

16th Outreach Certificate Course on “Geospatial Technologies for Urban Planning”
sponsored by NNRMS and organized by IIRS/ ISRO Dept. of Space, Govt. of India,
Dehradun 11/02/2016 to 15/03/2016

RAJA SHRIPATRAO BHAGWANTRAO MAHAVIDYALAYA, AUNDH, SATARA

Indian Institute of Remote Sensing, ISRO, Dehradun
Department of Space, Government of India
SUMMARY REPORT OF PROGRAM



Date: 14/04/2016

To,
The Principal,
R.S.B. Mahavidyalaya, Aundh
Tal. Khatav, Dist. Satara

I am submitting summary report of Outreach Programme. Please accept it.

1. **Name of Programme:** Geospatial Technologies for Urban Planning
2. **Duration:** 11/02/2016 to 15/03/2016 **Total Days:** 36
3. **Number of enrolled students:** 5
4. **Name of Coordinator:** Dr. Telore Namdev Vasant
5. **Name of Resource Persons:** i) Ms. Minakshi Kumar ii) Mr. Ashutosh Bhardwaj iii) Mr. Prasun Kumar Gupta
6. **Objectives of the Programme:**
 - i. To know basic concepts of Remote Sensing and Digital Image Analysis.
 - ii. To know basic concepts of Geographical Information System.
 - iii. To know basic concepts of Global Navigation Satellite System.
 - iv. To study applications of RS and GIS.
7. **Outcome of the Programme:**
 - i. Participants become aware of basic concepts of Remote Sensing and Digital Image Analysis.
 - ii. Participants become aware of Geographical Information System.
 - iii. Participants become aware of Global Navigation Satellite System.
 - iv. Participants become aware of RS and GIS.

Centre Coordinator

(Dr. Namdev V. Telore)
Dr. Namdev V. Telore
Co-ordinator

IIRS Outreach Programme, Dehradun
Centre: R.S.B. Mahavidyalaya, Aundh, Dist. Satara

Principal

PRINCIPAL
Raja Shripatrao Bhagwantrao
Mahavidyalaya, Aundh (Satara)

भारतीय सुदूर संवेदन संस्थान

4, Kaildas Road, P.B. No. 135,

Dehradun - 248 001, भारत

दूरभाष - +91-135-2524399

फैक्स: +91-135-2741967, 2748041

डॉ. ए. सेंथिल कुमार

Dr. A. Senthil Kumar

निदेशक/Director



सत्यमेव जयते

Government of India
Department of Space

Indian Institute of Remote Sensing

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सं.: आई.आई.आर.एस. /एडुसेट/2016/16

No.: IIRS/EDUSAT/2016/16

दिनांक: १२ जनवरी 2016/ Date: 12 January 2016

विषय: 11 फरवरी 2016 से "शहरी आयोजना हेतु भूस्थानिक प्रौद्योगिकी" पर प्रारम्भ होने वाले 16^{वें} आई.आई.आर.एस. आउटरीच कार्यक्रम की घोषणा के संबंध में।

Subj: Announcement of Sixteenth IIRS Outreach Program on "Geospatial Technologies for Urban Planning" commencing from February 11, 2016

प्रिय महोदय/ महोदया/ Dear Sir/ Madam,

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने जीवंत पृथ्वी अवलोकन (EO) कार्यक्रम के अंतर्गत पिछले 40 वर्षों के दौरान कई उपग्रह प्रेषित किए हैं। भारतीय सुदूर संवेदन (आईआरएस) उपग्रह शृंखला राष्ट्रीय प्राकृतिक संसाधन प्रबंधन प्रणाली (एनएनआरएमएस) के अंतर्गत प्राकृतिक संसाधनों की मॉनीटरिंग तथा उनके प्रबंधन और आपदा प्रबंधन सहयोग हेतु अंतरिक्ष आधारित जानकारी उपलब्ध करवाती है। भारतीय सुदूर संवेदन संस्थान (भा.सु.सं.स.), इसरो का एक महत्वपूर्ण संस्थान है जो पिछले पांच दशकों में प्राकृतिक संसाधनों की मॉनीटरिंग और आपदा प्रबंधन के लिए भूस्थानिक प्रौद्योगिकी के उपयोग पर प्रशिक्षण, शिक्षा और क्षमता निर्माण में लगी हुई है। इस संस्थान द्वारा अब तक 15 उपग्रह इंटरनेट आधारित आउटरीच पाठ्यक्रम संचालित किए जा चुके हैं। इन पाठ्यक्रमों से लगभग 303 भारतीय विश्वविद्यालयों/ संस्थानों के करीब 24,700 से अधिक प्रतिभागी लाभान्वित हुए हैं। इसी कार्यक्रम को आगे बढ़ाते हुये हम हर्ष/ प्रसन्नता के साथ 16^{वें} आई.आई.आर.एस. आउटरीच कार्यक्रम की घोषणा करते हैं। यह कार्यक्रम "शहरी आयोजना हेतु भूस्थानिक प्रौद्योगिकी" पर आधारित है तथा फरवरी 11, 2016 से प्रारम्भ हो रहा है। यह कार्यक्रम शहरी आयोजना में भूस्थानिक प्रौद्योगिकी एवं तत्संबंधी अनुप्रयोगों के ज्ञान को और समृद्ध करेगा।

The Indian Space Research Organisation (ISRO) has a vibrant Earth Observation (EO) programme with many satellite missions launched during past 40 years. The Indian Remote Sensing Satellite (IRS) series of satellites provide space based information for monitoring and management of natural resources and Disaster Management Support under the aegis of National Natural Resource Management System (NNRMS). The 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 technology for natural resources monitoring and disaster management since last five decades. The institute has so far conducted 15 Satellite/ Internet based Outreach Programmes, benefitting more than 24,700 participants from around 303 Indian universities/ institutions. We have now the pleasure of announcing the Sixteenth IIRS Outreach Programme on "Geospatial Technologies for Urban Planning" commencing from February 11, 2016 to further enhance the knowledge of geospatial technology and its applications in urban planning.

शहरी एवं सिटी आयोजना की विविध गतिविधियों के प्रभावी निर्माण, कार्यान्वयन तथा प्रबंधन में भूस्थानिक प्रौद्योगिकी अहम भूमिका अदा करती है। भारत सरकार के स्मार्ट सिटी की पहल में भूस्थानिक प्रौद्योगिकी महत्वपूर्ण साधन प्रस्तुत करती है। चार सप्ताह की अवधि का यह ऑनलाइन पाठ्यक्रम जिसमें प्रति सप्ताह हेतु 4-5 व्याख्यान प्रस्तावित हैं, भूस्थानिक प्रौद्योगिकी एवं तत्संबंधी अनुप्रयोगों के विहंगावलोकनी अध्ययन का अत्यन्त अच्छा प्रदान करेगा जिसके अंतर्गत सहभागियों को स्वस्थान पर ही प्रति दिवस केवल 100 पंटा देना होगा। इस पाठ्यक्रम में www.asview.in पर उपलब्ध एम्बू सॉफ्टवेयर के द्वारा तथा इंटरनेट का उपयोग करते हुये निःशुल्क भाग लिया जा सकता है। पंजीकृत सहभागियों के उक्त ऑनलाइन कार्यक्रम से जुड़ने हेतु भारतीय सुदूर संवेदन संस्थान (इसरो) प्रत्येक पत्र उपलब्ध कराएगा। सफल सहभागियों को भारतीय सुदूर संवेदन संस्थान (इसरो) द्वारा प्रमाण पत्र भी प्रदान किया जाएगा।

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भारतीय अंतरिक्ष अनुसंधान संगठन



Indian Space Research Organisation



Geospatial technologies can play an important role in effective decision making, execution and management of various activities in urban planning. The geospatial technologies offer important tools for Smart City initiative of Government of India. This online course of four-week duration with 4/5 lectures per week is a unique opportunity to learn the overview of geospatial technologies and their applications by devoting one-and-half-hour each day from the place of stay of the participant. 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 successful participants will be awarded with a certificate from IIRS/ ISRO.

उक्त पाठ्यक्रम की घोषणा सम्बन्धी विवरणिका अवलोकनार्थ तथा आपके संगठन/ संस्थान/ विश्वविद्यालय में प्रसार हेतु संलग्न है। व्यापक प्रचार विषयक पाठ्यक्रम में नगरीय एवं प्रक्षेत्रीय आयोजना के क्षेत्र में कार्यरत पेशेवर तथा शैक्षणिक समुदाय के पूर्वस्नातक व स्नातकोत्तर विद्यार्थी/ शोधकर्ता भाग ले सकते हैं। सहभागिता हेतु अहर्ता तथा कार्यक्रम के अभिप्रायण संबंधी अन्य जानकारी हेतु कृपया पाठ्यक्रम विवरणिका देखें।

A copy of the announcement brochure of this course is enclosed herewith for your kind perusal and also for wider circulation in your Organisation/ University/ Institute. The course is open for all the professionals working in Urban & Regional planning, UG & PG students/ researchers from academia. Kindly refer the course brochure for other details regarding eligibility for participation and programme reception.

उक्त प्रसंग में और जानकारी हेतु आप डॉ. हरिश कर्नाटक, कार्यक्रम समन्वयता, आई.आई.आर.एस. आउटरीच कार्यक्रम [दूरभाष: 0135-2524332 (कार्यालय), ईमेल harish@iirs.gov.in, एडुसेट स्टुडियो नियंत्रण कक्ष दूरभाष: 0135-2524130, ईमेल: edusat@iirs.gov.in], अथवा पाठ्यक्रम निदेशक श्री प्रमोद कुमार, [दूरभाष: 0135-2524186 (कार्यालय), ईमेल: pramod@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. Harish Karnatak, Programme Coordinator, IIRS Outreach Programme [Ph.: 0135-2524332 (off.), email: harish@iirs.gov.in, EDUSAT Studio/Control Room Ph.: 0135-2524130, email: edusat@iirs.gov.in or Shri Pramod Kumar, Course Director [Ph.:0135-2524186 (off.), email: pramod@iirs.gov.in] or visit IIRS website <http://www.iirs.gov.in/EDUSAT-News> for further details.

शुभकामनाओं सहित/ With regards and best wishes,

भवदीय /Yours sincerely,

डा. सेंटिल कुमार

(ए. सेंटिल कुमार/Senthil Kumar)

संलग्न उपरोक्तानुसार Encl: a/a

Dr. Namdev V. Telore
Co-ordinator

IIRS Outreach Programme, Dehradun
Centre R.S. & Mahanirayana, Aundh, Dist. Satara

PRINCIPAL

Raja Shripatrao Bhagwantrao
Mahavidyalaya, Aundh(Satara)

IIRS Outreach Programme

The IIRS outreach programme, which started in 2007 with 12 universities/institutions has now grown substantially. Currently, 303 universities/institutions spread across 16 states covering 26 states and 2 Union Territories are participating with IIRS. The beneficiaries of the programme are as follows:

- Urban Planning Bodies/Agencies in India
- Govt Offices
- Academics and Urban Planning Professionals
- Central / State/Provincial Universities & Academic Institutions
- Central & State Government Organizations / Departments
- Research Institutes
- Geospatial Institutes
- NGOs

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 GIS. Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IPi), founded in 1988, the Institute stands as the first of its kind in entire South-East Asia. While catering to primary education to build capacity among the user community by training 4000+ career professionals, the Institute has enhanced its capability and academic excellence and education programmes that are aimed to meet the requirements of various target groups, ranging from fresh graduates to highly skilled professionals.

IIRS also conducts training programme on Remote Sensing and Geoinformatics. Details: www.iirs.gov.in Over 2,000 participants have registered for the course.



Sixteenth IIRS Outreach Programme

Geospatial Technologies for Urban Planning

FEBRUARY 11 – MARCH 15, 2016

Co-sponsored by
National Natural Resources Management System (NNRMS)

Co-sponsored by
National Institute of Remote Sensing
Indian Space Research Organisation
Department of Space, Govt. of India, Dehradun
www.iirs.gov.in

Feedback Mechanism

IIRS has conducted an workshop in 2007, 2008, 2010, 2012, 2014 and 2015 to take feedback from participating institutions to improve the quality of these courses.



Awards

IIRS has received national awards for excellence in training for students and teaching programme during 1st National Conference on Excellence in Training conducted during April 11-12, 2015 at New Delhi by Department of Personnel & Training (DoPT), Govt. of India in collaboration with United Nations Development Programme (UNDP).



Dr. Namdev V. Velam
Coordinator
IIRS Outreach Programme, Dehradun

Rajesh Shrivastava
PRINCIPAL
Raja Shriprasad Bhagwantrao Mahavidyalaya, Aundh(Satara)

About the Course

The Indian cities are experiencing rapid growth with share of country's urban population increasing from 27% in 2001 to 32% in 2011. Majority of this growth has taken place in an unplanned and unregulated manner. The ill-effects of which are manifested in the form of poor quality of life, mainly due to lack of urban infrastructure and increasing vulnerability of urban population to various natural and man-made hazards. One of the major reasons for this unsustainable growth has been the lack of up-to-date and accurate spatial data on which urban planners can base their plans. Geospatial technologies pave way to these planning problems, as they offer accurate and timely spatial data at affordable cost. To enhance the awareness on Geospatial technologies, we have designed 16th IIRS Outreach Programme on "Geospatial Technologies for Urban Planning". The course is scheduled from 11 February – 15 March 2016. The course will contain 4/5 lectures per week (each of one and half hour duration).

IIRS has successfully conducted 16 such courses so far, with participation of over 24,000 students from 303 institutions/Universities spread across India.

Target Participants

The course is designed for Professionals engaged in Urban & Regional Planning, students & members of Urban & Regional Planning, Geomatics, Environmental studies, Civil Engineering and Architecture.

The course participants have to be duly sponsored by the university/institution and application should be submitted through coordinators from respective Organizations / Centers. Upon attending programme under DEC-UDCP CME / other networks on this particular programme on high speed / National Knowledge Network (NKN) can also participate using A-VISU software.

Course Funding & Technical Support

The programme is sponsored by National Natural Resources Management System – Standing Committee on Training and Education (SC-TE), Indian Space Research Organisation, Department of Space, Government of India and is conducted with due technical support from Ananta E-Learning Research Lab, Kollam, Kerala.

Curriculum

Remote Sensing and GIS:

- Overview of Remote Sensing and GIS for Urban Planning.
- Introduction to GIS.
- Urban Regional Features Extraction using remote sensing data.
- GIS concepts and Spatial Database for Urban Planning.

Urban Planning Applications

- Urban Planning Challenges & Opportunities in present context.
- Base Map and Cadastral Mapping.
- Urban Land Use / Land Cover Classification.
- Introduction to Street Portal.
- Open Source Tools & Databases for Urban Planning.
- National Urban Information System and Urban-MLIS.
- Cloud-based and Mobile Apps for Urban-planning services.

Course Study Material

Course study material like lecture slides, video recorded lectures, open source software & hardware demonstrations, etc. will be made available through IIRS by first video lectures will also be uploaded on YouTube Channel (<http://www.youtube.com/innroutreach>).

Programme Reception

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

Hardware Requirements:

- High-end Computer system (Windows OS)
- Good quality web camera.
- Headphone with microphone.
- Speakers.
- Large Display Screen (Projector or TV).

Software and Internet Requirements:

- Desktop based A-VISU software (free to download from www.iirs.gov.in or <http://ip.iiit.gov.in>)
- Online chat access through <http://live.in.gov.in> with free registration.

Connectivity & Other configurations:

- NAN 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.

Course Fee

There is no course fee for attending this programme.

Award of Certificate

Working Professionals: Based on 80% attendance and submission of assignments.

Students: Based on 80% attendance and must secure minimum 60% marks in the examination.

PRINCIPAL
Raja Shriprasad Bhagwantrao Mahavidyalaya, Aundh(Satara)

4



Government of India
Department of Space
Indian Space Research Organisation
Indian Institute of Remote Sensing
Dehradun



ADVANCED COURSE ON "GEOSPATIAL TECHNOLOGIES FOR URBAN PLANNING"
11 February 2016 – 15 March 2016
(1530-1700 Hrs.)

S.No.	Date	Day	Lecture/ Demonstration	Faculty
1.	11/02/2016	Thursday	Urban Planning: Challenges and Opportunities in Present Context	SK
2.	12/02/2016	Friday	Remote Sensing Overview and Earth Observation Data for Urban Planning	PK
3.	13/02/2016			
4.	14/02/2016		Saturday	
5.	15/02/2016		Sunday	
6.	16/02/2016	Monday	GIS Concepts and Spatial Database for Urban Planning	HK
7.	17/02/2016	Tuesday	Geospatial Data and Services on Bhuvan Geoportal	HK
8.	18/02/2016	Wednesday	Break	
9.	19/02/2016	Thursday	Open Source Tools and Datasets for Urban Planning	KO
10.	20/02/2016	Friday	Urban/ Regional Features Extraction Using Remote Sensing Data	PK
11.	21/02/2016		Saturday	
12.	22/02/2016		Sunday	
13.	23/02/2016	Monday	GPS Concepts, Mobile Mapping and Application in Urban Utility Mapping	BDB
14.	24/02/2016	Tuesday	Crowd sourcing and Mobile Apps for Citizen-centric services	HK
15.	25/02/2016	Wednesday	Break	
16.	26/02/2016	Thursday	National Urban Information System (NUIS) and Bhuvan-NUIS	BDB
17.	27/02/2016	Friday	Base Maps and Cadastral Mapping	KG
18.	28/02/2016		Saturday	
19.	29/02/2016		Sunday	
20.	29/02/2016	Monday	Urban Land use/ Land cover Classification	AS
21.	01/03/2016	Tuesday	Urban Sprawl and Urban Growth Modeling	SM
22.	02/03/2016	Wednesday	Urban Green Spaces	KG
23.	03/03/2016	Thursday	Land Surface Temperature Studies in Urban Areas	AS
24.	04/03/2016	Friday	Maharishi Dayanand Saraswati Jayanti (GH Holiday)	
25.	05/03/2016		Saturday	
26.	06/03/2016		Sunday	
27.	07/03/2016		Monday Maha Shivratri (GH Holiday)	
28.	08/03/2016	Tuesday	Urban Seismic Risk Assessment	SM
29.	09/03/2016		Break	
30.	10/03/2016	Thursday	3D City Modeling for Urban Planning	KG
31.	11/03/2016	Friday	Close Range Photogrammetry for Urban Heritage Studies	PST
32.	12/03/2016	Saturday		
33.	13/03/2016	Sunday		
34.	14/03/2016	Monday	Smart City and AMRUT: Mission Guidelines, Challenges and Opportunities	GL
35.	15/03/2016	Tuesday	Feedback & Examination (Online Mode)	

Faculty

SK	Dr. Sudhir Krishna	PST	Dr. Poonam Sethi Tiwari
PK	Shri Pramod Kumar	KG	Mrs. Kshama Gupta
HK	Dr. Harish Karnataka	AB	Shri Ashutosh Bhardwaj
SM	Dr. Sandeep Maithani	KO	Shri Kapil Oberai
BDB	Shri BD Bharath	AS	Ms. Asfa Siddiqui
GL	Guest Lecturer		

PRINCIPAL
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Mahavidyalaya, Aundh (Satara)



Sixteenth IIRS Outreach Programme
On
IIRS ISRO Outreach Program on
"Geospatial Technologies for Urban Planning"

11/02/2016 to 15/03/2016

Raja Shripatrao Bhagwantrao Mahavidyalaya, Aundh, Satara

Registered Participants

Sr. No.	Name of Participant
1	Jagannath Dagadu Barkade
2	Salim R. Mulla
3	Sanjay Maruti Shinde
4	Tushar Sawant Abaso
5	Pratima Kamble

Dr. Namdev V. Telore
Co-ordinator

IIRS Outreach Programme, Dehradun
R.S.B. Mahavidyalaya, Aundh, Satara

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Sixteenth IIRS Outreach Programme

On

IIRS ISRO Outreach Program on "Geospatial Technologies for Urban Planning"

11/02/2016 to 15/03/2016

Raja Shripatrao Bhagwantrao Mahavidyalaya, Aundh, Satara

Certificate Received

Sr. No.	Name of Participant
1	Jagannath Dagadu Barkade
2	Salim R. Mulla
3	Sanjay Maruti Shinde
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5	Pratima Kamble

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