

23rd EDUSAT Outreach Programme on 'Basics of Remote Sensing, Geographical Information System and GNSS', sponsored by NNRMS and organized by IIRS/ ISRO, Dept. of Space, Govt. of India, Dehradun 21/8/2017 to 04/12/2017

**RAJA SHRIPATRAO BHAGAWANTRAO MAHAVIDYALAYA, AUNDH, SATARA**

**Indian Institute of Remote Sensing, ISRO, Dehradun  
Department of Space, Government of India**



**SUMMARY REPORT OF PROGRAM**

**Date: 31/12/2017**

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:** Basic of RS, GIS & GNSS
2. **Duration:** 21.8.17 to 1.12.17 **Total Days:** 102
3. **Number of enrolled students:** 26
4. **Name of Coordinator:** Dr. Telore Namdev Vasant
5. **Name of Resource Persons:** i) Er. Ashutosh Bhardwaj ii) Dr. P.K.C. Ray  
iii) Dr. D. Mitra
6. **Objectives of the Programme:**
  - i. To know basic concepts of Remote Sensing.
  - ii. To know basic concepts of GIS.
  - iii. To study basic concepts of GNSS.
7. **Outcome of the Programme:**
  - i. Participants become aware of basic concepts of Remote Sensing.
  - ii. Participants become aware of GIS.
  - iii. Participants become aware of applications of GNSS.

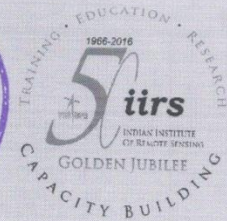
**Centre Coordinator**

**(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)



Announcement Brochure

# IIRS Outreach Programme

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

**August 21 – December 01, 2017**

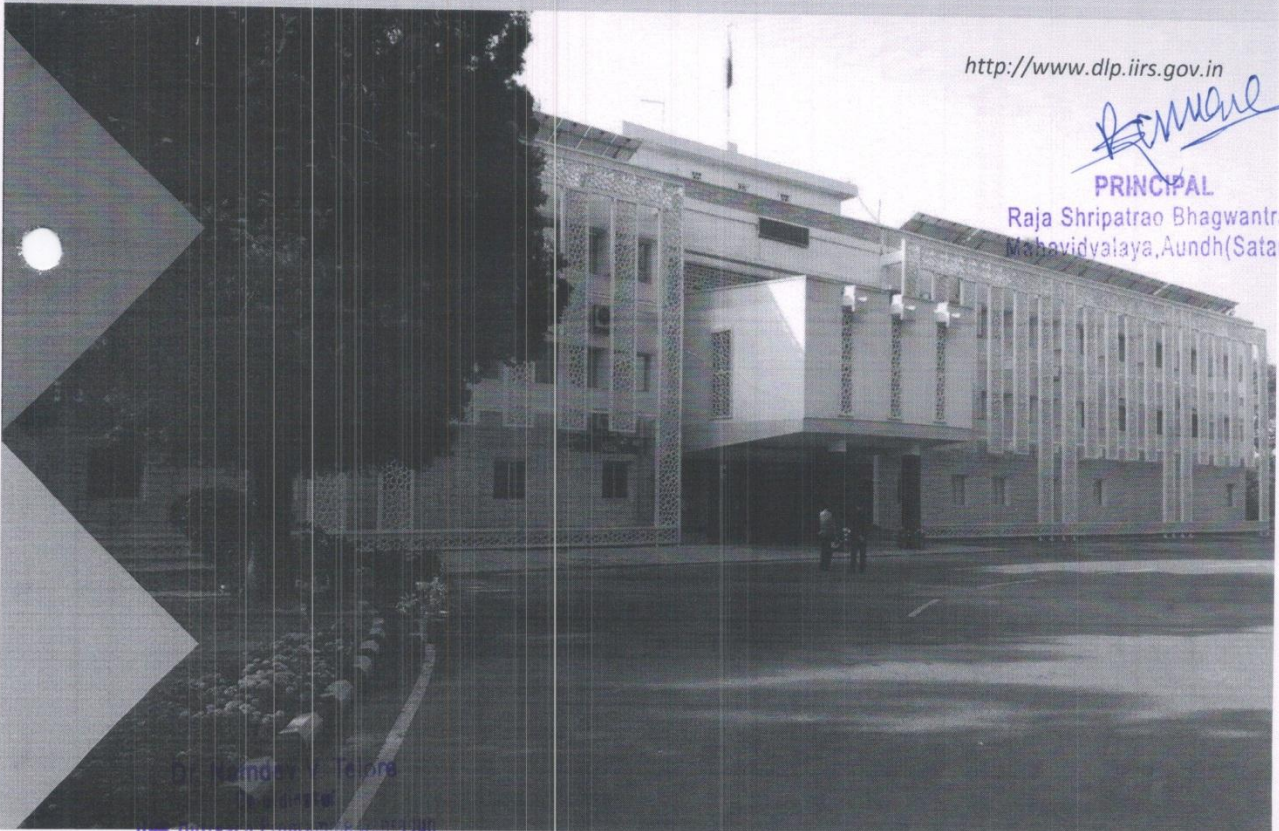
### *Organised by*

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

<http://www.dlp.iirs.gov.in>

**PRINCIPAL**

Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aundh (Satara)



## 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 22 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 (<http://dlp.iirs.gov.in>)
2. E-learning based online courses (<http://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 IIRS-ISRO and other knowledge Institutions. IIRS has successfully conducted 22 such courses so far with participation of over **46590+ participants from 626+ 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](http://www.iirs.gov.in)

Dr. Namdev V. Telore  
Co-ordinator

IIRS Outreach Programme, Dehradun  
Dr. R.S.B. Mahavidyalaya, Aunthi, Dist. Sitapur

PRINCIPAL  
Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aunthi, Dist. Sitapur

## Course Announcement

IIRS announces four courses commencing from **August 21st, 2017**

- ❖ **Remote Sensing and Digital Image Analysis (21/08/2017 to 15/9/2017):** 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 and Geographical Information System (25/09/2017 to 10/11/2017):** Introduction to GPS and GNSS, receivers, processing methods, errors and accuracy, GIS, databases, topology, spatial analysis and open source software.
- ❖ **RS and GIS Applications (13/11/2017 to 01/12/2017):** 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 (21/08/2017 to 01/12/2017):** Comprehensive course consisting of above three 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- <http://www.dlp.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: ([http://elearning.iirs.gov.in/edusat\\_lms/cordinator\\_registration.php](http://elearning.iirs.gov.in/edusat_lms/cordinator_registration.php)).
- ❖ All the participants have to register online through registration page ([http://elearning.iirs.gov.in/edusat\\_lms/student\\_registration.php](http://elearning.iirs.gov.in/edusat_lms/student_registration.php)) by selecting his/her organization as nodal centre.
- ❖ The Coordinator is required to approve the participants from his/her institute for each course.

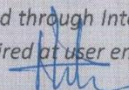
## Course Funding & Technical Support

The programme is sponsored by Indian Space Research Organization, Department of Space, Government of India and is conducted with due technical support from Amrita Virtual & Interactive E-learning World (A-VIEW).

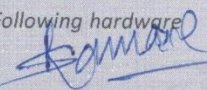
## Programme Reception

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

Hardware Requirements:

  
Dr. Namdev V. Telore  
Co-ordinator

IIRS Outreach Programme, Dehradun

  
PRINCIPAL

Raja Shripatrao Bhagwanrao  
Mahavidyalava Aundh/Satara



- ❖ 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:**

- ❖ Desktop based: **A-VIEW software** (free to download from [www.aview.in](http://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:** Participating Institutions 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 online examination.

**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 User Interaction Meet (IUIM)-2017



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](mailto:dlp@iirs.gov.in); **Tel:** 0135-2524130/4354/4115; **Mobile:** 9410924417, 7895309151  
 Monday to Friday (9:30 AM to 05:00 PM)

*Dr. Namdev V. Telore*  
 Co-ordinator

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

*Ramane*

PRINCIPAL  
 Raja Shripatrao Bhagwantrao  
 Mahavidyalaya, Aundh(Satara)



भारत सरकार  
अंतरिक्ष विभाग  
**भारतीय सुदूर संवेदन संस्थान**  
4, कालीदास मार्ग, पो. बाक्स सं. 135  
देहरादून- 248 001, भारत  
दूरभाष : +91-135-2524399  
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Government of India  
Department of Space  
**Indian Institute of Remote Sensing**  
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Dehradun - 248 001, India  
Telephone : +91-135-2524399  
Fax : +91-135-2741987, 2748041

डॉ. ए. सैथिल कुमार  
निदेशक

सं.: आई.आई.आर.एस. / एडुसेट / 2017 / 23  
दिनांक: 10<sup>th</sup> जुलाई, 2017

**विषय:** 21 अगस्त 2017 से "सुदूर संवेदन, भौगोलिक सूचना प्रणाली तथा वैश्विक नेविगेशन उपग्रह प्रणाली" पर प्रारम्भ होने वाले 23<sup>rd</sup> आई.आई.आर.एस. आउटरीच कार्यक्रम की घोषणा के संबंध में।

महोदय/ महोदया,

भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) ने अपने सशक्त/ व्यावसायिक भू-पेक्षण कार्यक्रम के अंतर्गत पिछले 50 वर्षों के दौरान कई उपग्रह प्रक्षेपण किए हैं। भारतीय सुदूर संवेदन संस्थान (आईआईआरएस) भारतीय अंतरिक्ष अनुसंधान संगठन (इसरो) का एक प्रमुख संस्थान है जो पिछले पांच दशकों से प्राकृतिक संसाधनों की निगरानी और आपदा प्रबंधन के लिए भू-स्थानिक प्रौद्योगिकी के इस्तेमाल पर प्रशिक्षण, शिक्षा तथा क्षमता निर्माण में जुड़ा हुआ है। इस संस्थान द्वारा अब तक 22 उपग्रह/ इंटरनेट आधारित आउटरीच पाठ्यक्रम संचालित किए जा चुके हैं। इन पाठ्यक्रमों से लगभग 631 भारतीय विश्वविद्यालयों/ संस्थानों के करीब 49,458 से अधिक प्रतिभागी लाभान्वित हुए हैं।

अंतरिक्ष आधारित भू-स्तरीय प्रौद्योगिकियों और इसकी उपयोगिताओं की पूरी संभावना को बढ़ावा देने के लिए, आई.आई.आर.एस. 21 अगस्त 2017 से दिसंबर 01, 2017 तक "बेसिक्स ऑफ रिमोट सेंसिंग, जीआईएस और जीएनएसएस" पर 23 वीं आउटरीच कार्यक्रम की घोषणा करता है। इस कार्यक्रम में तीन पाठ्यक्रम हैं जिनमें रिमोट सेंसिंग और डिजिटल छवि विश्लेषण (21 अगस्त - 15 सितंबर, 2017), ग्लोबल नेविगेशन सैटेलाइट सिस्टम (25 सितंबर से 10 नवंबर, 2017) तथा भौगोलिक सूचना प्रणाली एवं आरएस और जीआईएस एप्लीकेशन (13 नवंबर-दिसंबर 1, 2017)। प्रतिभागी अपनी पसंद के पाठ्यक्रम अथवा पूरे कार्यक्रम के लिए भी पंजीकरण कर सकते हैं।

यह प्रतिभागियों के लिए एक अच्छा अवसर है जिसमें वे सीधे अपने निवास स्थान से प्रतिदिन डेढ़ घंटे समर्पित करके इस अवसर से लाभान्वित हो सकते हैं। यह कार्यक्रम अंतरिक्ष विभाग, और क्षमता निर्माण के लिए भारत सरकार द्वारा प्रायोजित है। कार्यक्रम के सफलतापूर्वक समापन के बाद प्रतिभागियों को आईआईआरएस, इसरो द्वारा प्रमाण पत्र दिया जाएगा।

कार्यक्रम 1600 - 1730 घंटे बजे के दौरान निर्धारित है तथा प्रति सप्ताह 4/5 दिन आयोजित किया जाएगा। इस कार्यक्रम की घोषणा, ब्रोशर और शेड्यूल की एक कॉपी आपके संगठन के परिसंचरण और आपके के अवलोकन के लिए इसके साथ भेजी जा रही है। कार्यक्रम / पाठ्यक्रम यूजी और पीजी छात्रों / शोधकर्ताओं / वैज्ञानिक / तकनीकी कर्मचारियों एवं इच्छुक व्यक्तियों के लिए खुला है। इसके व्यापक प्रचार तथा प्रसार हेतु आपके संगठन से अधिकतम भागीदारी के लिए आपके सहयोग की अपेक्षा है। इस पत्र के साथ कार्यक्रम के अन्य विवरण संलग्न हैं।

अधिक जानकारी के लिए कृपया आईआईआरएस की वेबसाइट <http://dlp.iirs.gov.in> पर लॉग इन कर सकते हैं।  
शुभकामना सहित,

सहपत्र: पाठ्यक्रम अनुसूची

डॉ. सैथिल कुमार  
डॉ. ए. सैथिल कुमार

भारतीय अंतरिक्ष अनुसंधान संगठन इसरो Indian Space Research Organisation

Dr. Namdev V. Telore  
Co-ordinator

IIRS Outreach Programme, Dehradun  
Centre: R. S. B. Mahavidyalaya, Aunth (Satar)

Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aunth (Satar)

PRINCIPAL

भारत सरकार  
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**Dr. A. Senthil Kumar**  
Director

No.: IIRS/GIT&DL/EDUSAT/2017/23  
Date: 10<sup>TH</sup> JULY, 2017



**Sub: Announcement of 23<sup>th</sup> IIRS Outreach Program on "Basics of Remote Sensing, GIS and GNSS" commencing from 21 August 2017.**

Dear Sir/ Madam,

As you aware that the Indian Space Research Organization (ISRO) has a vibrant Earth Observation (EO) programme with many satellite missions launched during last 50 years. The Indian Institute of Remote Sensing (IIRS) is a premier Institute of 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 22 Satellite and Internet based Outreach Programmes, benefitting more than 49,458 participants from 631 Indian universities/institutions/user Departments/user ministries in India.

To promote the full potential of space based geospatial technologies and its use, IIRS announces 23rd Outreach Programme on "Basics of Remote Sensing, GIS & GNSS" commencing from **August 21, 2017 to December 01, 2017**. The Programme consists of three courses namely **Remote Sensing and Digital Image Analysis** (August 21 - September 15, 2017), **Global Navigation Satellite System** (September 25 - November 10, 2017) and **Geographical Information System and RS and GIS Applications** (November 13- December 01, 2017). The participants can register for **individual course** of their choice or the **entire programme** also.

It is a unique opportunity to learn directly by devoting one and half hours on each day from the place of stay of the participant. The Programme can be attended **without any fee** and will be available freely live through internet by utilizing freely available A-view software ([www.aview.in](http://www.aview.in)). This programme is sponsored by Department of Space, Government of India for capacity Building and skill development in the area of geospatial technology and its applications. After successful completion of the programme the participants will be awarded with certificate from IIRS, ISRO.

The programme is scheduled during 1600 Hrs. - 1730 Hrs. and will be conducted 4/5 days in a week. A copy of the announcement brochure and schedule of this programme is forwarded herewith for your kind perusal and also for wider circulation in your organisation. The programme/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 organisation.

Further details of the programme are enclosed with this letter. You may also visit IIRS website <http://dlp.iirs.gov.in> for more details.

*With regards and best wishes,*

Encl: Brochure and Course Schedule

(A. Senthil Kumar)

भारतीय अंतरिक्ष अनुसंधान संगठन



Indian Space Research Organisation

**Dr. Namdev V. Telore**  
Co-ordinator

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

PRINCIPAL

Raja Shripatrao Bhagwantrao  
Mahavidyalaya Aundh(Satara)



**Twenty-third IIRS Outreach Programme  
On  
Basic of RS, GIS & GNSS**

**Tentative Schedule**

Sl No.	Module Name	From	To
1	Remote Sensing and Digital Image Analysis	22-08-2017	15-09-2017
2	Global Navigation Satellite System & Geographical Information System	25-09-2017	10-11-2017
3	RS & GIS Applications	13-11-2017	04-12-2017

Technical Support from  
A-VIEW, Amrita University, Coimbatore

July, 2017


**Dr. Namdev V. Telore**  
Co-ordinator  
IIRS Outreach Programme, Dehradun  
Centre: R.S.B. Mahavidyalaya, Aundh (Satara)


**PRINCIPAL**  
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Mahavidyalaya, Aundh (Satara)





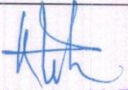
Module 1: Remote Sensing & Digital Image Analysis				
Module/ Course Coordinator: Ms. Minakshi Kumar				
Date	Day	Time	Topic	Speaker
21 Aug 17	Monday	1600-1730 hrs	Course Inauguration and Introductory Lecture	Dr. A. Senthil Kumar
22 Aug 17	Tuesday	1600-1730 hrs	Basic Principles of Remote Sensing	Mrs. Manu Mehta
23 Aug 17	Wednesday	1600-1730 hrs	Earth Observation Sensors and Platforms	Mr. Vinay Kumar
24 Aug 17	Thursday	1600-1730 hrs	Thermal Remote Sensing	Dr. Yogesh Kant
25 Aug 17	<b>Ganesh Chaturthi</b>			
26 Aug 17	<b>Saturday</b>			
27 Aug 17	<b>Sunday</b>			
28 Aug 17	Monday	1600-1730 hrs	Spectral Signatures of Different Land cover Features and Visual Image interpretation	Dr. Hina Pande
29 Aug 17	Tuesday	Offline (Morning Session)	RS and Image Interpretation Practical	By University Coordinator
30 Aug 17	Wednesday	<b>BREAK</b>		
31 Aug 17	Thursday	1600-1730 hrs	Digital Image Processing: Basic Concepts Rectification and Registration	Mrs. Minakshi Kumar
01 Sep 17	Friday	1600-1730 hrs	Image Enhancement techniques	Dr. Poonam S. Tiwari
02 Sep 17	<b>Saturday</b>			
03 Sep 17	<b>Sunday</b>			
04 Sep 17	Monday	<b>BREAK-ONAM</b>		
05 Sep 17	Tuesday	1600-1730 hrs	Image Classification Techniques and Accuracy Assessment	Dr. Poonam S. Tiwari
06 Sep 17	Wednesday	1600-1730 hrs	Microwave Remote Sensing	Mr. Shashi Kumar
07 Sep 17	Thursday	1600-1730 hrs	Hyperspectral Remote Sensing	Mrs. Shefali Agarwal
08 Sep 17	Friday	Offline - as per computer lab availability Morning Session	Image Processing Hands-on and Practical Assignment	By University Coordinator
09 Sep 17	<b>Saturday</b>			
10 Sep 17	<b>Sunday</b>			
11 Sep 17	Monday	1600-1730 hrs	Demonstration: Image Processing	Mrs. Minakshi Kumar
12 Sep 17	Tuesday	Offline - as per computer lab availability	Practical Assignment submission by Participants to respective coordinators and evaluation to be done by respective coordinators	
13 Sep 17	Wednesday	1600-1730 hrs	Panel Discussion Module-1	Faculty of Module-1
14 Sep 17	<b>BREAK For Examination</b>			
15 Sep 17	Friday	9:30 Hrs to 17:00 Hrs	Online Examination of Module-1	Edusat Team


  
**Dr. Namdev V. Telore**  
 Co-ordinator  
 IIRG Outreach Programme, Deh. Aundh - Satara  
 Centre: R.S.B. Mahavidyalaya, Aundh - Satara

  
**PRINCIPAL**  
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 Mahavidyalaya, Aundh(Satara)



Module-2 Global Navigation Satellite System and Geographical Information System				
Course Coordinator: Shri Ashutosh Bhardwaj & Shri Prasun Kumar Gupta				
Date	Day	Time	Topic	Speaker
25 Sep 17	Monday	1600-1730 hrs	Introduction to GPS and GNSS	Er. Ashutosh Bhardwaj
26 Sep 17	Tuesday	1600-1730 hrs	GPS receivers, processing methods, errors and accuracy	Er. Ashutosh Bhardwaj
27 Sep 17	Wednesday	1600-1730 hrs	Satellites based Augmentation systems & GPS Aided and GEO Augmented Navigation (GAGAN)	Er. Ashutosh Bhardwaj
28 Sep 17	Thursday	1600-1730 hrs	GPS signal characteristics, Data formats (broadcast, precise ephemeris)	Shri S. Raghavendra
29 Sep 17			<b>BREAK</b>	
30 Sep 17			<b>Dussehra - Saturday</b>	
01 Oct 17			<b>Sunday</b>	
02 Oct 17	Monday		<b>Gandhi Jayanthi</b>	
03 Oct 17	Tuesday	1600-1730 hrs	Indian Regional Navigation Satellite System (IRNSS)	Er. Ashutosh Bhardwaj & Shri Kamal Pandey
04 Oct 17	Wednesday	1600-1730 hrs	DGPS demonstration (Pre-recorded followed by live query session)	Shri S. Raghavendra
05 Oct 17	Thursday	1600-1730 hrs	Mobile Mapping	Dr. Harish Chandra Karnatak
06 Oct 17	Friday		<b>BREAK</b>	
07 Oct 17			<b>Saturday</b>	
08 Oct 17			<b>Sunday</b>	
Geographical Information System				
Module/ Course Coordinator: Shri Prasun Kumar Gupta				
09 Oct 17	Monday	1600-1730 hrs	Introduction to GIS	Dr. Sameer Saran
10 Oct 17	Tuesday	1600-1730 hrs	Geographic Phenomena, Concepts and examples	Shri P K Gupta
11 Oct 17	Wednesday		<b>Break</b>	
12 Oct 17	Thursday	1600-1730 hrs	Data Inputting and Editing in GIS	Shri Shiva Reddy
13 Oct 17	Friday	1600-1730 hrs	GIS Data Models (Spatial and Non spatial)	Shri Ashutosh Kumar Jha
14 Oct 17			<b>Saturday</b>	
15 Oct 17			<b>Sunday</b>	
16 Oct 17	Monday	1600-1730 hrs	Map Projection Concepts & Use in RS & GIS	Dr. Ashutosh Srivastav
17 Oct 17	Tuesday	1600-1730 hrs	Spatial Analysis- Introductory Concepts and Overview	Shri Prabhar Alok Verma
18 Oct 17			<b>BREAK</b>	
19 Oct 17			<b>Diwali</b>	
20 Oct 17			<b>BREAK</b>	
21 Oct 17			<b>Saturday</b>	
22 Oct 17			<b>Sunday</b>	
23 Oct 17	Monday	1600-1730 hrs	Spatial Analysis- Functionality and Tools	Shri Kapil Oberai
24 Oct 17	Tuesday	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	Shri P K Gupta
25 Oct 17	Wednesday	1600-1730 hrs	Demo of QGIS Software – Session 02: (Data Creation/Vector Generation) • Digitization ,Setting digitizing environment • Adding attributes to layer, Editing digitized layer • Attribute Queries, Spatial Queries Linking spatial & non-spatial data	Shri P K Gupta
26 Oct 17	Thursday	1600-1730 hrs	Open Source S/w Technology & Tools	Shri P K Gupta
27 Oct 17	Friday	1600-1730 hrs	Data Quality & Policies OGC, NSDI & GSDI initiatives. Discussion on Internet resources	Dr. Harish Karnatak
28 Oct 17			<b>Saturday</b>	

  
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29 Oct 17	Sunday			
30 Oct 17	Monday	1600-1730 hrs	Spatial Data Management using RDBMS-Demo on PostGRE SQL+ Post GIS	Shri Kapil Oberai
31 Oct 17	Tuesday	1600-1730 hrs	3D GIS and Application including Trivim	Shri Shiva Reddy
01 Nov 17	Break			
02 Nov 17	Thursday	1600-1730 hrs	Geo-Web Services: Technical Concepts and Applications	Dr. Harish Karnatak
03 Nov 17	Friday		Uncertainty in GIS and Error Propagation	Shri Hari Shankar
04 Nov 17	Saturday – Guru Nanak Birthday			
05 Nov 17	Sunday			
06 Nov 17	Monday	1600-1730 hrs	Customization in GIS	Shri Kamal Pandey
07 Nov 17	Tuesday	1600-1730 hrs	Recent Trends in Geoinformatics	Dr. Sameer Saran
08 Nov 17	Wednesday	1600-1730 hrs	Panel Discussion of Module 2	Faculty of Module-2
09 Nov 17	Thursday		Break	
10 Nov 17	Friday	9:30 Hrs to 17:00 Hrs	Online Exam - Global Navigation Satellite System and Geographical Information System	Edusat Team

Module-3 RS & GIS Applications				
Module/ Course Coordinator: Dr. Arijit Roy				
Date	Day	Time	Topic	Speaker
13 Nov 17	Monday	1600-1730 hrs	Space Technology & its applications in governance	Dr. S. K. Srivastav
14 Nov 17	Tuesday	1600-1730 hrs	Remote Sensing and GIS Applications in Soil Resource Assessment	Dr. Suresh Kumar
15 Nov 17	Wednesday	1600-1730 hrs	Remote Sensing Applications in Agriculture- Crop Inventory & Yield Forecasting	Dr. N.R. Patel
16 Nov 17	Thursday	1600-1730 hrs	RS & GIS Applications in Forestry and Ecology	Dr. Sarnam Singh
17 Nov 17	Friday	1600-1730 hrs	Engineering Geology with emphasis on landslide studies	Dr. Shovan Chattoraj
18 Nov 17	Saturday			
19 Nov 17	Sunday			
20 Nov 17	Monday	1600-1730 hrs	Geology and Geomorphology	Dr. R.S. Chatterjee
21 Nov 17	Tuesday	1600-1730 hrs	Space-enabled Products & Services for Disaster Management :Indian Initiatives	Dr. P.K.C.Ray
22 Nov 17	Wednesday	1600-1730 hrs	Geospatial Technology for climate change studies	Dr. Arijit Roy
23 Nov 17	Thursday	1600-1730 hrs	RS & GIS Applications to Water Resources Management	Dr. S.P. Aggarwal
24 Nov 17	Friday	1600-1730 hrs	RS & GIS for Coastal Zone Management	Dr. D. Mitra
25 Nov 17	Saturday			
26 Nov 17	Sunday			
27 Nov 17	Monday	1600-1730 hrs	Remote Sensing Application to Atmospheric & Marine Environment	Dr. A.K. Mishra
28 Nov 17	Tuesday	1600-1730 hrs	RS & GIS Application in Urban & Regional Planning	Dr. Pramod Kumar
29 Nov 17	Wednesday	1600-1730 hrs	Geo-web Services and mobile GIS in governance	Dr. Harish Karnatak
30 Nov 17	Thursday	1600-1730 hrs	Panel Discussion Module-3	Faculty of Module-3
04 Dec 17	Monday	9:30 Hrs to 17:00 Hrs	Online Examination -RS & GIS Applications	Edusat Team

**Dr. Namdev V. Telore**  
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INDIAN INSTITUTE OF REMOTE SENSING  
Indian Space Research Organisation  
Department of Space, Government of India



**Raja Shripatrao Bhagwantrao Mahavidyalaya, Aundh, Dist. Satara**

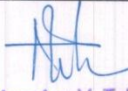
**Twenty-third IIRS Outreach Programme**

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

**August 21 to December 01, 2017**

**Registered Students**

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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



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



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यह प्रमाणित किया जाता है कि राजा श्रीपत्राव भगवंतराव महाविद्यालय, औंध, महाराष्ट्र ने भारतीय सुदूर संवेदन संस्थान, इसरो देहारादून द्वारा संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम "रिमोट सेंसिंग की मूल बातें, भौगोलिक सूचना प्रणाली एवं वैश्विक नेविगेशन सैटेलाइट प्रणाली" में भाग लिया। इस ऑनलाइन पाठ्यक्रम का संचालन दिनांक 21 सितम्बर 2017 से 04 दिसम्बर 2017 तक किया गया।

This is to certify that **Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh, Maharashtra**, has participated in online training programme conducted by Indian Institute of Remote Sensing, ISRO Dehradun on "**Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System**". This online programme was conducted during August 21, 2017 to

December 04, 2017

दिनांक/ Date  
16-01-2018  
देहारादून/ Dehradun

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

Dr. Namdev V. Telore  
Co-ordinator  
IIRS Outreach Programme, Dehradun

PRINCIPAL  
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Mahavidyalaya, Aundh(Satara)



भारतीय सुदूर संवेदन संस्थान/ INDIAN INSTITUTE OF REMOTE SENSING  
भारतीय अंतरिक्ष अनुसंधान संगठन/ INDIAN SPACE RESEARCH ORGANISATION  
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बहिः परिसर संपर्क/विस्तार कार्यक्रम प्रमाण पत्र  
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समन्वयक प्रमाण पत्र

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समन्वय का प्रमाणपत्र  
CERTIFICATE OF COORDINATION

यह प्रमाणित किया जाता है कि राजा श्रीपत्राव भगवंतराव महाविद्यालय, औंध, महाराष्ट्र में कार्यरत डॉ नामदेव वसंत तेलोरे, ने "रिमोट सेंसिंग की मूल बातें, भौगोलिक सूचना प्रणाली एवं वैश्विक नेविगेशन सैटेलाइट प्रणाली" विषय पर इस संस्थान द्वारा दिनांक 21 सितम्बर 2017 से 04 दिसम्बर 2017 तक संचालित ऑनलाइन प्रशिक्षण पाठ्यक्रम को समन्वित किया।

This is to certify that **DR. DR. NAMDEV V. TELORE**, working with **Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh, Maharashtra**, has coordinated the online training course on "**Basics of Remote Sensing, Geographical Information System and Global Navigation Satellite System**" conducted by this institute during August 21, 2017 to December 04, 2017.

दिनांक/ Date  
16-01-2018  
देहारादून/ Dehradun

प्रमुख,  
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग  
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Group Director, Geospatial Technologies & Outreach Programme Group, IIRS

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