

IIRS Outreach Programme

The IIRS outreach programme, which was started in 2007 with 12 universities/ institutions has now grown substantially to 3900+ network institutes. The beneficiaries of the programme may include:

- Central/State/Private Universities & Academic Institutions
- Central & State Government Departments
- Forest Resource Professionals
- State Forest Departments/Forest Training Academies
- Research Institutes
- Geospatial Industries
- NGOs

Feedback Mechanism

IIRS takes continuous feedback from participating institutions to improve the quality of future courses.



Feedback session during Academia Meet-2025

Awards

IIRS has received national awards for excellence in training for outreach and e-learning programme during 1st National Symposium on Excellence in Training conducted during 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 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 endeavour 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 groups, ranging from fresh graduates to policy makers including academia.

IIRS also conducts e-learning programme on Remote Sensing and Geoinformation Science (<http://elearning.iirs.gov.in>).

Contact Details

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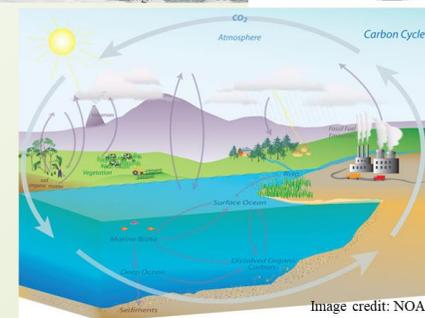
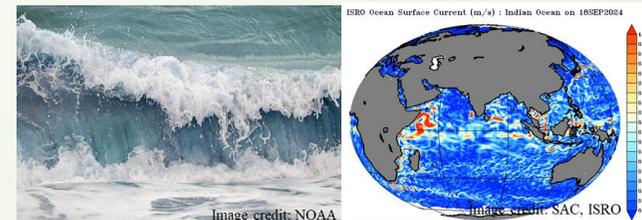
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166th IIRS Outreach Programme



Remote Sensing and numerical ocean modelling for oceanic processes

August 25-29, 2025



Organised by

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

www.iirs.gov.in

About the Course

Upper Oceanic processes play a significant role in governing the weather, climate, and marine life by modulating the physical, chemical, and biological phenomena. The important Oceanic processes and features include ocean currents, vertical mixing, upwelling and downwelling, and the biogeochemical cycles. Of particular significance are the coastal processes, and some of the critical coastal features and characteristics include waves, tides, coastal circulation and currents, oceanic eddies, stratification, turbulence, and mixing. Understanding these oceanic processes is vital for comprehending the Earth's climate system, predicting future climate changes, and managing marine resources.

The advent of satellite remote sensing provided a vast platform for better observing the upper ocean processes and understanding its dynamics. Satellite ocean color remote sensing is a very cost-effective technique for large-scale quantification of primary productivity in the ocean worldwide. The numerical general circulation as well as coupled models also serve as a great tool for testing various hypotheses and predicting different ocean phenomena. This course will provide an overview of the various crucial upper ocean processes, understand their dynamics, use of remote sensing data, basics of numerical ocean modelling, and their application to study the upper ocean processes and biogeochemistry. The course is therefore of special interest for professionals, researchers, and students interested in learning the utility of satellite observations and numerical modeling in ocean processes studies.

Course Contents

- Understanding of coastal and open ocean processes using remote sensing.
- An introduction to numerical ocean modeling and its application to study the various upper oceanic processes and ocean biogeochemistry.
- Study of ocean waves using remote sensing and numerical ocean modelling.

Target Participants

- The course is designed for professionals, students/researchers from various Central/State Govt. institutes/Universities/Private Organizations/NGO engaged in marine science/oceanography research/studies.
- The candidates who want to participate in the course should be students of a final-year undergraduate course or postgraduate course (any year) at least and citizens of India.

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 be uploaded on e-class (<https://www.eclass.iirs.gov.in/login>).

Course Fee

There is no course fee for attending this programme.

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 centres.
- 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 centre.

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>

Course Funding & Technical Support

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

Programme Reception

Programme can be received through e-class platform of IIRS-ISRO using internet connectivity. No specific hardware/software required. However, it is recommended good internet connectivity at user end. To run the programme in class room, following hardware will be required:

- Desktop computer with web camera microphone and output speakers or laptop with microphone camera and output speaker.
- Large display screen/projector/TV.

Important links

To participate in this programme the interested organizations/ universities/ departments/ institutes have to identify coordinator at their end. The identified coordinator will register online his/her institute as nodal center in IIRS website (<https://elearning.iirs.gov.in/edusatregistration/coordinator> or)

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.

There are a limited number of seats. Registration will be done on a first-come, first-served basis.