

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_19-20_Capability enhancement.pdf		
Sr. No	Details of Documents	No of Pages
1.	Technology trends 1 – Course brochure, course letter, Time table, Participants list	6
2.	Technology trends 2 – Course brochure, course letter, Participants list	5
3.	Technology trends 3 – Course brochure, course letter, Time table, Participants list	15
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5.	Summary	1

IIRS Outreach Programme

The IIRS outreach programme, which started in 2007 with 12 universities/ institutions has now grown substantially. Currently, 880 universities / institutions spread across India covering 30 States and 2 Union Territories are networked with IIRS. 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

The participants can submit their feedback through online portal. Feedbacks are critically analyzed and implemented in next courses. For one to one feedback the participants and participating organizations are invited to attend annual IIRS User Interactive Meet (IUIIM) at IIRS Dehradun.



IIRS Outreach programme feedback session during IIRS User Interaction Meet (IUIIM)-2018

Awards of Appreciation

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 (<https://elearning.iirs.gov.in>).

Contact Details

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IIRS DLP Team

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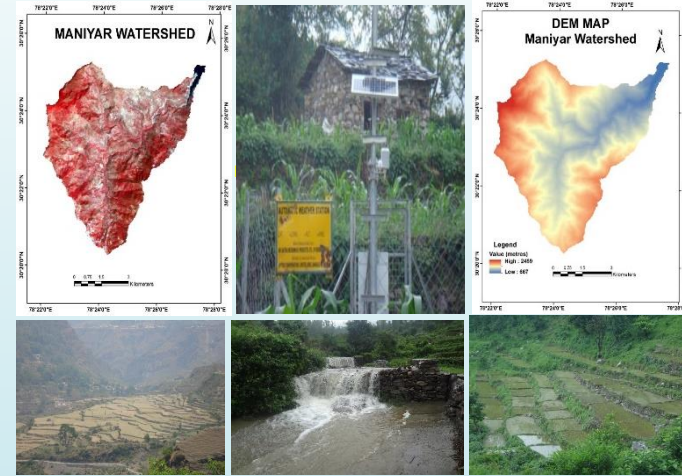
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Indian Institute of Remote Sensing,
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Department of Space, Govt. of India,
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Email: dip@iirs.gov.in

45th IIRS Outreach Programme



RS and GIS Applications in Watershed Management

April 08- April 12, 2019



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

Watershed is a natural hydrologic entity governed by the terrain topography from where run-off is drained to a point and used for planning and management of natural resources. Watershed management encompasses an integrated/comprehensive approach for proper planning, utilisation and conservation of various resources including land as well as water, resulting in the overall improvement of resources within the area. Hence, continuous monitoring and assessment of various components becomes necessary for effective Watershed Management.

Geospatial technologies including remote sensing, GIS and GPS has emerged as a powerful tool in recent years for assessment and monitoring of natural resources. Integrated Watershed Management Programme (IWMP)(presently as WDC-PMKSY), a flagship programme of Govt of India was envisaged to restore the ecological balance by harnessing and conserving soil and water resources. IWMP emphasizes use of geospatial technology in natural resource assessment, planning and monitoring of the watershed. Nearly 50,000 micro watersheds in 10 states are being monitored using high spatial resolution remote sensing data through BHUVAN. This course will provide an overview on the principles of watershed management, use of geospatial technologies for watershed management including the use of digital elevation models (DEMs) for terrain analysis of watershed, spatial modelling of soil erosion and soil and water conservation planning. The course is therefore of special interest for the professionals, researchers and students interested in learning utility of these modern technologies in the context of Watershed Management.

Curriculum

- Concept and principles of watershed, Overview of RS and GIS applications in watershed management
- Terrain analysis for watershed characterization
- Geospatial modelling for soil erosion assessment in watershed

- Soil and water conservation planning
- Monitoring of watershed development programs using RS and GIS

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.

The course is designed for professionals from Central / State Govt. / State watershed directorates/ Private Organizations/ NGO engaged in land resources management and planning/ students and researchers aligned to research in watershed management.

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

The Course is free of cost.

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

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

- IIRS Learning Management System.

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 attending 40% in the online examination.



सं०: आई०आई०आर०एस० /एडुसेट/२०१९/४५
No.: IIRS/GIT&DL/EDUSAT/2019/45

दिनांक: ०५ मार्च, २०१९
Date: March 05, 2019

विषय: ०८ अप्रैल २०१९ से "सुदूर संवेदन और भौगोलिक सूचना प्रणाली का अनुप्रयोग जल संग्रहण प्रबंध" पर प्रारम्भ होने वाले ४५वें आई०आई०आर०एस० आउटरीच कार्यक्रम की घोषणा के संबंध में।

Sub: Announcement of 45th IIRS Outreach Program on "RS and GIS Applications in Watershed Management" commencing from April 08, 2019.

महोदय/महोदया,
Sir/ Madam,

पृथ्वी अवलोकन (ई ओ) भारतीय अन्तरिक्ष अनुसंधान संस्थान का एक महत्वपूर्ण कार्यक्रम है, जिसके अंतर्गत पिछले पचास वर्षों में कई उपग्रहों को अन्तरिक्ष में प्रक्षेपित किया गया है। इन उपग्रहों से प्राप्त आकड़ों का उपयोग प्राकृतिक संसाधन व आपदा प्रबंधन में किया जाता है। भारतीय सुदूर संवेदन संस्थान (भा.सु.सं.सं.) भू-स्थानिक प्रौद्योगिकी के अंतर्गत शिक्षण, प्रशिक्षण तथा क्षमता संवर्धन को समर्पित एक महत्वपूर्ण संस्थान है। इस संस्थान द्वारा अब तक 42 उपग्रह एवं इंटरनेट आधारित आउटरीच पाठ्यक्रम संचालित किए जा चुके हैं। इन पाठ्यक्रमों से लगभग 900 भारतीय विश्वविद्यालयों/ संस्थानों के करीब 91,000 से अधिक प्रतिभागी लाभान्वित हुए हैं। इस कार्यक्रम को आगे बढ़ाते हुए हम सहर्ष ४५वें आई०आई०आर०एस० आउटरीच कार्यक्रम को प्रारंभ करने की घोषणा करते हैं। ०८ अप्रैल २०१९ से प्रारम्भ होने वाला यह कार्यक्रम "सुदूर संवेदन और भौगोलिक सूचना प्रणाली का अनुप्रयोग जल संग्रहण प्रबंध" पर आधारित है। यह कार्यक्रम कार्यरत सरकारी एवं गैर - सरकारी तथा छात्रों हेतु संचालित किया जा रहा है। यह कार्यक्रम प्रतिभागियों को अपने कार्यस्थल पर रहते हुये ज्ञान को समृद्ध करने का एक अनूठा अवसर प्रदान करेगा।

The Indian Space Research Organisation (ISRO) has a vibrant Earth Observation (EO) programme since last 50 years with launch of several satellite missions. The Indian Remote Sensing Satellite (IRS) series of satellites provide space based information for monitoring and management of natural resources and Disaster Management Support. The Indian Institute of Remote Sensing (IIRS) is a premier Institute under ISRO engaged in training, education and capacity building on use of geospatial technology for natural resources monitoring and disaster management since last five decades. The Institute has so far conducted 42 Satellite and Internet based Outreach Programmes, benefitting more than 89,000 participants from 880 Indian universities/ institutions/user Departments/user ministries in India. To promote the use of Geospatial technology, IIRS announces the 45th IIRS Outreach Program on "RS and GIS Applications in Watershed Management" commencing from April 08, 2019. The course is targeted to working professionals and students and will provide a unique opportunity to the learners to enhance their knowledge by attending the course at their respective working places.

प्रकृतिक संसाधनों के आंकलन और निगरानी के लिए हाल के वर्षों में सुदूर संवेदन जी.आई.एस. और जी.पी.एस. सहित भू-स्थानिक प्रौद्योगिकीयों एक शक्तिशाली साधन के रूप में उभरी हैं। एकीकृत जलागम प्रबंधन प्रोग्राम (आई.डब्ल्यू.एम.पी.) (वर्तमान में डब्ल्यू.डी.सी. - पी.एम.के.एस.वाई.), भारत सरकार के एक प्रमुख कार्यक्रम के अंतर्गत मृदा एवं जल संसाधनों का समुचित उपयोग और संरक्षण के द्वारा पारिस्थितिक संतुलन को पुनर्स्थापित करने की परिकल्पना की गयी है। आई.डब्ल्यू.एम.पी. प्रोग्राम प्राकृतिक संसाधनों का मूल्यांकन योजना एवं निगरानी में भू-स्थानिक प्रौद्योगिकी के अधिकाधिक उपयोग पर जोर देता है। वर्तमान में देश के 10 राज्यों में लगभग 50,000 माइक्रो जलागम का उच्च स्थानिक सुदूर संवेदी आंकड़ों के उपयोग द्वारा BHUVAN के माध्यम से निगरानी की जा रही है। यह पाठ्यक्रम जलागम प्रबंधन के सिद्धांतों पर एक सिंहवालोकन, जलागम प्रबंधन के लिए भू-स्थानिक प्रौद्योगिकियों के उपयोग के साथ-साथ जलागम के विश्लेषण के लिए डिजिटल-इलेक्शन मॉडल (डी.ई.एम.) का उपयोग, मृदा का क्षरण और मृदा और जल संरक्षण योजना के स्थानिक मॉडलिंग एवं निगरानी के विषयों पर विवेचना करेगा। यह पाठ्यक्रम उन सरकारी कर्मचारी, शोधकर्ताओं और विद्यार्थियों का मृदा एवं जल के संदर्भ में भू-स्थानिक प्रौद्योगिकियों की उपयोगिता को सीखने में अत्यंत उपयोगी होगा।

Geospatial technologies including Remote Sensing, GIS and GPS has emerged as a powerful tool in recent years for assessment and monitoring of natural resources. Integrated Watershed Management Programme (IWMP) presently as WDC-PMKSY, a flagship programme of Govt of India was envisaged to restore the ecological balance by

harnessing and conserving soil and water resources. IWMP emphasizes use of geospatial technology in natural resource assessment, planning and monitoring of the watershed. Nearly 50,000 micro watersheds in 10 states are being monitored using high spatial resolution remote sensing data through BHUVAN. This course will provide an overview on the principles of watershed management, use of geospatial technologies for watershed management including the use of digital elevation models (DEMs) for terrain analysis of watershed, spatial modelling of soil erosion and soil and water conservation planning. The course is useful for the professionals, researchers and students interested in learning utility of Geospatial technologies in the context of Watershed Management.

अपने कार्यस्थल में रहकर प्रतिदिन डेढ़ घंटा समर्पित करके भू-स्थानिक प्रौद्योगिकी सीखने का यह एक अनोखा अवसर है। इस पाठ्यक्रम में निशुल्क भाग लिया जा सकता है। कार्यक्रम आईआईआरएस से उपलब्ध पूर्ण रूप से निशुल्क सॉफ्टवेयर का उपयोग करके आईआईआरएस वेबसाइट और यूट्यूब पर लाईव स्ट्रीमिंग के माध्यम से प्राप्त किया जा सकता है। यह कार्यक्रम एनएनआरएमएस, अंतरिक्ष विभाग, और क्षमता निर्माण के लिए भारत सरकार द्वारा प्रायोजित है। पाठ्यक्रम पूर्ण करने पर प्रतिभागियों को आईआईआरएस, इसरो से प्रमाण पत्र के साथ सम्मानित किया जाएगा। यह कार्यक्रम 16:00-17:30 बजे के दौरान प्रतिदिन प्रसारित किया जाएगा। इस कोर्स के घोषणा ब्रोशर की एक प्रति आपके सहयोगियों और आपके विश्वविद्यालय / संस्थान / संगठन में परिसंचरण के लिए इसके साथ भेजी जा रही है। यह पाठ्यक्रम यूजी और पीजी छात्रों / शोधकर्ताओं / वैज्ञानिक / तकनीकी कर्मचारियों और इच्छुक व्यक्तियों के लिए उपलब्ध है। इसके व्यापक प्रचार और आपके विश्वविद्यालय / संस्थान / संगठन से अधिकतम भागीदारी के लिए आपके समर्थन की आवश्यकता है।

It is a unique opportunity for participants to learn directly from their place of working by devoting an hour and a half each day. The course can be attended with **no cost** to the participants. Programme can be receive live through internet using freely available software from IIRS and also through live streaming from IIRS website and YouTube. This Programme is sponsored by NNRMS, Department of space, and Government of India for capacity building. The participants who successfully complete the course will be awarded a certificate from IIRS, ISRO. The programme is scheduled during 1600 Hrs.-1730 Hrs. every day for a week. A copy of the announcement brochure of this course is forwarded herewith for your kind perusal and for circulation in your university/institute/Organisation. The course is open to UG & PG students/researchers/scientific/technical staff and interested individuals. We need your support for wide publicity and maximum participation from your university/ institute/Organisation.

यदि आपको कार्यक्रम के बारे में और जानकारी की आवश्यकता है, तो कृपया संपर्क करने में संकोच न करें

- डॉ. सुरेश कुमार, पाठ्यक्रम निदेशक, ४५वें आईआईआरएस आउटरीच प्रोग्राम / Dr. Suresh Kumar, Course Director, 45th IIRS Outreach Programme - Ph.: 2524142 (Office), email: suresh_kumar@iirs.gov.in
- श्री जस्टिन जॉर्ज के, पाठ्यक्रम समन्वयक, ४५वें आईआईआरएस आउटरीच प्रोग्राम / Mr. Justin George K, Course Coordinator, 45th IIRS Outreach Programme - Ph.: 2524139 (Office), email: justin@iirs.gov.in
- डॉ हरीश कर्नाटक, प्रमुख, भू-वेब सेवाएँ, सूचना प्रौद्योगिकी तथा दूरस्थ अधिगम विभाग / Dr. Harish Karnatak, Head, Geoweb Services, IT & Distance Learning Department - Ph.: 0135-2524332 (Office), email: harish@iirs.gov.in
- डॉ पूनम एस तिवारी, कार्यक्रम समन्वयक, आईआईआरएस आउटरीच प्रोग्राम / Dr. Poonam S. Tiwari, Programme Coordinator, IIRS Outreach Programme - Ph. 0135-2524334 (Office), email- poonam@iirs.gov.in
- श्री अशोक घिल्डियाल, प्रमुख संपर्क अधिकारी, आईआईआरएस आउटरीच प्रोग्राम / Shri Ashok Ghildiyal, Focal point, IIRS Outreach Programme - Ph.: 0135-2524130, 9611568920 email: ashokg@iirs.gov.in
- एडीयूसैट स्टूडियो / कंट्रोल रूम [श्री जनार्दन विश्वकर्मा और श्री अशोक घिल्डियाल] / EDUSAT Studio/Control Room [Shri Janardan Vishwakarma & Shri Ashok Ghildiyal] - Ph.: 0135-2524130, email: dlp@iirs.gov.in

You may also 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,

(Prakash Chauhan)

Encl: Course Schedule



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



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


irs

**45th IIRS Outreach Programme on “RS and GIS Applications in
Watershed Management”**

April 08, 2019 to April 15, 2019


Date & Time	Day	Lecture	Faculty
08.04.2019 1600-1730	Monday	Overview of RS & GIS applications in watershed management	Dr Suresh Kumar
09.04.2019 1600-1730	Tuesday	Digital elevation model for terrain analysis of watershed	Mr Justin George K
10.04.2019 1600-1730	Wednesday	Modelling soil erosion for watershed management	Mr Justin George K
12.04.2019 1600-1730	Friday	Soil and water conservation planning in watershed	Dr Suresh Kumar
15.04.2019 1600-1730	Monday	Remote sensing and GIS applications in monitoring of watershed development programme	Dr T Ravishankar
		Panel Discussion	Course Faculty




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

S.No.	RegNo.	Name	Father's Name	DOB	Mobile No.	Email
1	20194400075342	A DHANURAGAVI	P AYYAPPAN	03/08/1996	8883258355	ragavini3@gmail.com
2	20194500075142	Digvijay Patil	Sanjay Patil	17/11/1993	9823656792	17070146010@sig.ac.in
3	20194574267	Ayushi Kshirsagar	Rajendra Kshirsagar	10-30-1993	9420914776	ar93kshirsagar@gmail.com




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

IIRS Outreach Programme

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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 (<https://elearning.iirs.gov.in>).

Contact Details

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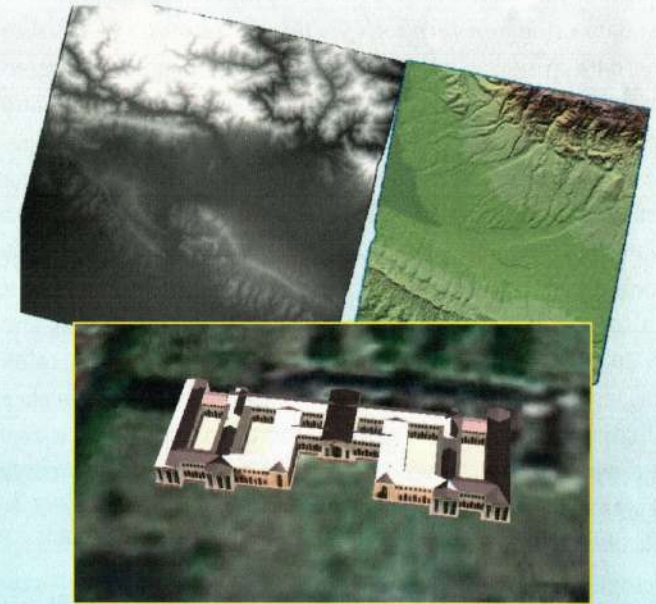
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IIRS DLP Team

Mr. Janardan Vishwakarma
&
Mr. Ashok Ghildiyal
Tel: 0135-2524130

Indian Institute of Remote Sensing,
Indian Space Research Organisation
Department of Space, Govt. of India,
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48th IIRS Outreach Programme



Digital Photogrammetry based 3D Modelling

July 29 - August 02, 2019



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

In recent years it has been possible to collect vast quantities of 3D data using new technology, and to interpret and visualize the data in new ways. The third dimension has become an integral part of geospatial information. Different methods and techniques are adopted to acquire 3D data from space borne, airborne and terrestrial sensors. 3D technology is finding huge utility in resource monitoring, facilities management, urban planning, defense and internal security and has not only revolutionized the surveying and mapping applications but it has emerged as a powerful tool for planning, monitoring and evaluation of developmental activities, informed decision making in governance. With the prevalence of smartphones and drones, photogrammetry is now widely present as an effective and cost-efficient method to easily recreate 3D models of large areas and specific objects or buildings. In fact, some drones have utilized smartphones within their systems to deploy photogrammetry data collection. Smartphones and devices have come to replace common loading cameras and older photogrammetric equipment within drones due to their cost effectiveness and increased smartphone resolution and accuracy.

A few potential users of the technique are administrators, decision makers, engineers, researchers in medical profession, city planners, natural resource scientists, entertainment industry. Photogrammetry has dealt with the 3D reconstruction of objects from images. It provides low cost, accurate, photo-realistic object models using digital images and allows a virtual first-person experience of the real world.

Curriculum

The course structure is spread into following broad topics of teaching on:

- Overview of Photogrammetry
- Aerial Photogrammetry

- Satellite Photogrammetry
- Terrestrial Photogrammetry
- Applications of Photogrammetry
- DEM and its derivatives
- Issues Challenges and current trends in Photogrammetry

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.

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

The Course is free of cost.

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

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

- IIRS Learning Management System.

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 on 70% attendance and scoring 40% marks in online examination.

भारत सरकार
अंतरिक्ष विभाग
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Government of India
Department of Space

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दिनांक: 20 जून, 2019
Date: June 20, 2019

सं: आई°आई°आर°एस°/ जीआईटी और डीएल/एडुसेट/2019/48
IIRS/GIT&DL/EDUSAT/2019/48

विषय: 29 जुलाई, 2019 से शुरू होने वाले "डिजिटल फोटोग्रामेट्री आधारित 3 डी मॉडलिंग" पर 48 वें आई°आई°आर°एस° आउटरीच कार्यक्रम की घोषणा।

Sub: Announcement of 48th IIRS Outreach Program on "Digital Photogrammetry based 3D Modelling" commencing from July 29, 2019.

महोदय/महोदया,
Sir/ Madam,

पृथ्वी अवलोकन (इसरो) भारतीय अन्तरिक्ष अनुसंधान संस्थान का एक महत्वपूर्ण कार्यक्रम है, जिसके अंतर्गत पिछले पचास वर्षों में कई उपग्रहों को अन्तरिक्ष में प्रक्षेपित किया गया है। इन उपग्रहों से प्राप्त आकड़ों का उपयोग प्राकृतिक संसाधन व आपदा प्रबंधन में किया जाता है। भारतीय सुदूर संवेदन संस्थान (भा.सु.सं.सं.) भू-स्थानिक प्रौद्योगिकी के अंतर्गत शिक्षण, प्रशिक्षण तथा क्षमता संवर्धन को समर्पित एक महत्वपूर्ण संस्थान है। इस संस्थान द्वारा अब तक 45 उपग्रह एवं इंटरनेट आधारित आउटरीच पाठ्यक्रम संचालित किए जा चुके हैं। इन पाठ्यक्रमों से लगभग 920 भारतीय विश्वविद्यालयों / संस्थानों के करीब 96,000 से अधिक प्रतिभागी लाभान्वित हुए हैं। इस कार्यक्रम को आगे बढ़ाते हुए हम सहर्ष 48 वें आई°आई°आर°एस° आउटरीच कार्यक्रम को प्रारंभ करने की घोषणा करते हैं। **29 जुलाई, 2019** से प्रारम्भ होने वाला यह कार्यक्रम "डिजिटल फोटोग्रामेट्री आधारित 3 डी मॉडलिंग" पर आधारित है। यह कार्यक्रम कार्यरत सरकारी एवं गैर - सरकारी तथा छात्रों हेतु लक्षित है। यह कार्यक्रम प्रतिभागियों को अपने कार्यस्थल पर रहते हुये ज्ञान को समृद्ध करने का एक अनूठा अवसर प्रदान करेगा।

The Indian Space Research Organisation (ISRO) has a vibrant Earth Observation (EO) programme since last 50 years with launch of several satellite missions. The Indian Remote Sensing Satellite (IRS) series of satellites provide space based information for monitoring and management of natural resources and Disaster Management Support. The Indian Institute of Remote Sensing (IIRS) is a premier Institute under ISRO engaged in training, education and capacity building on use of geospatial technology for natural resources monitoring and disaster management since last five decades. The Institute has so far conducted 45 Satellite and Internet based Outreach Programmes, benefitting more than 96,000 participants from 920 Indian universities/ institutions/user Departments/user ministries in India. To promote the use of Geospatial technology, IIRS announces the 48th IIRS Outreach Program on "Digital Photogrammetry based 3D Modelling" commencing from **July 29, 2019**. The course is targeted to working professionals and students and will provide a unique opportunity to the learners to enhance their knowledge by attending the course at their respective working places.

हाल के वर्षों में नई तकनीक का उपयोग करके बड़ी मात्रा में 3 डी डेटा एकत्र करना, और नए तरीकों से डेटा की व्याख्या और कल्पना करना संभव हो गया है। तीसरा आयाम भू-स्थानिक सूचना का एक अभिन्न अंग बन गया है। अंतरिक्ष हवाई और स्थलीय सेंसर से 3 डी डेटा प्राप्त करने के लिए विभिन्न तरीकों और तकनीकों को अपनाया जाता है। 3 डी तकनीक संसाधन की निगरानी, सुविधाओं के प्रबंधन, शहरी नियोजन, रक्षा और आंतरिक सुरक्षा में भारी उपयोगिता पा रही है और इसने न केवल सर्वेक्षण और मानचित्रण अनुप्रयोगों में क्रांति ला दी है, बल्कि यह विकास गतिविधियों की योजना, निगरानी और मूल्यांकन के लिए एक शक्तिशाली उपकरण के रूप में उभरा है। स्मार्टफोन और ड्रोन की व्यापकता के साथ, फोटोग्रामेट्री अब बड़े क्षेत्रों और विशिष्ट वस्तुओं या इमारतों के 3 डी मॉडल को आसानी से फिर से बनाने के लिए एक प्रभावी और लागत-प्रभावी विधि के रूप में व्यापक रूप से मौजूद है। वास्तव में, कुछ ड्रोंनों ने फोटोग्रामेट्री डेटा संग्रह को तैनात करने के लिए अपने सिस्टम के भीतर स्मार्टफोन का उपयोग किया है। स्मार्टफोन और डिवाइस अपनी लागत प्रभावशीलता और बढ़े हुए स्मार्टफोन रिज़ॉल्यूशन और सटीकता के कारण ड्रोन के भीतर आम लोडिंग कैमरों और पुराने फोटोग्रामेट्रिक उपकरणों को बदलने के लिए उपयोग में लिए जाते हैं। फोटोग्रामेट्री ने छवियों से वस्तुओं के 3 डी पुनर्निर्माण को संभव किया है। यह डिजिटल छवियों का उपयोग करके कम लागत,

सटीक, फोटो-यथार्थवादी वस्तु मॉडल प्रदान करता है और वास्तविक दुनिया के एक आभासी प्रथम-व्यक्ति अनुभव की अनुमति देता है। तकनीक के कुछ संभावित उपयोगकर्ता प्रशासक, निर्णय निर्माता, इंजीनियर, चिकित्सा पेशे में शोधकर्ता, शहर नियोजक, प्राकृतिक संसाधन वैज्ञानिक, मनोरंजन उद्योग हैं।

In recent years it has been possible to collect vast quantities of 3D data using new technology, and to interpret and visualize the data in new ways. The third dimension has become an integral part of geospatial information. Different methods and techniques are adopted to acquire 3D data from space borne, airborne and terrestrial sensors. 3D technology is finding huge utility in resource monitoring, facilities management, urban planning, defense and internal security and has not only revolutionized the surveying and mapping applications but it has emerged as a powerful tool for planning, monitoring and evaluation of developmental activities, informed decision making in governance. With the prevalence of smartphones and drones, photogrammetry is now widely present as an effective and cost-efficient method to easily recreate 3D models of large areas and specific objects or buildings. In fact, some drones have utilized smartphones within their systems to deploy photogrammetry data collection. Smartphones and devices have come to replace common loading cameras and older photogrammetric equipment within drones due to their cost effectiveness and increased smartphone resolution and accuracy. Photogrammetry has dealt with the 3D reconstruction of objects from images. It provides low cost, accurate, photo-realistic object models using digital images and allows a virtual first-person experience of the real world. A few potential users of the technique are administrators, decision makers, engineers, researchers in medical profession, city planners, natural resource scientists, entertainment industry.

अपने कार्यस्थल में रहकर प्रतिदिन डेढ़ घंटा समर्पित करके भू-स्थानिक प्रौद्योगिकी सीखने का यह एक अनोखा अवसर है। इस पाठ्यक्रम में निशुल्क भाग लिया जा सकता है। कार्यक्रम आईआईआरएस से उपलब्ध पूर्ण रूप से निशुल्क सॉफ्टवेयर का उपयोग करके आईआईआरएस वेबसाइट और यूट्यूब पर लाईव स्ट्रीमिंग के माध्यम से प्राप्त किया जा सकता है। पाठ्यक्रम पूर्ण करने पर प्रतिभागियों को आईआईआरएस, इसरो से प्रमाण पत्र के साथ सम्मानित किया जाएगा। यह कार्यक्रम 16:00-17:30 बजे के दौरान प्रतिदिन प्रसारित किया जाएगा। इस कोर्स के घोषणा ब्रोशर की एक प्रति आपके सहयोगियों और आपके विश्वविद्यालय / संस्थान / संगठन में परिसंचरण के लिए इसके साथ भेजी जा रही है। यह पाठ्यक्रम यूजी और पीजी छात्रों / शोधकर्ताओं / वैज्ञानिक / तकनीकी कर्मचारियों और इच्छुक व्यक्तियों के लिए उपलब्ध है। इसके व्यापक प्रचार और आपके विश्वविद्यालय / संस्थान / संगठन से अधिकतम भागीदारी के लिए आपके समर्थन की आवश्यकता है।

It is a unique opportunity for participants to learn directly from their place of working by devoting an hour and a half each day. The course can be attended with **no cost** to the participants. Programme can be receive live through internet using freely available software from IIRS and also through live streaming from IIRS website and YouTube. The participants who successfully complete the course will be awarded a certificate from IIRS, ISRO. The programme is scheduled during 1600 Hrs.-1730 Hrs. every day for a week. A copy of the announcement brochure of this course is forwarded herewith for your kind perusal and for circulation in your university/institute/Organisation. The course is open to UG & PG students/researchers/scientific/technical staff and interested individuals. We need your support for wide publicity and maximum participation from your university/ institute/Organisation.

यदि आपको कार्यक्रम के बारे में और जानकारी की आवश्यकता है, तो कृपया संपर्क करने में संकोच न करें

- डॉ हरीश कर्नाटक, प्रमुख, भू-वेब सेवाएँ, सूचना प्रौद्योगिकी तथा दूरस्थ अधिगम विभाग / Dr. Harish Karnatak, Head, Geoweb Services, IT & Distance Learning Department - Ph.: 0135-2524332 (Office), email: harish@iirs.gov.in
- डॉ पूनम एस तिवारी, कार्यक्रम समन्वयक, आईआईआरएस आउटरीच प्रोग्राम / Dr. Poonam S. Tiwari, Programme Coordinator, IIRS Outreach Programme - Ph. 0135-2524334 (Office), email- poonam@iirs.gov.in
- श्री अशोक घिल्डियाल, प्रमुख संपर्क अधिकारी, आईआईआरएस आउटरीच प्रोग्राम / Mr. Ashok Ghildiyal, Focal point, IIRS Outreach Programme - Ph.: 0135-2524130, 09611568920 email: ashokg@iirs.gov.in
- एडीयूसैट स्टूडियो / कंट्रोल रूम [श्री जनार्दन विश्वकर्मा और श्री अशोक घिल्डियाल] / EDUSAT Studio/Control Room [Shri Janardan Vishwakarma & Shri Ashok Ghildiyal] - Ph.: 0135-2524130, email: dlp@iirs.gov.in


You may also visit IIRS website <https://www.iirs.gov.in/Edusat-News> for further details.

With regards and best wishes,


(Prakash Chauhan)
Director, IIRS

Encl: Course Schedule





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

Attendance Record for Course on Digital Photogrammetry based 3D modelling

Registration Number	Name
201948078240	MR. KRISHNA
201948081514	MR. ARPIT SINGH
201948081139	MS. ADRITA TALAPATRA
201948077874	MS. RITIKA GUPTA
201948081189	MS. ARNAVA GHATAK
201948078449	MR. DEBOBRATA SADHUKHAN
201948077724	MR. RAHULKUMAR SAMPATLAL JAIN
201948081145	MR. J ARJUN
201948078223	MS. PRADNITA KOMAL HENRY
201948081231	MR. TEJAS SANJAY MAHADIK
201948080069	MR. VARUN SHRIVASTAVA
201948077854	MS. SOHINI MUTT
201948081156	MS. NABANITA MONDAL
201948078232	MS. DIMPLE JAIN
201948081255	MS. ARPITA KONER
201948081135	MR. NIRBHAY S SHEKHAWAT
201948077856	MS. ANITA KUSUM PURTY
201948081160	MS. ARTHITA MONDAL
201948078238	MR. A ABIJITH
201948081499	MR. VARAD NARENDRA SAWANT
201948081138	MR. PAILA FERNANDO LYNGDOH
201948077859	MS. BIDUSHI PANDEY
201948081187	MS. PIYALI PODDER




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

Announcement Brochure

IIRS Outreach Programme

Basics of Remote Sensing, Geographical Information System and
Global Navigation Satellite System

August 19- November 15, 2019

Organised by

Indian Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India
Dehradun




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



About IIRS

Indian Institute of Remote Sensing (IIRS), a unit under Indian Space Research Organization (ISRO), Department of Space, Government 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 endeavor 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 user groups in the society, ranging from fresh graduates to policy makers including academia.

The training and education programmes at IIRS includes the short duration customized courses, PG Diploma, Master's Degree (M.Tech and M.Sc.) in various disciplines. IIRS also conducts distance learning programmes under IIRS Outreach Activity.

IIRS Outreach Programme

IIRS Outreach Programme focusses on strengthening the Academia and User Segments in Space Technology & Its Applications using Online Learning Platforms. IIRS distance learning program was initiated in 2007 with the participation of twelve universities in India. Till date, IIRS has successfully conducted 45th programs through live and interactive classrooms (also known as EDUSAT programme) and also launched five online courses under e-learning programme. Currently IIRS distance learning programme is being conducted through following modes:

1. Live and Interactive classroom sessions (<https://dlp.iirs.gov.in>)
2. E-learning based online courses (<https://elearning.iirs.gov.in>)

Live and Interactive classroom

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. The live and interactive mode of distance learning is enabled through Internet and A-view software platform developed by Amrita e-learning Lab in collaboration with Ministry of Human Resource Development (MHRD) Government of India. The programs are available **through Internet without any cost** to the user. The live and interactive sessions will be conducted by experts from IISR-ISRO and other knowledge Institutions. IIRS has successfully conducted 45 such courses so far with participation of over **96000+ participants from 920+ academic institutions, government departments and industry**. The beneficiaries of the programme may include:

- ❖ Central/State/Private Universities & Academic Institutions;
- ❖ Central & State Government Organizations/Departments;
- ❖ Research Institutes;
- ❖ Geospatial Industry;
- ❖ NGOs.

IIRS also conducts various theme oriented online courses and monthly webinars on recent topics on geospatial technologies and its applications. Users are encouraged to actively participate on these programs. For more detail please visit IIRS official website- www.iirs.gov.in



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Course Announcement

IIRS announces four courses commencing from **August 19th, 2019**

- ❖ **Remote Sensing and Digital Image Analysis (19/08/2019 to 06/09/2019):** 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.
- ❖ **Global Navigation Satellite System (09/09/2019 to 20/09/2019):** Introduction to GPS and GNSS, receivers, processing methods, errors and accuracy,
- ❖ **Geographical Information System (23/09/2019 to 21/10/2019):** GIS, databases, topology, spatial analysis and open source software.
- ❖ **RS and GIS Applications (23/10/2019 to 15/11/2019):** Agriculture and Soil, Forestry and Ecology, Geoscience and Geo-hazards, Marine and Atmospheric Sciences, Urban and Regional Studies and Water Resources.
- ❖ **Basics of Remote Sensing, GIS and GNSS (19/08/2019 to 15/11/2019):** Comprehensive course consisting of above four courses.

The participants can register for **individual course** of their choice or the **entire Programme**.

Target Participants

- ❖ Student of Undergraduate and Postgraduate courses (any year);
- ❖ Technical/ Scientific Staff of Central/ State Government Ministries/ Departments;
- ❖ Faculty / Researchers at university / Institutions.

Course Study Material

Course study materials such as lecture slides, video recorded lectures, open source software, data & handouts of demonstrations, etc., will be made available through IIRS ftp link (<ftp://ftp.iirs.gov.in>) 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- <https://elearning.iirs.gov.in/>

- ❖ To participate in the program, organizations/universities/departments/ Institutes have to **identify a Coordinator** at their end. The coordinator is required to register his/her Institute as nodal centre at: (<https://elearning.iirs.gov.in/edusatregistration/coordinator>).
- ❖ All the participants have to register online through registration page (<https://elearning.iirs.gov.in/edusatregistration/student>) by selecting his/her organization as nodal centre.
- ❖ The Coordinator is required to approve the participants from his/her institute for each course.

Course Funding & Technical Support

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




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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 (optional);
- ❖ Headphone with Microphone (optional) and Speakers;
- ❖ Large Display Screen (Projector or TV).

Software and Internet Requirements:

- ❖ Programme can be receive live through internet using freely available software from IIRS

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: *Participating Institutions have to bear total expenses for establishment of the classroom facility.*

Award of Certificate

Working Professionals/Students: Below Guidelines will be followed to award the certificate.

- 1-Based on 70% attendance and minimum 40% passing marks in online examination.
- 2-20% weightage will be given for classroom activity (mandatory)

3- Grading system will be followed

A+	90-100
A	80-90
B+	60- 80
B	40- 60

Feedback Mechanism

The participants and participating organizations are invited to attend annual IIRS User Interactive Meet (IUIM) at IIRS Dehradun. The participants can submit their feedback online through IIRS e-Learning portal. Feedbacks are critically analyzed and implemented in next courses.



Outreach Programme Feedback Session during IIRS Academia Meet (IUIM)-2019



IIRS received two national awards for excellence in training for outreach and e-learning programme by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).

Contact Details

IIRS Distance Learning Centre

Indian Institute of Remote Sensing, Indian Space Research Organization
Department of Space, Govt. of India, 4-Kalidas Road, Dehradun-248001

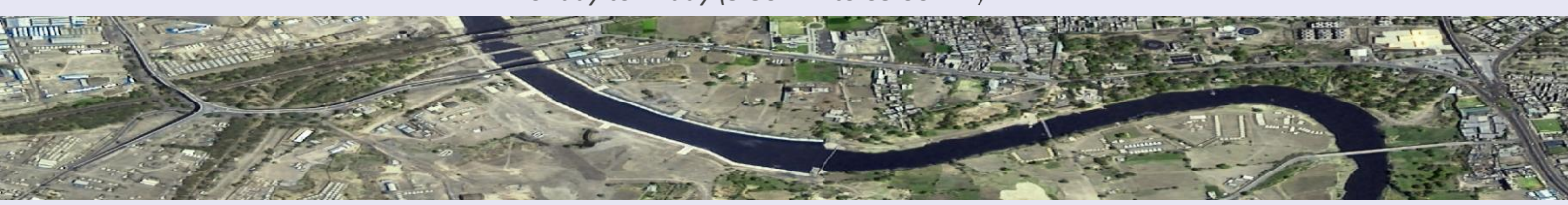
Email: dlp@iirs.gov.in; Tel: 0135-2524354/4130/4334

Monday to Friday (9:30 AM to 05:00 PM)



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Fifty IIRS Outreach Programme
On
Basic of RS, GIS & GNSS

Tentative Course Schedule

Sl No.	Course Name	Module Name	From	To
1.	Basic of RS, GIS & GNSS	-	19-08-2019	15-11-2019
2.	Remote Sensing & Digital Image Analysis	Module-1	19 Aug	06 Sep
3.	Global Navigation Satellite System	Module-2	09 Sep	20 Sep
4.	Geographical Information System Module	Module-3	23Sep	21 Oct
5.	RS & GIS Applications	Module-4	23 Oct	15 Nov

July, 2019




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Module 1: Remote Sensing & Digital Image Analysis				
Module/ Course Coordinator: Mrs. Minakshi Kumar				
Date	Day	Time	Topic	Speaker
19 Aug 19	Monday	1600-1730 hrs	Course Inauguration and Introductory Lecture , Indian Space Programme	Dr. Prakash Chauhan
20 Aug 19	Tuesday	1600-1730 hrs	Basic Principles of Remote Sensing	Ms. Manu Mehta
21 Aug 19	Wednesday	1600-1730 hrs	Earth Observation Sensors and Platforms	Mr. Vinay Kumar
22 Aug 19	Thursday	1600-1730 hrs	Thermal Remote Sensing	Dr. Yogesh Kant
23 Aug 19	Friday	1600-1730 hrs	Spectral Signatures of Different Land cover Features and Visual Image interpretation	Dr. Hina Pande
24 Aug 19		Saturday		
25 Aug 19		Sunday		
26 Aug 19	Monday	1600-1730 hrs	Digital Image Processing: Basic Concepts Rectification and Registration	Ms. Minakshi Kumar
27 Aug 19	Tuesday	1600-1730 hrs	Image Enhancement techniques	Dr. Poonam S. Tiwari
28 Aug 19	Wednesday	1600-1730 hrs	Image Classification Techniques and Accuracy Assessment	Dr. Poonam S. Tiwari
29 Aug 19	Thursday	Offline (Morning Session)	RS and Image Interpretation Practical	By University Coordinator
29 Aug 19	Thursday	1600-1730 hrs	Microwave Remote Sensing	Mr. Shashi Kumar
30 Aug 19	Friday	1630-1730 hrs	Demonstration: Image Processing	Ms. Minakshi Kumar
31 Aug 19		Saturday		
01 Sep 19		Sunday		
02 Sep 19		Monday	Vinayaka Chaturthi	
03 Sep 19	Tuesday	1600-1730 hrs	Hyperspectral Remote Sensing	Mrs. Shefali Agarwal
04 Sep 19	Wednesday	1600-1730 hrs	Advance Image classifier-OBIA ,fuzzy logic	-----
05 Sep 19	Thursday	1600-1730 hrs	Image Texture	-----
05 Sep 19	Thursday	Offline - as per computer lab availability Morning Session	Image Processing Hands-on and Practical Assignment	By University Coordinator
06 Sep 19	Friday	1530-1730 hrs	Panel Discussion/Query Session	Faculty



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Module- 2 Global Navigation Satellite System Module/ Course Coordinator: Shri Ashutosh Bhardwaj				
09 Sep 19	Monday	1600-1730 hrs	Introduction to GPS and GNSS	Er. Ashutosh Bhardwaj
10 Sep 19	Tuesday		Muharram	
11 Sep 19	Wednesday		Onam	
12 Sep 19	Thursday	1600-1730 hrs	GPS receivers, processing methods, errors and accuracy	Er. Ashutosh Bhardwaj
13 Sep 19	Friday	1600-1730 hrs	Satellites based Augmentation systems & GPS Aided and GEO Augmented Navigation (GAGAN)	Er. Ashutosh Bhardwaj
14 Sep 19			Saturday	
15 Sep 19			Sunday	
16 Sep 19	Monday	1600-1730 hrs	GPS signal characteristics, Data formats (broadcast, precise ephemeris)	Shri S. Raghavendra
17 Sep 19	Tuesday	1600-1730 hrs	Indian Regional Navigation Satellite System (IRNSS)	Er. Ashutosh Bhardwaj & Shri Kamal Pandey
18 Sep 19	Wednesday	1600-1730 hrs	DGPS demonstration (Pre-recorded followed by live query session)	Offline
19 Sep 19	Thursday	1600-1730 hrs	Advance GNSS processing	Shri Suresh Kannaujiya
20 Sep 19	Friday	1600-1730 hrs	Mobile Mapping	Dr. Harish Chandra Karnatak
21 Sep 19			Saturday	
22 Sep 19			Sunday	

Module- 3 Geographical Information System Module/ Course Coordinator: Shri Prasun Kumar Gupta				
23 Sep 19	Monday	1600-1730 hrs	Introduction to GIS	Dr. Sameer Saran
24 Sep 19	Tuesday	1600-1730 hrs	Geographic Phenomena, Concepts and examples	Shri Prasun Kumar Gupta
25 Sep 19	Wednesday	1600-1730 hrs	Data Inputting and Editing in GIS	Shri K. Shiva Reddy
26 Sep 19	Thursday	1600-1730 hrs	GIS Data Models (Spatial and Non spatial)	Shri Ashutosh Kumar Jha
27 Sep 19	Friday	1600-1730 hrs	Map Projection Concepts & Use in RS & GIS	Dr. Ashutosh Srivastav
28 Sep 19		Saturday		
29 Sep 19		Sunday		
30 Sep 19	Monday	1600-1730 hrs	Spatial Analysis - Introductory Concepts and Overview	Shri Prabhhar Alok Verma
01 Oct 19	Tuesday	1600-1730 hrs	Spatial Analysis - Functionality and Tools	Shri Kapil Oberai
02 Oct 19			Mahatma Gandhi	
03 Oct 19	Thursday	1600-1730 hrs	Demo of QGIS Software – Session 01: Adding GIS Data, Attribute table & Identity tool Change symbology, Create map composers Manage plugins, CRS & EPSG Geo-referencing & Tie-points, RMSE & Rectification	Recorded Lecture
04 Oct 19	Friday	1600-1730 hrs	Demo of QGIS Software – Session 02: (Data Creation/Vector Generation) Digitization, Setting digitizing environment Adding attributes, Editing digitized layer Attribute Queries, Spatial Queries Linking spatial & non-spatial data	Recorded Lecture
05 Oct 19		Saturday		
06 Oct 19		Sunday		
07 Oct 19	Monday		Dussehra (Maha Navmi)	
08 Oct 19	Tuesday		Dussehra (Vijay Dushmi)	
09 Oct 19	Wednesday		Break	
10 Oct 19	Thursday	1530-1555hrs	Interactive Session of Demo of QGIS Software – Session 01 & Session 02	Shri Prasun Kumar Gupta
		1600-1730 hrs	Open Source Software Technology & Tools	Shri Prasun Kumar Gupta



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11 Oct 19	Friday	1600-1730 hrs	Data Quality & Policies OGC, NSDI & GSDI initiatives. Discussion on Internet resources	Dr. Harish Karnatak
12 Oct 19	Saturday			
13 Oct 19	Sunday			
14 Oct 19	Monday	1600-1730 hrs	Advanced Geospatial Modeling	Shri Ashutosh Kumar Jha
15 Oct 19	Tuesday	1600-1730 hrs	Uncertainty in GIS and Error Propagation	Shri Hari Shankar
16 Oct 19	Wednesday	1600-1730 hrs	3D GIS, City Models and Applications	Dr. Sameer Saran
17 Oct 19	Thursday		BREAK	
18 Oct 19	Friday	1600-1730 hrs	Recent Trends in Geoinformatics	Dr. Sameer Saran
21 Oct 18		1600-1730 hrs	Panel Discussion of Module 3	All Faculty



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Module-4 RS & GIS Applications				
Module/ Course Coordinator: Dr. C M Bhatt				
Date	Day	Time	Topic	Speaker
23 Oct 19	Wednesday	1600-1730 hrs	Space Technology & its applications in governance	Dr. S. K Srivastav
24 Oct 19	Thursday	1600-1730 hrs	Remote Sensing and GIS Applications in Soil Resource Assessment	Dr. Suresh Kumar
25 Oct 19	Friday	1600-1730 hrs	Break	
26 Oct 19	Saturday			
27 Oct 19	Sunday			
28 Oct 19	Monday	1600-1730 hrs	Break	
29 Oct 19	Tuesday	1600-1730 hrs	Remote Sensing Applications in Agriculture- Crop Inventory & Yield Forecasting	Dr. N.R. Patel
30 Oct 19	Wednesday	1600-1730 hrs	RS & GIS Applications in Forestry and Ecology	Dr. Hitendra Padalia
31 Oct 19	Thursday	1600-1730 hrs	RS & GIS Applications to Water Resources Management	Dr. S.P Aggarwal
01 Nov 19	Friday	1600-1730 hrs	Geology and Geomorphology	Dr. R.S. Chatterjee
02 Nov 19	Saturday		Break	
03 Nov 19	Sunday		Break	
04 Nov 19	Monday	1600-1730 hrs	Space-enabled Products & Services for Disaster Management :Indian Initiatives	Dr. P.K.C.Ray
05 Nov 19	Tuesday	1600-1730 hrs	RS & GIS Application in Urban & Regional Planning	Shri. Pramod Kumar
06 Nov 19	Wednesday	1600-1730 hrs	RS applications for Planetary Studies	Dr. Prakash Chauhan
07 Nov 19	Thursday	1600-1730 hrs	RS & GIS for Coastal Zone Management	Dr. D. Mitra
08 Nov 19	Friday	1600-1730 hrs	Remote Sensing Application to Atmospheric & Marine Environment	Dr. A.K Mishra
09 Nov 19		Saturday		
10 Nov 19		Sunday		
11 Nov 19	Monday	1600-1730 hrs	Engineering Geology with emphasis on landslide studies	Dr. Shovan Chatteraj
12 Nov 19			Break	
13 Nov 19	Tuesday	1600-1730 hrs	Geospatial Technology for climate change studies	Dr. Arijit Roy
14 Nov 19	Thursday	1530-1630 hrs	Applications of Geo-web Services and mobile GIS in governance	Dr. Harish Karnatak
15 Nov 19	Thursday	1630 – 1730 hrs	Panel Discussion Module-3	All speakers



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50th Course on Basic of RS, GIS & GNSS Consist 04 Module


- 1- Remote Sensing & Digital Image Analysis
- 2- Global Navigation Satellite System
- 3- Geographical Information System
- 4- RS & GIS Applications

There will be 01 exam for Basic of RS, GIS & GNSS after completion of the course

And a single exam for Course no 51th, 52th, 53th and 54th course

SI No	Exam Name	Exam Date
1-	Online Examination 51 th Course or Module 1 on Remote Sensing and Digital Image Analysis	Last week of the Month
2-	Online Examination 52 th Course or Module 1 on Global Navigation Satellite System	Will be conducted first week and last week of the Month
3-	Online Examination of 53 th Course or Module 3 on Geographical Information System	Will be conducted first week and last week of the Month
4-	Online Examination of 54 th Course or Module 4 on <i>RS & GIS Applications</i>	Will be conducted first week and last week of the Month




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List of Participants	
Registration	Name
201950088259	MS. PIYALI PODDER
201950084641	MR. ARPIT SINGH
201950085450	MS. ARNAVA GHATAK
201950081029	VARUN
201950084276	MR. VIKAS RAZDAN
201950079615	MS. YUKTA KHURANA
201950078235	KRISHNA
201950078450	MR. DEBOBRATA SADHUKHAN
201950078068	MS. ADRITA TALAPATRA
201950080691	MS. SRISHTI DUBEY
201950078408	MS. ARTHITA MONDAL
201950078522	MS. SUPRAJA NARSAIAH YELLA
201950078190	MS. NITUPARNA GHOSH
201950080718	MS. SAWAT POOJA ANKUSH
201950078409	MS. SAYANI DAS
201950078833	MR. GORESH SHARMA
201950078227	MS. PRADNITA KOMAL HNERY
201950080733	NITESH SINGH
201950078414	MS. NABANITA MONDAL
201950079581	GAURI
201950078234	MR. A ABIJITH
201950080739	MS. POOJA ANKUSH SAWAT
201950078446	MS. AYUSHI AGARWAL



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Date: 1/06/2019

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
- Work Life Balance



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Programme Schedule:

Day 1:

Session 1 & Session 2

- Self Awareness
 - Understanding Self
 - Perception & Attitudes
 - Identifying one's Potential & areas of improvement
- Basics of Communication
 - Understanding Communication Process
 - Barriers to Communication

Session 3 & Session 4


- Effective Communication
 - Improving Communication Process
 - Effective Listening
 - Improving Verbal & Non verbal Communication

Day 2:

Session 1 & Session 2

- Interpersonal Relationships
 - Understanding Others
 - Understanding our roles in Personal / Professional / Social lives
 - Importance of Communication in our lives




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- Importance of Interpersonal relationships in motivating team members

Session 3 & Session 4

- Motivation
 - Understanding our needs and desires
 - What motivates us & others?
 - Importance of motivation in organisation
 - Motivating for effective performance

Day 3:

Session 1 & Session 2

- Team Bonding & Group Dynamics
 - Working in Teams
 - Developing Team Synergy

Session 3 & Session 4

- Enhancing Team Performance
- Understanding potential sources of Conflicts
- Resolving Conflicts

Day 4:

Session 1 & Session 2

- Leadership
 - Role of a Leader
 - Leadership Skills

Session 3 & Session 4

- Leadership



A handwritten signature in black ink, appearing to be 'T. P. Singh', is written over the circular logo.

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- Being Assertive
- Decision Making
- Problem Solving

Day 5:

Session 1 & 2

- Time Management
- Setting Life's Goals & Action Plan

Session 3 & 4

- Work Life Balance – An Understanding
- Stress Management

Training Methods:

A rich blend of experiential processes, case studies, discussions, management games, role plays and outbound training methods will be used.




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Participants list from M.Sc Data Science & Spatial Analytics Batch 2019-21

Sr No	PRN	Name
1	19070243001	ANJU KUMARI SHAW
2	19070243002	ANOUSHKA SAHA
3	19070243003	AYUSHI AGARWAL
4	19070243004	CHANDEL VIKRAMSINGH GOVINDSINGH
5	19070243005	DAGADE SANKET SUNIL
6	19070243006	DALAI NAMRATA
7	19070243007	DHUMAL RUTIKA UJWAL
8	19070243008	GORESH SHARMA
9	19070243009	JOSHI SAURABH KRUSHNAKANT
10	19070243010	KAROTTAPURAM JOYOUS VAREETH
11	19070243011	MONDAL DEBARPAN
12	19070243012	PATIL SHUBHAM HIRALAL
13	19070243013	RAJPUT SHRADDHA PRAVINSING
14	19070243014	SAWANT VARAD NARENDRA NEETA
15	19070243015	SHUVAM SANYAL
16	19070243016	SINGH NITESH UTTAM
17	19070243017	SOUMYA KUMAR
18	19070243018	SRIJANI MITRA
19	19070243019	SRISHTI DUBEY
20	19070243020	TANAY GOSWAMI
21	19070243021	TONIMA RAJEEB GHOSH
22	19070243022	VAIDYA GAURI SHASHIKANT MANJIRI
23	19070243023	VARUN SHRIVASTAVA
24	19070243024	YOGESH
25	19070243025	YUKTA KHURANA




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Participants list from M. Sc. (Geoinformatics) Batch No 2019-2021


Sr No	PRN	Name
1	19070241001	A ABIJITH
2	19070241002	AASTHA SINGH
3	19070241003	ADHAV VAISHNAVI PRASHANT
4	19070241004	ADRITA TALAPATRA
5	19070241005	AKASH ANIL KALE
6	19070241006	ANITA KUSUM PURTY
7	19070241007	ANKITA BAGAL
8	19070241008	ARISHMITA GHOSH
9	19070241009	ARNAVA GHATAK
10	19070241010	ARPITA KONER
11	19070241011	ARTHITA MONDAL
12	19070241012	BIDUSHI PANDEY
13	19070241013	BITHI PAUL
14	19070241014	CHHATRE ADITI SANDEEP
15	19070241015	DEBOBRATA SADHUKHAN
16	19070241016	DISHA ADAK
17	19070241017	J ARJUN
18	19070241018	KORGAONKAR NINAD PRAMOD SMITA
19	19070241019	KRISHNA
20	19070241020	KULKARNI INDRANEEL KRISHNA
21	19070241021	MANISHA GHOSH
22	19070241022	MOULI TIKADAR
23	19070241023	MOUMA DAS
24	19070241024	NABANITA MONDAL
25	19070241025	NEHA GUPTA
26	19070241026	NITUPARNA GHOSH
27	19070241027	PAILA FERNANDO LYNGDOH
28	19070241028	PATEL SHOAIB JAKIR
29	19070241029	PATHAK SANYUKTA MADHAV
30	19070241030	PAYEL PODDAR
31	19070241031	PIYALI PODDER
32	19070241032	PRADNITA KOMAL HENRY
33	19070241033	PUJA PAL
34	19070241034	RITIKA GUPTA
35	19070241035	RITIKA SINGH
36	19070241036	RITTIKA SEN
37	19070241037	RITUPARNA PAUL
38	19070241038	SAMADRITA KUNDU
39	19070241039	SANGINI VERMA
40	19070241040	SAYANI DAS
41	19070241041	SHAGUN SALECHA
42	19070241042	SHEWALE ANKIT PRAKASH



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43	19070241043	SHINDE AKSHATA BHAGWAN SAVITA
44	19070241044	SHINDE GAURANGI SHAIENDRA
45	19070241045	SHREYA BARMAN ROY
46	19070241046	SHREYA KAR
47	19070241047	SHRI ARPIT SINGH
48	19070241048	SHUVANGI BANERJEE
49	19070241049	SIMRAN SINGH
50	19070241050	SOHINI MUTT
51	19070241051	SUCHISMITA BANERJEE
52	19070241052	SUMOULI BASU
53	19070241053	TANYA SINGH
54	19070241054	UNMILAN KASHYAP SAIKIA
55	19070241055	UPASANA SINGH
56	19070241056	YELLA SUPRAJA NARSAIAH SUJATA





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Summary

Name of the capability enhancement scheme	Year of implementation	Number of students enrolled	Name of the agencies involved with contact details
Technology – RS and GIS Applications in Watershed Management	April 08-April 12, 2019	3	IIRS, ISRO Tel: 0135-2524142 Email: suresh_kumar@iirs.gov.in
Technology – Digital Photogrammetry based 3D modelling	July 29 – August 02, 2019	23	IIRS, ISRO Tel: 0135- 2524332 Email: haish@iirs.gov.in
Technology – Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System	August 19- November 15, 2019	23	IIRS, ISRO Tel: 0135-2524354 Email: dlp@iirs.gov.in
Communication & softskills	1 June, 2019	81	Sandeep Sinha




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