समन्वयक:
EDUSAT कार्यक्रम,
भारतीय सुदूर संवेदन संस्थान (IIRS),
ISRO

मोबाइल: 8948332533
ई-मेल: satyamgeog@gmail.com

डॉ॰ सत्यम् मिश्र
सहायक आचार्य
भूगोल विभाग,
सिद्धार्थ विश्वविद्यालय, कपिलवस्तु
सिद्धार्थनगर – 272 202

पत्रांक: 006/SM-GEOG/SUK/2026

दिनांक: 23-07-2026

ई मेल द्वारा

सूचना

भारत में रिमोट सेंसिंग के प्रतिष्ठित संस्थान भारतीय सुदूर संवेदन संस्थान (IIRS), इसरो (ISRO), देहरादून द्वारा दिनांक 27-28 जुलाई 2026 को दो दिवसीय कार्यशाल – '**Aerosols: measurement, retrieval and impacts**' का आयोजन किया रहा है। यह कार्यशाला पूर्णतः निःशुल्क है और ऑनलाइन माध्यम से आयोजित की जा रही है।

सिद्धार्थ विश्वविद्यालय (परिसर) के समस्त इच्छुक विद्यार्थी, शोधार्थी एवं शिक्षकगण इस कार्यशाला में सहभागिता के आमंत्रित हैं।

ऑनलाइन रजिस्ट्रेशन की प्रक्रिया, कार्यशाला की विवरणिका (brochure) एवं समय-सारिणी (schedule) इस सूचना के साथ संलग्न है।

सधन्यवाद,

[डॉ. सत्यम् मिश्र]
सहायक आचार्य, भूगोल विभाग
कोऑर्डिनेटर, एजुसैट (EDUSAT) प्रोग्राम

संलग्नक:

1. कार्यशाला की विवरणिका (ब्रोशर) (pdf),
2. समय सारणी (शेड्यूल) (pdf), एवं
3. पंजीकरण मार्गदर्शिका (रजिस्ट्रेशन गाइड) (pdf)

About the Workshop

Understanding atmospheric aerosols has become increasingly vital as they influence climate, air quality, radiation balance, and human health. Over the past few decades, remarkable progress in ground-based and satellite remote sensing - supported by modern retrieval algorithms and advanced data analysis techniques - has significantly enhanced our ability to monitor, characterize and model aerosol properties. The wealth of multi-platform observations has opened new avenues to explore aerosol sources, transformations, and their regional and global impacts. This two-day online workshop focuses on the measurement techniques, retrieval approaches, and scientific insights related to aerosols, highlighting recent advances and emerging research opportunities. We invite you to join us for the workshop on "AEROSOLS: MEASUREMENT, RETRIEVAL AND IMPACTS" to be held on 27 -28 July, 2026.

Workshop Content and Outline

This online workshop will cover the following topics:

- Aerosol Physics and Optics
- Aerosol Forcing & Boundary Layer Dynamics
- Aerosol Chemistry
- Health Impacts of Aerosols
- Ground Based Aerosol Instrumentation
- Remote Sensing of Aerosols: Physics and Retrieval
- Modelling of Aerosols
- Hands-on Training

Who can attend the workshop

The workshop is designed for professionals from Central / State Govt. / Private Organisations / NGOs, students and researchers; who are aligned to undertake research in atmospheric and environmental science.

Course Registration

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

- Registered through Nodal centres.The participant's registration must be approved by the coordinator of nodal centers.
- The participants can register and see their application status through URL- https://elearning.iirs.gov.in/edusatregistration/ . In case, the application is pending for approval then participants are advised to contact the coordinator of respective nodal center.

Registered as "Individual registrations"-The participants with individual registration will be automatically approved. All the registered participants will get their login credentials for ISRO Learning Management System (LMS)- **https://isrolms.iirs.gov.in**

Award of Certificate

Registered through Nodal centres : Based on 70% attendance, students will be awarded a "Courses Participation Certificate."

Individual Registration: A "Course Participation" certificate will be given to everyone who devotes at least 70% of each session's hours to the course. The course participation certificate will be available for download in ISRO LMS.

Contact Details

Dr. Manu Mehta
Workshop Coordinator
Email: **manu@iirs.gov.in**

Dr. Poonam S Tiwari
Programme Coordinator

IIRS DLP Team
Mr. Janardan Vishwakarma &
Mr. Ashok Ghildiyal
Tel: 0135-2524130
Email- **dlp@iirs.gov.in**

इसरो ISRO

Online Workshop on

AEROSOLS:
MEASUREMENT, RETRIEVAL AND IMPACTS

July 27- 28, 2026

IIRS Outreach Programme

Organised by

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

www.iirs.gov.in

INDIAN INSTITUTE OF REMOTE SENSING (IIRS), ISRO

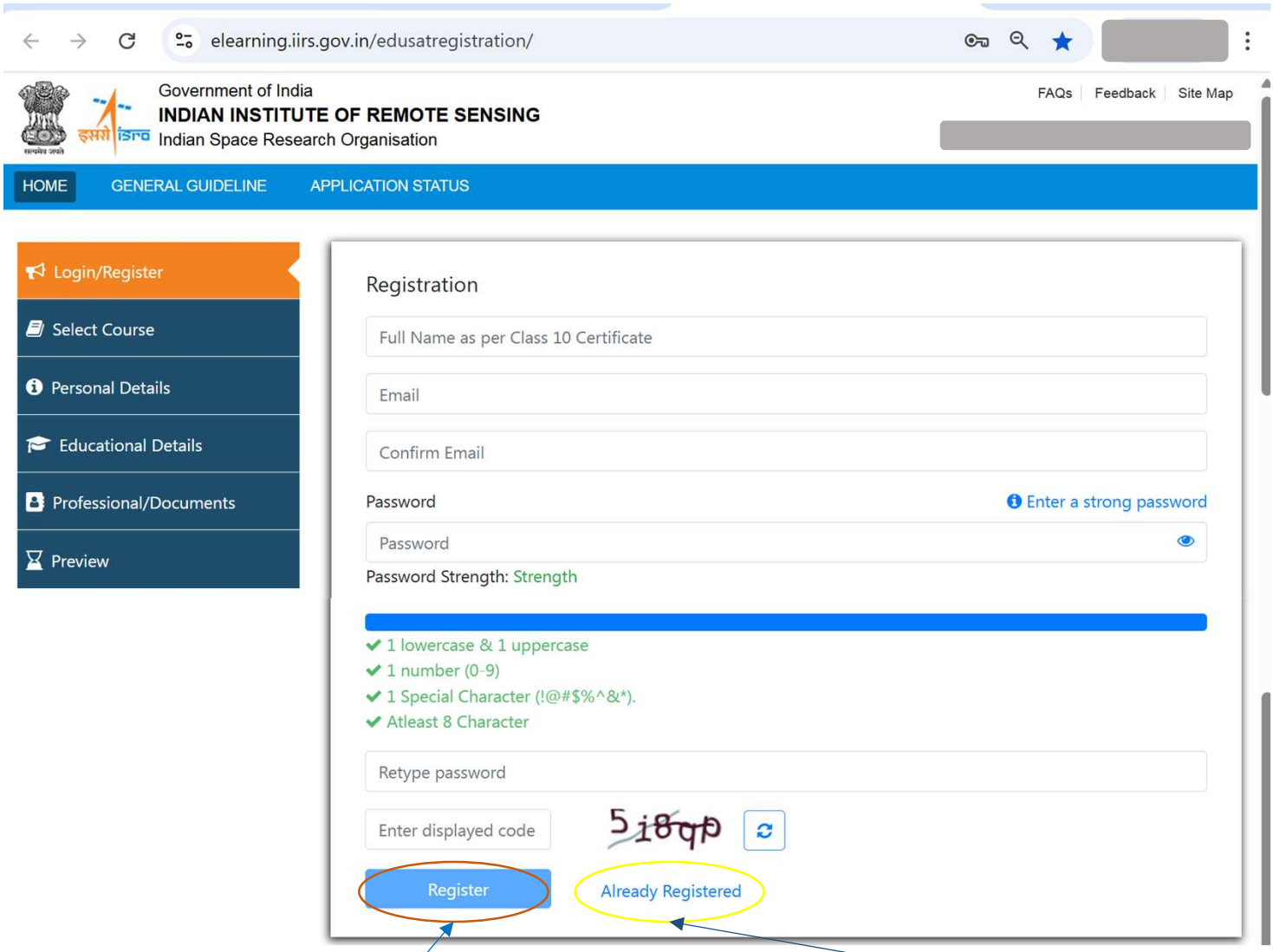
Schedule for Online Workshop on
AEROSOLS: MEASUREMENT, RETRIEVAL AND IMPACTS
(27-28th July 2026)

Session	Key Subtopics	Duration	Speakers
Briefing of the Course Contents to the participants		**10:50 -11:00 am**	
DAY 1: UNDERSTANDING AEROSOLS, INTERACTIONS AND IMPACTS			
Aerosols: Physics & Optics	*Structure and Composition of the Atmosphere, Sizes, Formation pathways, Particle behaviour, Scattering/absorption, Refractive index, Optical traits like Optical Depth, SSA, Phase function*	**11:00-11:55 am** 40 min Lecture 15 min interaction	**Dr. Yogesh Kant** (IIRS)
Aerosol Forcing & Boundary Layer Dynamics	*Aerosol-Planetary Boundary Layer feedback, Vertical distribution, Direct/Indirect Forcing, and Boundary Layer Height interactions, Case Studies*	**12:00-12:55 pm** 40 min Lecture 15 min interaction	**Dr. Narenda Singh** (ARIES)
Aerosol Chemistry	*Core chemical composition of different aerosol types, Chemical transformation processes, measurement and challenges, Chemical Pathways Shaping Climate and Health Impacts, Case Studies*	**02:30-03:25 pm** 40 min Lecture 15 min interaction	**Prof. Neeraj Rastogi,** (PRL/ DOS)
Health Impacts of Aerosols	*PM2.5 / PM10 exposure studies, Aerosol–health linkages, Air quality monitoring for health, AOD-PM relationships, Health risk assessment using remote sensing, Long-term vs short-term exposure studies*	**03:30-04:25 pm** 40 min Lecture 15 min interaction	**Prof. Sagnik Dey** (IIT, Delhi)

DAY 2: MEASUREMENT, RETRIEVAL AND MODELLING			
Ground Based Aerosol Instrumentation	*Sun Photometers, Sky Radiometers, Aethelometer, Mie/ Raman/ MicroPulse Lidars, Nephelometer, Aerosol Spectrometers (OPC), Balloon/Radiosonde etc.*	**09:30- 10:30 am** 40 min Lecture 15 min interaction	**Dr. Aditya Vaish** (Ahmedabad University)
Remote Sensing of Aerosols : Physics and Retrieval	*Remote Sensing Techniques, Role of wavelength, viewing geometry and polarisation, Surface, Columnar and Vertical Distribution, Physics-based and Machine-Learning based retrieval approaches*	**10:30-11:25 am** 40 min Lecture 15 min interaction	**Dr. Manu Mehta** (IIRS)
Modelling of Aerosols	*WRF-Chem, CMAQ, GEOS-Chem frameworks, Emission inventories, Coupled chemistry–meteorology feedbacks, AI/ML based approaches, Case studies*	**11:30-12:25 pm** 40 min Lecture 15 min interaction	**Dr. Narendra Ojha,** (PRL/ DOS)
Hands-on Training	*Downloading, Familiarisation and Visualisation of satellite/AERONET/ Reanalysis data, iAOD software*	**02:30-03:25 pm** 40 min Lecture 15 min interaction	**Mr. Akhilesh Kumar** (Univ of South Wales Sydney)
Wrap Up and Closing		**03:30-3:45 pm**	

Registration/Joining Process for EDUSAT Courses

Follow this link: https://elearning.iirs.gov.in/edusatregistration/

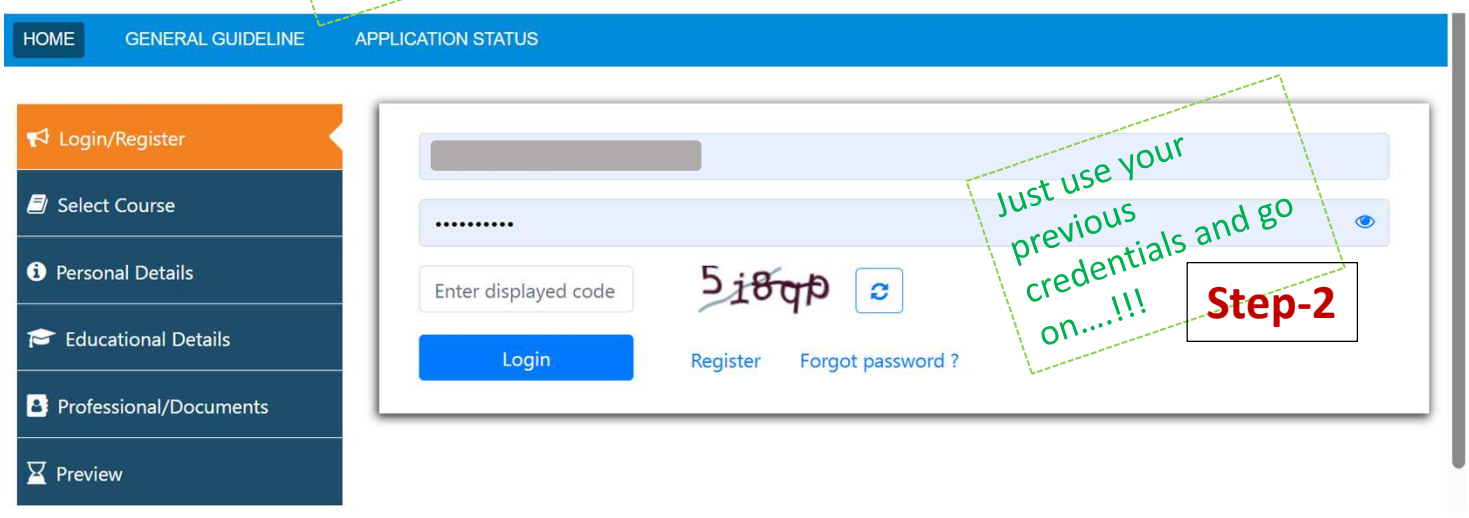


For New Candidates
(Those who have never attended any EDUSAT Course)

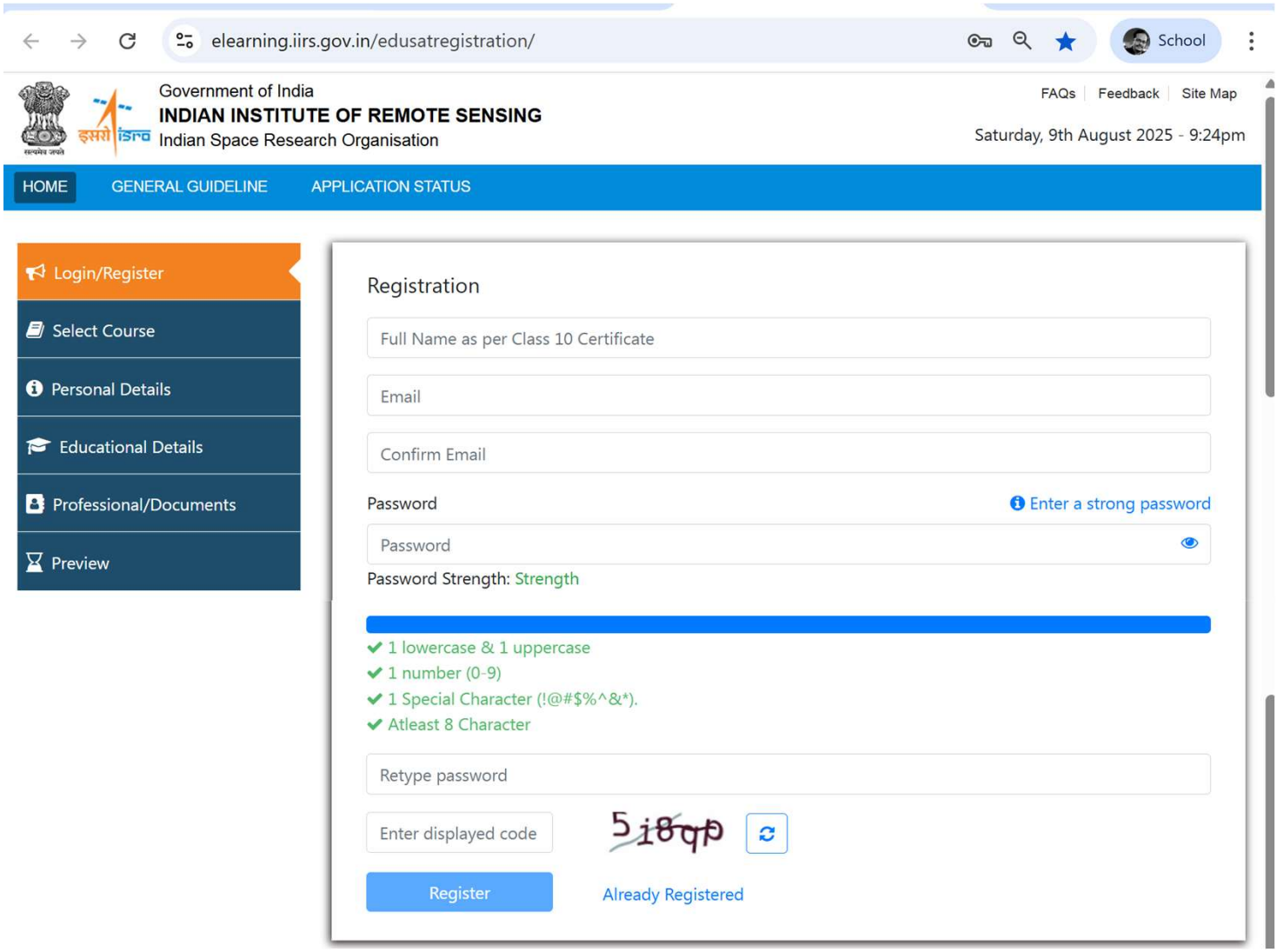
Fill the above form and continue...

Step-1

For Already Registered Candidates
(Those who have attended
at least one EDUSAT Course previously)

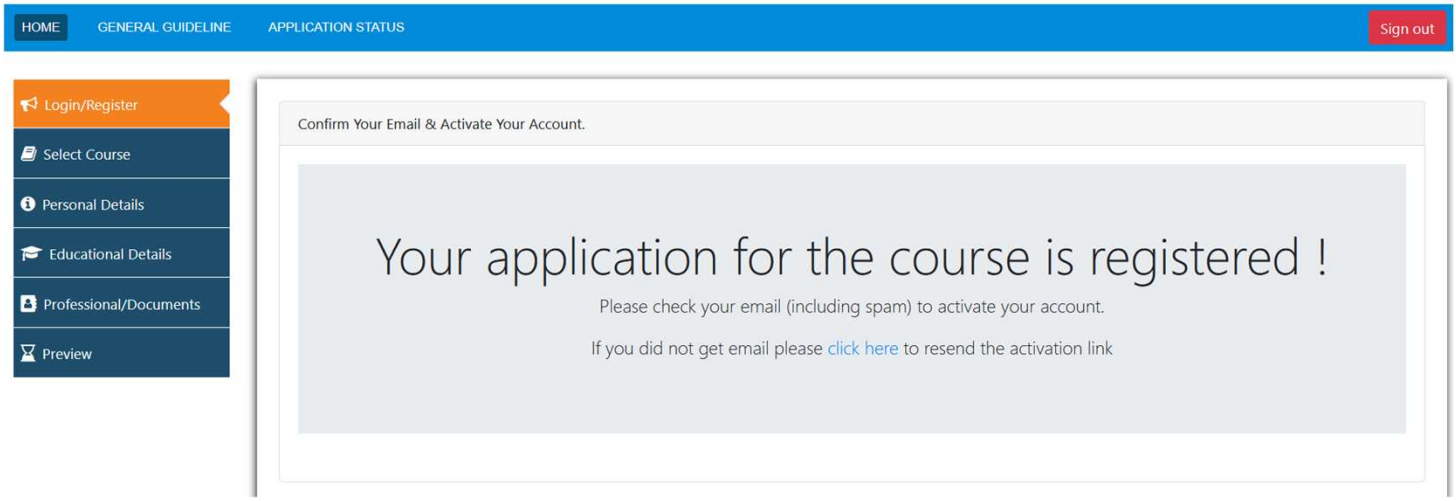


Step – 1: Complete Your Registration



Fill the above form with a valid and working email ID

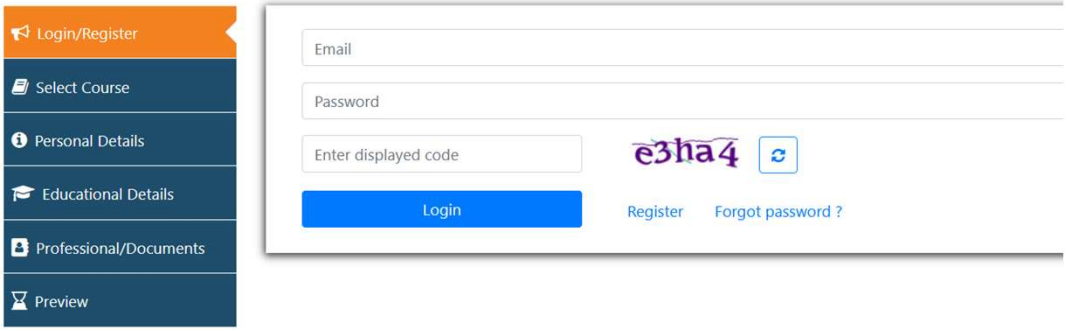
Click on Register button and a link for verification/confirmation will be sent to your email ID.



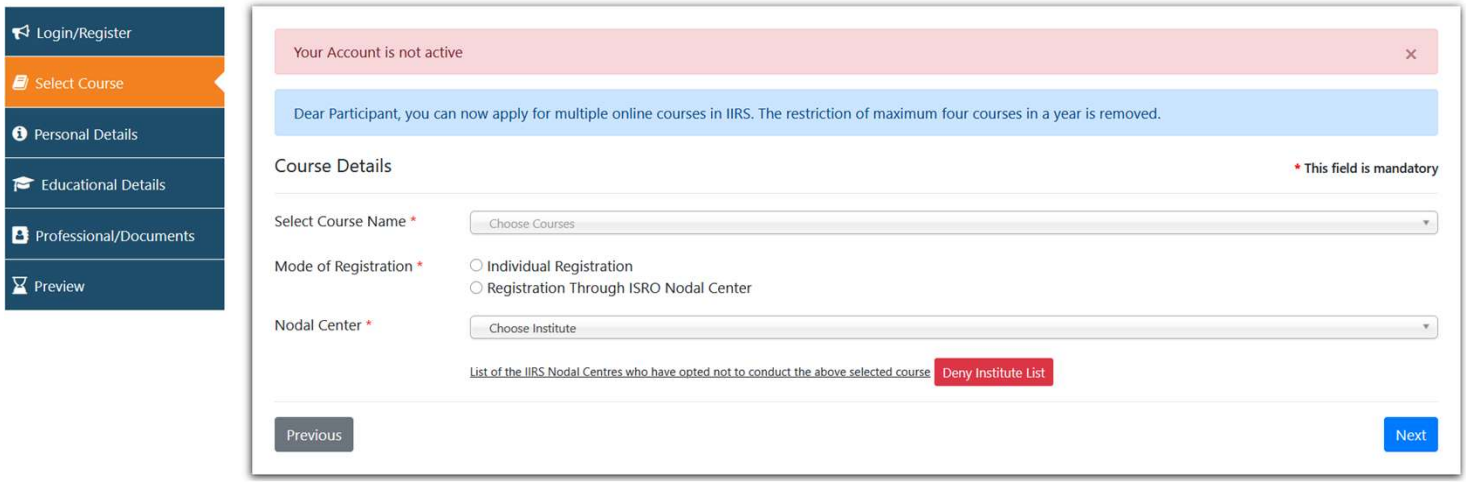
Click that link to verify. You can now move to **Step -2**

STEP – 2: Course and Nodal Center Selection

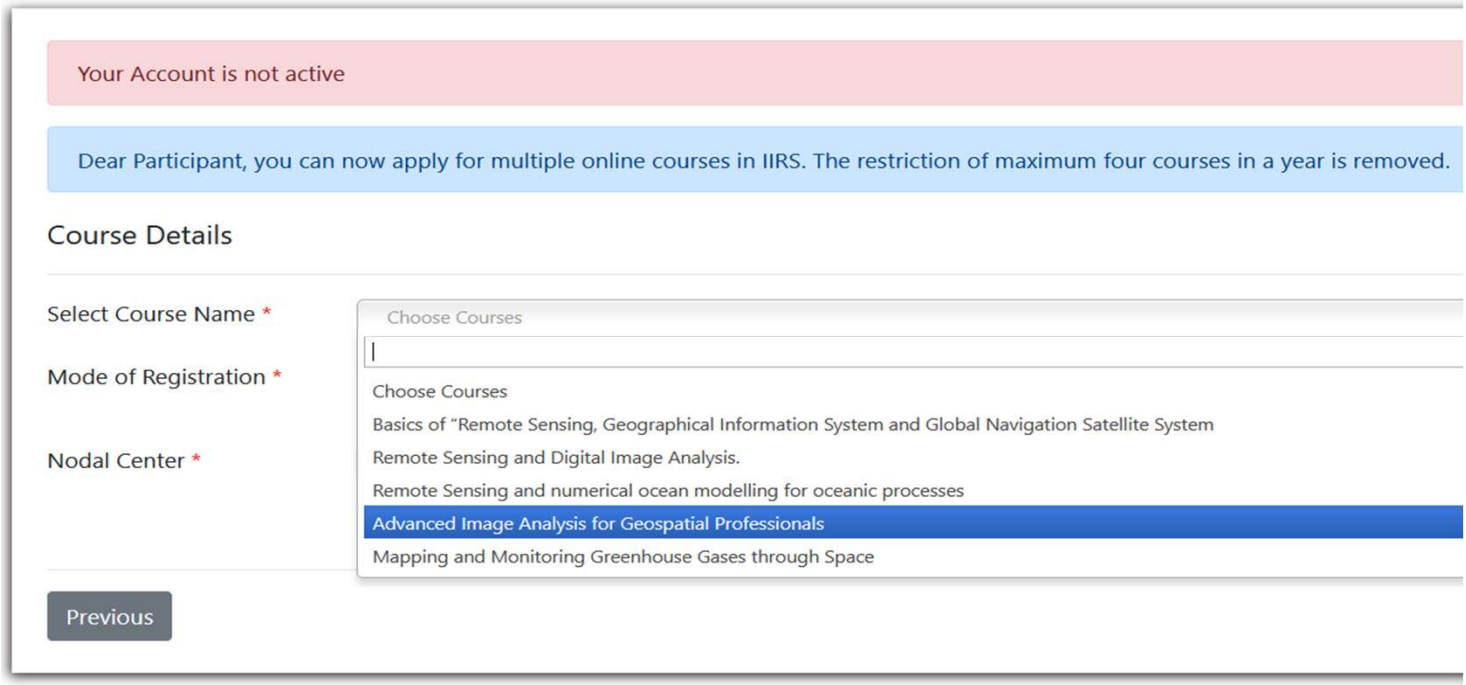
If you are coming following the step one (i.e. New Registration) You may be already Logged In. If you logged out accidently Please follow this same link https://elearning.iirs.gov.in/edusatregistration/ and this time click on Already Registered Button as shown in the First page of this Process Documentation.
This will lead you to the Login Form shown below:



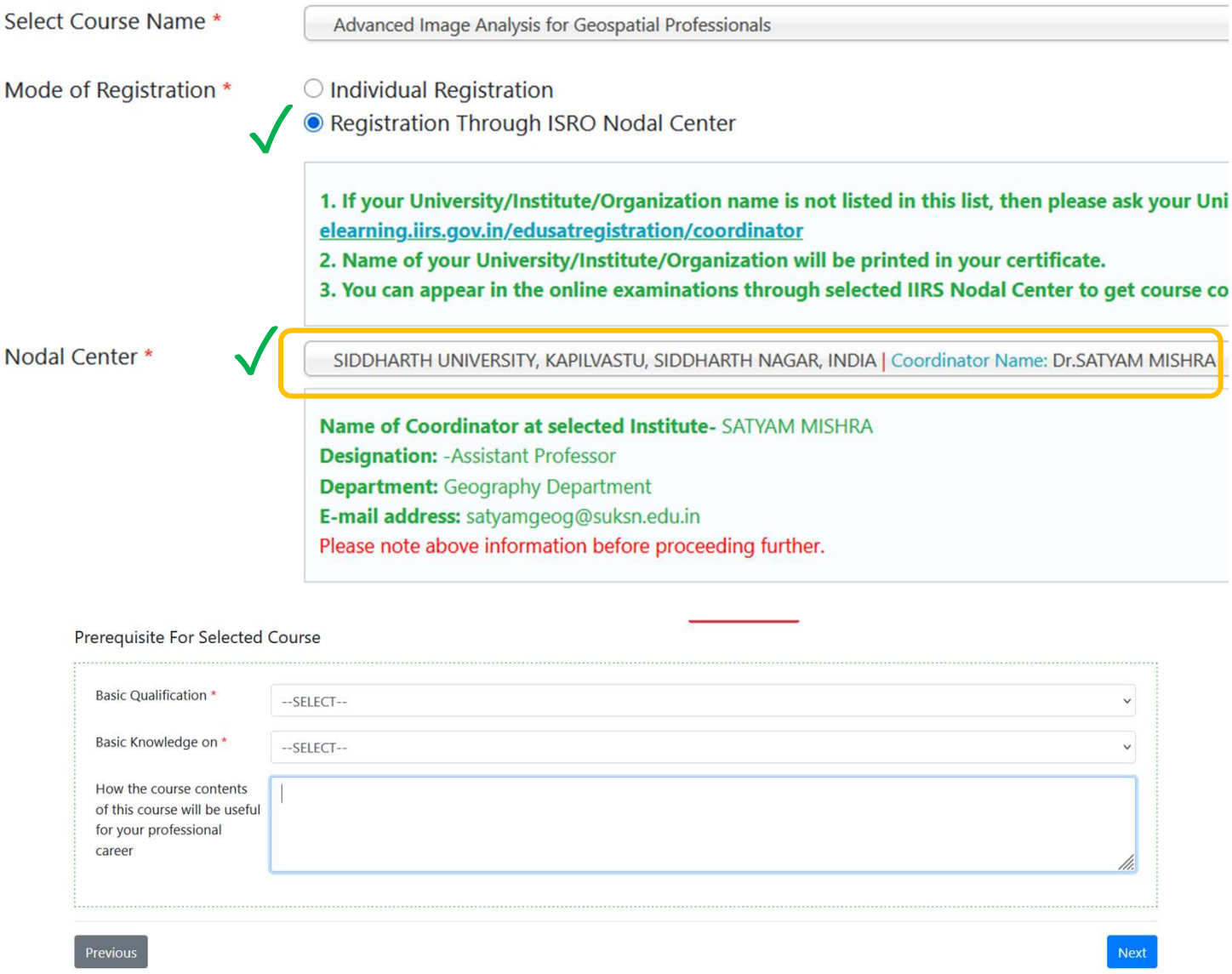
After login Click on 'Select Course' which will lead you to the following page.



'Select Course/Workshop Name' for Which You are Applying.
See attached Brochure



Next, carefully select "Registration Through ISRO Nodal Centre"
From the List Choose Your Nodal Center: SIDDHARTH UNIVERSITY



Select appropriate things in the above dropdowns and briefly describe how this Course/Workshop is beneficial for you. Proceed by Clicking 'Next'.

Next to this you will be asked to fill Personal, Educational & Professional Details:

For Uploads
Get handy Soft copy of
Passport Size Photo
And **ID Proof**

Fill/Update the Personal Details, Educational Details, Professional Details and **Upload Photo and ID Proof**

Personal Details

* This field is mandatory

Salutation * Select Salutation

Full Name * Full Name

Father's Name * Father's Name

Date of Birth * Date of Birth

Gender * Male Female Transgender

Nationality * --SELECT--

Mobile Number * Phone

City * City

Country * --SELECT--

Pin/Zip code * Pin/Zip code

Previous Save & Continue

Educational Details

* This field is mandatory

Highest Qualification	Major Subjects	Board/Institute/University	Year of passing
Select			Select Year

Previous Save & Continue

Professional / Documents Details

* This field is mandatory

Employment Status * Student Working Professional Self Employed Foreign student in Indian university

Upload Photo * Browse... No file selected.

File should not exceed 500 KB (.jpeg, .PNG, .jpg)

Identification Proof * Passport Voter ID Card PAN Card Aadhaar Card Govt. Employee ID Proof Other

Identification Proof Document * Browse... No file selected.

File should not exceed 2MB (.jpeg, .PNG, .jpg)

Aadhar Number

Previous Save & Continue

Finally Click on Apply and Print the Acknowledgment

You are now done!!!

Join WhatsApp Group at
Siddharth university

Please do message your Name and class in the group and name of the course for which you have applied.

COMMUNICATE THE CO-ORDINATOR

After the successful registration, please communicate your details to the course co-ordinator at the Department of Geography, Siddharth University. Contact details are given below:

Co-ordinator: **DR. SATYAM MISHRA**

WhatsApp No: **8948332533**

Email-ID: **satyamgeog@gmail.com**

Feel free to contact the co-ordinator (office time) if got stuck in any of the above steps, or if you have any other query.

Best Regards
&
Welcome to the Workshop!