

 "Sheel, Sharir, Adhyayan" प्राचार्य डॉ. संभाजी राऊ बामणे M.Sc. Ph. D. भ्रमणधनी - 9860441417	और शिक्षण संस्था, और <b>राजा श्रीपत्राव भगवंतराव महाविद्यालय, और</b> <b>( सातारा )</b> <b>( कला व विज्ञान )</b>	
	प्रमुख श्रीमंत गायत्रीदेवी भगवंतराव पंतप्रतिनिधी राणीरावदेव, और Web-site - <a href="http://www.rsbmaundh.org">www.rsbmaundh.org</a> Reaccredited with B grade by NAAC	प्रमुख या. आ. अजितदादा पवारसाहेब माजी उपमुख्यमंत्री, महाराष्ट्र राज्य Email : <a href="mailto:aundhcollege@gmail.com">aundhcollege@gmail.com</a>

जा. क.. राश्रीमम/ 4255 / 2015-16

दिनांक : 04 / 07 / 2015

To,  
 The Director,  
 Indian Institute of Remote Sensing,  
 Department of Space, Government of India,  
 4, Kalidas Road, PB No. 135,  
 Dehradun.

Subject: Permission to conduct fifteenth IIRS Outreach programme.

Reference: No. IIRS / EDUSAT / 2015 / Date: 1/5/2015

Dear Sir,

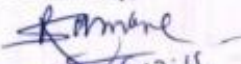
Raja Shripatrao Bhagawantrao Mahavidyalaya is affiliated to Shivaji University, Kolhapur and conducting U.G. courses. The college is recognised under UGC 2F / 12B and re-accredited by NAAC with 'B' grade. It is located in hilly region of Satara District, Maharashtra State and having good infrastructure, computer and sports facilities. Major and minor research projects are going on with financial assistance of UGC. Faculty members have patents also. College has well qualified teaching staff and faculty members have Ph.D. degree in their respective subjects.

We would like to conduct fifteenth IIRS outreach programme on 'Basics of Remote Sensing, GIS and GNSS' scheduled from 10/8/2015 to 27/11/2015 in the Department of Geography. We request you to give permission to conduct the programme.

Thanking you and oblige.

Yours sincerely,



  
 PRINCIPAL  
 Raja Shripatrao Bhagwantrao  
 Mahavidyalaya, Aundh (Satara)



## IIRS Outreach Programme

The Outreach Programme, which started in 2007 with 12 universities/colleges, has now grown substantially. Currently, 222 universities/institutions spread across India covering 29 States and 2 union territories are networked with IIRS. The beneficiaries of the programme include:

- Central/State/Private Universities & Academic Institutions
- Central & State Government Organisations/Departments
- Research Institutes
- Geospatial Industries
- NGOs
- Individuals with good internet connectivity

## Feedback Mechanism

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



Participants of sixth Outreach feedback session during IIRS User Interaction Meet (UIM) 2015

## Awards

Received National Awards for excellence in training for IIRS Outreach Programme and e-learning Programme during 1st National Symposium on Excellence in Training conducted on 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 GPS Technology for Natural Resources, Environmental and Disaster Management. Formerly known as Indian Photo-interpretation Institute (IP), founded in 1961, 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 & education programmes that are tuned to meet the requirements of various target groups, ranging from fresh graduates to policy makers including academia.

IIRS outreach program is popular across India. So far, 14 programmes have been conducted benefiting 19,000 participants.

IIRS also conducts e-learning Programme (<http://elearning.iirs.gov.in/>) on Remote Sensing and Geoinformation Science. First course is in progress and over 2,000 participants have registered for the course.

### Contact Details

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IIRS Outreach Programme and  
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Indian Institute of Remote Sensing, Indian Space Research Organisation  
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Email: [educat@iirs.gov.in](mailto:educat@iirs.gov.in) / [educat2004@gmail.com](mailto:educat2004@gmail.com)

## Fifteenth IIRS Outreach Programme



## Basis of Remote Sensing, Geographical Information System & Global Navigation Satellite System

August 10 – November 27, 2015

Sponsored by  
National Natural Resources Management System  
(NNRMS)



Organised by  
Indian Institute of Remote Sensing  
Indian Space Research Organisation  
Department of Space, Govt. of India  
Dehradun  
[www.iirs.gov.in](http://www.iirs.gov.in)



## About the Course

The course of Remote Sensing, Geographical Information System, Global Navigation Satellite System and associated geospatial technologies is growing rapidly, creating an urgent demand for trained manpower. IIRS utilizes the Ku-Band facility of INSAT-4CR, an ISRO Satellite and internet, for conducting Distance Learning Programme to primarily complement the educational programmes of the Indian Universities. The target group includes students at undergraduate/postgraduate level and faculty/researchers at different universities/institutions. Under its Outreach Programme, IIRS has established its own Teaching end studio and uplinking facility in the campus under national beam coverage of ISRO satellites, connecting numerous classroom end users. Internet bandwidth is also used as an alternative option. IIRS has successfully conducted 14 such courses so far with participation of over 19,000 students from 222 institutions. This programme can be received live using either one of the options i.e. (i) A-VIEW e-learning tool developed by Amrita University in internet environment with login permission, (ii) Satellite Interactive Terminal (SIT) classroom facility at university with LMS S/W tool (i.e. TrainNet). Course participation has increased with the option of A-VIEW software as it has also enabled participation of many who do not have the SIT facility.

## Curriculum

The course is divided into 4 modules:

- Remote Sensing and Digital Image Analysis
- Global Navigation Satellite System
- Geographical Information System
- RS and GIS Applications

The topics include

- 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
- Introduction to GPS and GNSS, receivers, processing methods, errors and accuracy

- GIS, data bases, topology, spatial analysis and open source software's.
- RS & GIS Applications: Agriculture and Soil, Forestry and Ecology, Geoscience and Geohazards, Marine and Atmospheric Sciences, Urban and Regional Studies and Water Resources

Course study materials like lecture pdf, lecture video, lecture notes, open source software, practical data & handouts of practical lecture etc. will be made available through IIRS ftp site and lecture videos are uploaded in YouTube Channel (<http://www.youtube.com/user/educat2004>)

## Target Participants

- Student of undergraduate course/ Postgraduate course (any year).
- Technical/ Scientific Staff of Central/ State Government Departments
- Faculty / researchers at university / institutions are also eligible to participate in this course.
- Individuals, who have good internet bandwidth facility may also participate.

Applications of participants have to be duly sponsored by their university/institution and forwarded through coordinators from respective centres. Users receiving programmes under CEC-UGC/CIET / other networks can also participate. Institutions on high speed National Knowledge Network (NKN) can also participate using A-VIEW software.

## Course Fee

The Course is free of cost.

## Course Registration

Online registration is open through URL: <http://iirs.gov.in/Eduat-News/>, the online registration is mandatory. No hard copy application will be accepted.

## Sponsors & Technical Support

The programme is sponsored by National Natural Resources Management System – Standing Committee on Training and Education (SC-T), Indian Space Research Organisation, Department of Space, Government of India and is conducted with due technical help from Satellite Communications & Navigation Programme (SCNP), ISRO;

Development and Educational Communication Unit (DECU), ISRO and A-VIEW Amrita University, National Mission on Education through Information and Communication Technology

## Programme Receptions

NKN/ NMEICT Institutions/ other Institutions / Universities may participate in IIRS Outreach Programme by using any one of the following setups:

### Option-I: A-VIEW internet based streaming

Hardware Requirements:

- High end Computer/Laptop (Windows OS)
- Good quality web camera
- Headphone with Microphone
- Speakers
- Large Display Screen (Projector or TV)

Software and Internet Requirements

- Desktop based- A-VIEW software (free to download from [www.aview.in](http://www.aview.in) or IIRS ftp link: <ftp://ftp.iirs.gov.in/>)
- Web based- <https://live.aview.in>
- National Knowledge Network or any other high speed internet facility (Preferably without firewall, bandwidth (2 mbps minimum))
- Network requirements Port 80 and RTMP (port 1935) protocol should be unblocked from users' computer

Option-II: Satellite Based (SIT/ ROT) users can receive if hub is operational at CIET-NCERT

- 1.2 m Satellite Interactive Terminal (SIT) Antenna
- Indoor unit (IOU) i.e. set top box
- PC with software for LMS
- LCD Projector
- Classroom

Note: Only existing users with SIT/ ROTs established under CEC-UGC/CIET-NCERT/AICTE/IGNOU/Vijayan Prasar may participate



औध शिक्षण मंडळ, औधचे

राजा श्रीपतराव भगवंतराव महाविद्यालय, औध

( कला व विज्ञान )

**भूगोल विभाग**

**उद्घाटन**

Fifteenth ISRO- IIRS Outreach Programme

“ Basics of Remote Sensing , GIS and GNSS ”

**कार्यक्रम पत्रिका**

1. प्रतिमा पुजन व दिपप्रज्वलन
2. पाहुण्याचा सत्कार
3. पाहुण्याची ओळख
4. कार्यक्रमाची प्रस्तावना
5. प्राचार्यांचे मनोगत
6. पाहुण्यांचे बिजभाषण
7. अध्यक्षीय भाषण
8. आभार प्रदर्शन

Aundh Shikshan Mandal's  
Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh  
Tal. Khatav, Dist. Satara  
Department of Geography



On the occasion of Birth Anniversary of  
**Hon'ble Ajitdada Pawar Saheb**  
President, Aundh Shikshan Mandal, Aundh  
**INAGURATION**  
Fifteenth IIRS Outreach Programme  
Basics of Remote Sensing, GIS and GNSS

Sponsored by  
National Natural Resources Management System (NNRMS)  
Indian Space Research Organisation (ISRO)

Organised by  
Indian Institute of Remote Sensing  
ISRO, Dept. of Space, Govt. of India, Dehradun

Chief Guest: Shri. Bedwal

President: Shri.

Coordinator	Principal	Chairman
Dr. N.V. Telore	Dr. S.R. Bamane	Hon'ble Shrimant Gayatri Devi Pantpratinidhi Ranisaheb Aundh



"Sheel, Sharir, Adhyayan"

University  
AIB/F.2/New College/ 6695,  
Dt. 14-09-1994

M.S. Govt.  
NGC/3594/7356-ME-3,  
Dt. 5-8-1994

औद्योगिक शिक्षण मंडळ, औंध

**राजा श्रीपतराव भगवंतराव महाविद्यालय, औंध**

(सातारा)

दूरध्वनी. ०२१६१.२६२४७७

(कला व विज्ञान)

दूरध्वनी. ०२१६१.२६२३२४

प्रेक्षक

श्रीमंत मायजीदेवी भगवंतराव पंतप्रतिनिधी  
राणीसाहेब, औंध

अध्यक्ष

मा. आ. अजितदादा पवारसाहेब  
माजी उपमुख्यमंत्री, महाराष्ट्र राज्य

Web- site – [www.rsbmaundh.org](http://www.rsbmaundh.org)

Email : [aundhcollege@gmail.com](mailto:aundhcollege@gmail.com)

Reaccredited with B grade

प्राचार्य डॉ. संभाजी राऊ बामणे M.Sc. Ph. D.

संभाजी - 9860441417

जा. क्र. साजीमया/4188 2014-15

दिनांक : 19 / 05 / 2015

To  
Shri J.S. Bedwal,  
Senior Geologist,  
Groundwater Survey and Development Agency,  
Satara

Subject: Inauguration of ISRO – IIRS course.

Dear Sir,

It gives me immense pleasure to invite you as a chief guest to inaugurate fifteenth IIRS Outreach Programme on "Basics of Remote Sensing, Geographical Information System & Global Navigation Satellite System" on the occasion of birth anniversary of Hon'ble Ajitdada Pawar Saheb, Former Deputy Chief Minister, Govt. of Maharashtra on 22/7/2015 at 11.00 am in the Auditorium Hall of College.

Thanking you.

Yours Sincerely

Dr. Sambhaji Rau Bamane

PRINCIPAL

Raja Shripatrao Bhagwantrao  
Mahavidyalaya, Aundh (Satara)



"Sheel, Sharir, Adhyayan"

Aundh Shikshan Mandal, Aundh

**RAJA SHRIPATRAO BHAGAWANTRAO  
MAHAVIDYALAYA, AUNDH.( Satara)**

Phone No. 02161-262324,325,475

Web-site - [www.rsmaundh.org](http://www.rsmaundh.org)

Email : [aundhcollege@gmail.com](mailto:aundhcollege@gmail.com)

Chairman

President

Shrimant Gayatrivedi Bhagwantrao  
Pantpratnindhi, Ranisaheb, Aundh

Hon'ble Namdar Ajitdada Pawar Saheb

( Affiliated to Shivaji University, Kolhapur.)

Aff/F. 2/New College/6695 dt. 14-09-1994 M.S. Govt. NGC/3594/7356-ME-3 dt. 5-9-1994.

Re-accredited by NAAC with B Grade

Principal- Dr. Bamane S.R., M.Sc. Ph.D

Mo. 9860441417

Ref. No. RSBM/4789/2015-16.

Date - 22-07-2015

To,  
Shri J.S. Bedwad,  
Senior Geologist,  
Groundwater Survey and Development Agency,  
Satara.

Subject : Vote of thanks.

Dear Sir,

I express my sincere gratitude for your kind cooperation and presence as a chief guest on the auspicious occasion of birth anniversary of Hon'ble Ajitdada Pawar Saheb, Former Chief Minister, Govt. of Maharashtra and inauguration of fifteenth IIRS Outreach Programme on "Basics of Remote Sensing, Geographical Information System & Global Navigation Satellite System" on 22/7/2015.

Thanking you.

Yours sincerely,

Dr. Sambhaji Rau Bamane

**PRINCIPAL**

Raja Shripetrao Bhagwantrao  
Mahavidyalaya, Aundh (Satara)

Aundh Shikshan Mandal's  
Raja Shripatrao Bhagawantrao Mahavidyalaya, Aundh  
Tal. Khatav, Dist. Satara



## Department of Geography

Fifteenth ISRO - IIRS Outreach Programme  
' Basics of Remote Sensing, GIS and GNSS '

### REQUIREMENTS

Sr. No.	Item	Quantity
1	Upgradation of computer RAM 2 GB to 8 GB	5 PCs + 1 Laptop
2	Upgradation of computer Microprocessor Intel Core 2 Duo to Intel Core i5	5 PCs + 1 Laptop
3	Headphones with microphone	2 set
4	Speakers	2 set
5	Web camera HD	2
6	Printer with Scanner and Xerox facility	1
7	Printing Paper A4	2 rim
8	Internet Bill	

Co ordinator

Dr. Namdev V. Telore

Head

Prof. Barkalle J.D.