रमाणपत्र **“सुदूर संवेदन तथा भौगोलिक सूचना प्रणाली का कार्बन वानिकी में अनुप्रयोग”** पर आधारित ऑनलाइन पाठ्यक्रम पूरित करने पर प्रदान किया गया है। उक्त पाठ्यक्रम इस संस्थान द्वारा 16 फरवरी, 2017 से 10 मार्च, 2017 तक संचालित किया गया।

This is to certify that **Sanjana Rajan** from **Symbiosis Institute Of Geoinformatics, Pune, Maharashtra** has been awarded this certificate for having completed the course on **“Remote Sensing and GIS Applications in Carbon Forestry”** conducted by this institute during February 16, 2017 to March 10, 2017.

दिनांक/ Date: 24-05-2017
देहरादून/ Dehradun

समन्वयक,
विश्वविद्यालय/संस्थान
Coordinator
University/ Institution

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Geoweb Services, IT & Distance Learning
Department, IIRS

समूह निदेशक,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Director, Geospatial Technologies &
Outreach Programme Group, IIRS

निदेशक,
आई.आई.आर.एस.
Director, IIRS



Dr. (Prof.) T. P. Singh
Director



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION
अंतरिक्ष विभाग, भारत सरकार/ DEPARTMENT OF SPACE, GOVERNMENT OF INDIA



नामांकन सं०/ Enrollment No. : EDU192017121149

बहिःपरिसर संपर्क/विस्तार कार्यक्रम प्रमाण पत्र
OFF - CAMPUS OUTREACH CERTIFICATE PROGRAMME

यह प्रमाणित किया जाता है कि **स्नेहा रॉय**, सिम्बायोसिस इंस्टिट्यूट ऑफ जियोइन्फॉर्मेटिक्स, पुणे, महाराष्ट्र को यह प्रमाणपत्र “**सुदूर संवेदन तथा भौगोलिक सूचना प्रणाली का कार्बन वानिकी में अनुप्रयोग**” पर आधारित ऑनलाइन पाठ्यक्रम पूरित करने पर प्रदान किया गया है। उक्त पाठ्यक्रम इस संस्थान द्वारा 16 फरवरी, 2017 से 10 मार्च, 2017 तक संचालित किया गया।

This is to certify that **Sneha Roy** from **Symbiosis Institute Of Geoinformatics, Pune, Maharashtra** has been awarded this certificate for having completed the course on “**Remote Sensing and GIS Applications in Carbon Forestry**” conducted by this institute during February 16, 2017 to March 10, 2017.

दिनांक/ Date: 24-05-2017
देहरादून/ Dehradun

समन्वयक,
विश्वविद्यालय/संस्थान
Coordinator
University/ Institution

प्रमुख,
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग
Geoweb Services, IT & Distance Learning
Department, IIRS

समूह निदेशक,
भू-स्थानिक प्रौद्योगिकी एवं आउटरीच कार्यक्रम समूह
Group Director, Geospatial Technologies &
Outreach Programme Group, IIRS

निदेशक,
आई.आई.आर.एस.
Director, IIRS



डा. (प्रो.) टी. ए. सिंह
Director

Programme Name: Induction Training

Programme Objectives:

The participants will be able to

- Identify their potential and areas of improvement
- Demonstrate Verbal & Non-verbal Communication skills
- Demonstrate Interpersonal relationship skills
- Identify what Motivates them
- Demonstrate Team Building & Leadership skills

Programme Content:

- Self Awareness
- Perception & Attitudes
- Effective Communication
- Interpersonal Relationships
- Motivation
- Team Bonding & Group Dynamics
- Leadership
- Time Management
- Stress Management

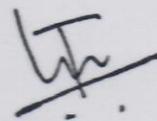
Training Methodology:

Lectures, Discussions, Case study, Role plays, Games & Experiential Processes.

Duration: 5 days

Time: 9.30 am to 5.30 pm

Professional Fees: Rs 1500/- (Rs Fifteen Hundred Only) per hour.



Dr. (Prof.) T. P. Singh
Director

SYMBIOSIS INSTITUTE OF GEOINFORMATICS
Faculty session for M.Sc Geoinformatics Batch 2016-18 (SEM I)

Course Code:

Course Name: Orientation Programme

Faculty Name: Sandeep Singh

Date	Timings	No. Of Hrs	Topics Covered	Faculty Sign.	Co-ord. Sign	Director Sign
6/6/16	9.30 5.30	8	Objectives, Intro of students Self Awareness, Communication and of Team Bonding	<u>Sandeep</u>	(JRIC)	<u>TS</u>
7/6/16	9.30 5.30	8	Basic Concepts of Self-Dev Increasing Self Confidence Attitudes &	<u>Sandeep</u>	(JRIC)	<u>TS</u>
8/6/16	9.30 5.30	8	Improving Interpersonal Relationships. Motivating Self & others. Leadership Skills.	<u>Sandeep</u>	(JRIC)	<u>TS</u>
9/6/16	9.30 5.30	8	Improving Identifying Potential, Group Dynamics: Improving Performance	<u>Sandeep</u>	(JRIC)	<u>TS</u>
10/6/16	9-30	8	Motive, Drive, Motivation Managing Time Managing Stress	<u>Sandeep</u>	(JRIC)	<u>TS</u>
		40				<u>TS</u>

SYMBIOSIS INSTITUTE OF GEOINFORMATICS

Attendance Sheet for Batch 2016-18 (SEM I)

Course Code:

Course Name: **Orientation Programme**

Faculty Name: **Mr. Sandip Sinha**

Month:

Dates: 6/6 7/6 8/6 9/6 10/6

Total

Hours conducted:

Sr. No.	Student Name	6/6	7/6	8/6	9/6	10/6	Total
1	Ankita Vashisht	P	P	P	P	P	
2	Aarti Raju Jadhav	P	P	P	P	P	
3	Ahsanul Haque	P	P	P	P	P	
4	Aisharya Basu	P	P	P	P	P	
5	Aishweria Gaur	P	P	P	P	P	
6	Akshay Devdas Koli	P	P	P	P	P	
7	Anamika Kanjilal	P	P	P	P	P	
8	Anasua Chakroborty	P	P	P	P	P	
9	Anmol Kanwar	P	P	P	P	P	
10	Anuranjana Nand	P	P	P	P	P	
11	Anushna Das Gupta	P	P	P	P	P	
12	Apran Giri	P	P	P	P	P	
13	Ashish Kumar	-	-	-	-	-	
14	Baisali Sen	P	P	P	P	P	
15	Bratati Golui	P	P	P	P	P	
16	Chetan Sharma	P	P	P	P	P	
17	Emily Laskar	P	P	P	P	P	
18	Indranil Rakshit	P	P	P	P	P	
19	Ishani Choudhury	P	P	P	P	P	
20	Jayant Kumar Sandip Sonawane	P	P	P	P	P	
21	Kankana Chakraborty	P	P	P	P	P	
22	Kaushik Kumar Das	P	P	P	P	P	
23	Kirti Girdhar	P	P	P	P	P	
24	Madhurjya Madhab Dutta	P	P	P	P	P	
25	Mahasweta Podder	P	P	P	P	P	
26	Mani Shankar Neogi	P	P	P	P	P	
27	Megha Kundu	P	P	P	P	P	
28	Mitali Madhukar Kota	P	P	P	P	P	
29	Mijanur sarkar	-	-	-	-	-	
30	Nikhilesh Bhattacharyya	P	P	P	P	P	

Faculty Signature:

[Handwritten Signature]



Dr. (Prof.) T. P. Singh
Director

SYMBIOSIS INSTITUTE OF GEOINFORMATICS
Attendance Sheet for Batch 2016-18 (SEM I)

Course Code:

Course Name: Orientation Programme

Faculty Name: Mr. Sandip Sinha

Dates: 6/6 7/6 8/6 9/6 10/6 Total

Hours conducted:

Sr.No.	Student Name	6/6	7/6	8/6	9/6	10/6	Total
31	Nishad Rohidas Naik	P	P	P	P	P	
32	Nitya Sinha	P	P	P	P	P	
33	Palmu Bhutia	P	P	P	P	P	
34	Partha Nandi	P	P	P	P	P	
35	Partha Pradeep Bhatt	P	P	P	-	P	
36	Patil Shubhangi Ananda	P	P	P	P	P	
37	Pratiksha Lal Saraf	-	-	-	-	P	
38	Priyadarshini Dutta	P	P	P	P	P	
39	Prolay Bag	P	P	P	P	P	
40	Rachel Lyngdoh	P	P	P	P	P	
41	Rahul Chandar Rathod	P	P	P	P	P	
42	Rajan Prasad Rajak	P	P	P	P	P	
43	Ram Srujan M. R.	P	P	P	P	P	
44	Rapborlang Samiam	P	P	P	P	P	
45	Rizwan Khan	P	P	P	P	P	
46	Rushikesh S Veer	P	P	P	P	P	
47	Rushiraj S Mungase	P	P	P	P	P	
48	Sanjana Rajan	P	P	P	P	P	
49	Saradindu Dey	P	P	P	P	P	
50	Sarvesha Sandesh Bhandarkar	P	P	P	P	P	
51	Saurabh Sunil Sable	P	P	P	P	P	
52	Shakti Singh	-	-	-	-	P	
53	Sheetal Bhadauriya	P	P	P	P	P	
54	Shreya Srivastava	P	P	P	P	P	
55	Shruti Goel	P	P	P	P	P	
56	Sneha Ray	P	P	P	P	P	
57	Sohan Subhash Bhosale	P	P	P	P	P	
58	Srinitya Ananthraman	-	-	-	-	-	
59	Supriya Nayak	P	P	P	P	P	
60	Tapas Khaskel	P	P	P	P	P	

Faculty Signature:

[Handwritten Signatures]

[Handwritten Signature]



SYMBIOSIS INSTITUTE OF GEOINFORMATICS

Symbiosis International (Deemed University)

(Established under section 3 of the UGC Act, 1956 vide notification No. F.9-12/2001-U3 Govt. of India)

Re-accredited by NAAC with 'A' grade

Founder : Prof. Dr. S. B. Mujumdar, M. Sc., Ph. D. (Awarded Padma Bhushan and Padma Shri by President of India)

21/06/2016

Yoga Day celebration

“Yoga is an invaluable gift of India’s ancient tradition. It embodies unity of mind and body; thought and action; restraint and fulfillment; harmony between man and nature; a holistic approach to health and well-being. It is not about exercise but to discover the sense of oneness with yourself, the world and the nature. By changing our lifestyle and creating consciousness, it can help in well being.”

Yoga Day was celebrated by the students and teachers at SIG with great enthusiasm. Students demonstrated various asanas followed by Omkar chanting. Warm up exercises were taken and all the students performed sitting and standing asanas, importance of these were explained simultaneously. Director encouraged students to practice regular yoga to remain fit and improve concentration.

Regular practice of yoga will surely help our students achieve a better life, physically, mentally and spiritually as well.



SYMBIOSIS INSTITUTE OF GEOINFORMATICS
Attendance Sheet for Batch 2016-18 (SEM I)

Course Code:
 Course Name: **Attendance for guest lecture Mr. Amey Yerawdekar, Mr. Sneff, Yoga Day.**
 Faculty Name: _____

Sr. No.	Student Name	Month: _____			Total
		Dates: 15/6/16 Mr. Amey Yerawdekar	15/6/16 Mr. Sneff	21/6/16 Yoga Day	
1	Ankita Vashisht	P	P	P	
2	Aarti Raju Jadhav	P	P	.	
3	Ahsanul Haque	P	P	P	
4	Aisharya Basu	P	P	P	
5	Aishweria Gaur	P	P	P	
6	Akshay Devdas Koli	P	P	P	
7	Anamika Kanjilal	P	P	P	
8	Anasua Chakroborty	P	P	P	
9	Anmol Kanwar	P	P	P	
10	Anuranjana Nand	P	P	.	
11	Anushna Das Gupta	P	P	P	
12	Arpan Giri Arpan	P	P	P	
13	Ashish Kumar	P	P	.	
14	Baisali Sen	P	P	P	
15	Bratati Golui	P	P	P	
16	Chetan Sharma	P	P	P	
17	Emily Laskar	P	P	P	
18	Indranil Rakshit	P	P	P	
19	Ishani Choudhury	P	P	P	
20	Jayant Kumar Sandip Sonawane	P	P	P	
21	Kankana Chakraborty	P	P	P	
22	Kaushik Kumar Das	P	P	P	
23	Kirti Girdhar	P	P	P	
24	Madhurjya Madhab Dutta	P	P	P	
25	Mahasweta Podder	P	P	P	
26	Mani Shankar Neogi	P	P	P	
27	Megha Kundu	P	P	P	
28	Mitali Madhukar Kota	P	P	P	
29	Mijanur sarkar	A	A		
30	Nikhilesh Bhattacharyya	P	P	P	

Faculty Signature: _____



Dr. (Prof.) T. P. Singh
Director

SYMBIOSIS INSTITUTE OF GEOINFORMATICS
Attendance Sheet for Batch 2016-18 (SEM I)

Course Code:

Course Name:

Faculty Name:

Dates:							Total
Hours conducted:							

Sr.No.	Student Name						
31	Nishad Rohidas Naik	A		A		P	
32	Nitya Sinha	P		P		P	
33	Palmu Bhutia	P		P		P	
34	Partha Nandi	P		P		P	
35	Parth Pradeep Bhatt	P		P		P	
36	Patil Shubhangi Ananda	P		P		P	
37	Pratiksha Lal Saraf	P		P		P	
38	Priyadarshini Dutta	P		P		P	
39	Prolay Bag	P		P		P	
40	Rachel Lyngdoh	P		P		P	
41	Rahul Chandar Rathod	P		P		P	
42	Rajan Prasad Rajak	P		P		P	
43	Ram Srujan M. R.	P		P		P	
44	Rapborlang Samiam	P		P		P	
45	Rizwan Khan	P		P		P	
46	Rushikesh S Veer	P		P		P	
47	Rushiraj S Mungase	P		P		P	
48	Sanjana Rajan	P		P		P	
49	Saradindu Dey	P		P		P	
50	Sarvesha Sandesh Bhandarkar	P		P		P	
51	Saurabh Sunil Sable	P		P		P	
52	Shakti Singh	P		P		P	
53	Sheetal Bhadauriya	P		P		P	
54	Shreya Srivastava	P		P		P	
55	Shruti Goel	P		P		P	
56	Sneha Ray	P		P		P	
57	Sohan Subhash Bhosale	P		P		P	
58	Srinitya Ananthraman	A		A		P	
59	Supriya Nayak	P		P		P	
60	Tapas Khaskel	P		P		P	
61	Satyam Mondal	P		P		P	
62	Akshay Gund	P		P		P	
63							

Faculty Signature:



Dr. (Prof.) T. P. Singh
Director

Summary

Name of the capability enhancement scheme	Year of implementation	Number of students enrolled	Name of the agencies involved with contact details
Technology – Remote Sensing and GIS Applications in Carbon Forestry	February 16 – March 10, 2017	33	IIRS, ISRO
Soft skills & communication skills	6 – 10 June 2016	57	Sandeep Sinha
Yoga Day	21-6-16	51	SIU

