

***Announcement Brochure***

# **IIRS Outreach Programme**

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

**\*There are limited number of seats. Registration will be done on first come first serve basis**

**August 16- November 26, 2021**

***Organised by***

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



## 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 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 82 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://eclass.iirs.gov.in/login>)
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 based platform. The programs are available **through Internet without any cost** to the user. Experts from IIRS-ISRO and other knowledge Institutions will conduct the live and interactive sessions. IIRS has successfully conducted 82 such courses so far with participation of over **368000+ participants from 2800+ academic institutions, government departments and industry**. The beneficiaries of the programme may include:

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

IIRS also conducts various theme oriented online courses and webinars on recent topics on geospatial technologies and its applications. Users are encouraged to actively participate on these programs. For more details, please visit IIRS distance learning website- <https://www.iirs.gov.in/EDUSAT-News>

# Course Announcement

IIRS announces following courses commencing from **August 16, 2021**. The participants can register for either comprehensive course or individual modules (only three) of their choice.

## **Comprehensive Course:**

- ❖ **Basics of Remote Sensing, GIS and GNSS (16/08/2021 to 26/11/2021):** Comprehensive course consisting of above five courses.

## **Modules:**

- ❖ **Remote Sensing and Digital Image Analysis (16/08/2021 to 10/09/2021):** 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 (13/09/2021 to 24/09/2021):** Introduction to GPS and GNSS, receivers, processing methods, errors and accuracy,
- ❖ **Geographical Information System (27/09/2021 to 22/10/2021):** GIS, databases, topology, spatial analysis and open source software.
- ❖ **Basics of Geocomputation and Geoweb Services (25/10/2021 to 02/11/2021):** Geocomputation and Geoweb Services
- ❖ **RS and GIS Applications (08/11/2021 to 26/11/2021):** Agriculture and Soil, Forestry and Ecology, Geoscience and Geo-hazards, Marine and Atmospheric Sciences, Urban and Regional Studies and Water Resources.

## **Target Participants**

- ❖ Undergraduate and Postgraduate (any year)
- ❖ Technical/ Scientific Staff of Central/ State Government/Faculty/researchers at university/institutions

## **Course Study Material**

Course study materials like lecture slides, video recorded lectures, open source software & handouts of demonstrations, etc. will be made available through e-class. Video lectures will also uploaded in IIRS Learning management system (E-CLASS) <https://eclass.iirs.gov.in/login>

## **Course Fee**

There is [no course fee](#).

## **Course Registration**

Course updates and other details will be available on URL- <http://www.iirs.gov.in/Edusat-News/>.

Participants can register through institute or also go for individual registration

### **For Participation through Institute/ Universities/Institutes/Department**

- ❖ To participate in IIRS Outreach 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.
- ❖ Participants has to register online through registration page by selecting his/her organization as nodal center
- ❖ The Coordinator is required to approve the participants from his/her institute for each course before programme commencement date.

### **For Individual Participation**

- ❖ Participants can register using Individual registration option also, if their institute not registered under IIRS Outreach network (Indian Institute of Remote Sensing, Dehradun will be the nodal center)

## **Course Funding & Technical Support**

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

## Number of seats:

**Comprehensive Course:** 10,000 seats

**Modules:** 5,000 seats

The Nodal Center Coordinators will be provided with 25 seats in every course to register students of their institute

## Programme Reception

Programme can be received live through E-CLASS platform of IIRS-ISRO or using IIRS youtube channel using internet connectivity. No specific hardware /software required. *The content of the sessions will be available offline after 24 hours in the E-class portal.*

### Classroom Mode

- ❖ Required Hardware: Desktop computer with web camera microphone & output speaker or laptop with microphone camera and output speaker and Large display screen /projector/TV (Participating Institutions have to bear total expenses for establishment of the classroom facility)
- ❖ The Nodal centre coordinator will be responsible for approval and marking attendance of the registered participants

### Individual participants

- ❖ Individuals can attend the course live via any web browser through the eclass portal of IIRS Dehradun i.e. <https://eclass.iirs.gov.in> or via the YouTube channel of IIRS i.e. <https://www.youtube.com/user/edusat2004>
- ❖ Participant can attend class through their personal smart phones, desktop or laptops (preferred for good resolution reception of programme)

## Important Links

Course updates, and other details will be available on URL- <https://www.iirs.gov.in/EDUSAT-News>

## Award of Certificate

**Working Professional and Students:** Based 70% attendance and 40 % passing marks

## Feedback Mechanism

The participants are required to submit their feedback online through IIRS e-Learning portal. Feedbacks are critically analyzed and implemented in further courses. Selected participants and participating organization will be invited to attend annual IIRS Academia Meet (IAM) at IIRS Dehradun.



Outreach Programme Feedback Session during  
IIRS Academia Meet (IAM)-2020



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

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Department of Space, Govt. of India, 4-Kalidas Road, Dehradun-248001

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

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Ref: DLP/Coordinator/2022/275  
सं: डीएलपी/समन्वयक/2022/275

Date: November 29, 2022  
दिनांक: 29 नवंबर, 2022

**TO WHOMSOEVER IT MAY CONCERN**

यह प्रमाणित किया जाता है कि प्रोफेसर (डॉ.) सीमा जालान, आचार्य एवं अध्यक्ष, भूगोल विभाग, मोहनलाल सुखाड़िया विश्वविद्यालय, उदयपुर, वर्ष 2014 से भारतीय सुदूर संवेदन संस्थान, देहरादून द्वारा संचालित ऑनलाइन-प्रशिक्षण पाठ्यक्रमों का समन्वय कर रही हैं। भूगोल विभाग, मोहनलाल सुखाड़िया विश्वविद्यालय, उदयपुर, द्वारा आई.आई.आर.एस आउटरीच नोडल केंद्र के रूप में पिछले पाँच वर्षों (2018-22) के दौरान, 55 ऑनलाइन पाठ्यक्रम संचालित किए गए हैं।

यह प्रमाण पत्र महाविद्यालय की एन.ए.ए.सी मान्यता के लिए जारी किया जा रहा है।

This is to certify that Professor (Dr.) Seema Jalan, Professor & Head, Department of Geography, Mohanlal Sukhadia University, Udaipur has been coordinating Online-training courses conducted by Indian Institute of Remote Sensing, Dehradun since 2014. The Department of Geography, Mohanlal Sukhadia University, Udaipur as IIRS Outreach Nodal centre has conducted 55 online courses during last five years (2018-22).

This certificate is being issued for NAAC accreditation of the College.

(Harish Karnatak)

**डॉ. हरीश कर्नाटक / Dr. Harish Karnatak**  
प्रमुख / Head  
जियोवेब सर्विसेस, सूचना प्रौद्योगिकी एवं दूरस्थ अधिगम विभाग  
Geoweb Services, Information Technology & Distance Learning Department  
भारतीय सुदूर संवेदन संस्थान / Indian Institute of Remote Sensing  
भारतीय अंतरिक्ष अनुसंधान संगठन / Indian Space Research Organisation  
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