

Geospatial Applications for Atmospheric and Oceanic Hazards

(September 9 – 13, 2024)



Marine and Atmospheric Sciences Group
Indian Institute of Remote Sensing
Indian Space Research Organization
Dept. of Space, Govt. of India
Dehradun-248001, Uttarakhand

www.iirs.gov.in

Introduction

A disaster is an event, located in time and space that negatively affects life, property, livelihood and industry often resulting in permanent changes to human societies, ecosystems and environment. Events such as tsunami, extreme rainfall, floods, and cyclones, by themselves, are not considered disasters. Rather, they become disasters when they adversely and seriously affect human life, livelihoods and property. Disasters can be caused by naturally occurring events or they can be due to man-made events. A natural disaster is a major adverse event resulting from natural processes of the Earth; examples include tsunami, dust storms, floods, cyclones, storms, and other geological or atmospheric-oceanic processes. A natural disaster can cause loss of life or damage property, and typically leaves some economic damage in its wake, the severity of which depends on the affected population's resilience and on the infrastructure available. The man-made disasters such as fire and anthropogenic emissions also adversely effect the human life. Disasters are becoming more frequent, and the number of persons affected is increasing. The impact of the natural disasters is impossible to avoid, but it may be possible to plan ahead of time to minimize the impact that any given disaster might have on human health, life and property. Therefore, the information of such type of events is required well advance in time to minimize the impact on society.

Objective of the Course

The course is designed with a view to provide participants an understanding of the scientific concepts and an overview on approaches & pathways of atmospheric and oceanic hazards (i.e., tsunami, cyclone, floods, storm surge, extreme rainfall, dust storm, air quality and fog). The participants will also gain knowledge and ability to access, analyze, and apply satellite remote sensing data for atmospheric and oceanic disasters. They will also understand the advantages and limitations of remote sensing observations for preparedness and mitigation during disasters.

Course Highlights

- Introduction to Atmospheric and Oceanic Hazards
- Earth Observation Satellites and Sensors for atmospheric and oceanic hazards studies
- Satellite observation to Fog, extreme rainfall events, extreme dust episodes
- Satellite observations in coastal inundation, Tropical Cyclone, storm surge and Tsunami
- Satellite based observations on gaseous air pollutant, Aerosols and air quality assessment.
- Geo-web portals for disaster management support.

Target Participants

The target for this course includes participants across a broad spectrum of the community who need to be aware of the threat of natural as well as man-made disasters. This course is designed for central and state government officials, policy makers, professionals and specialists from universities, educational institutes, operational & research institutes and research scholars.

Eligibility criteria:

Post-graduate in Marine Science/Earth Science /Oceanography/Applies Geology/Environmental Science/Physics/ Meteorology/Atmospheric Science/Geography or equivalent.

Note: Candidates nominated by the govt. organizations & professionals working in the field of Atmospheric and Ocean sciences will be given preference for admission.

Important Dates

- Start date to Apply: : 01.04.2024 [10:00 hrs]
- Last date to Apply: 14.07.2024 [17:30 hrs]
- Announcement of selection list: 12.08.2024
- Course start date: 09.09.2024
- Course completion: 13.09.2024

Course Fees and Accommodation:

- INR 6,500/- (INR. 4,000: Tuition Fee + INR 2,500: Registration & Other Charges).
- Boarding & lodging charges in IIRS Hostel are extra and will have to be paid by the candidate as per the IIRS hostel rules & regulations.

Number of Seats:

20 (all seats for Indian nationals only)

Mode of Applying:

- Candidates need to fill online application form available in IIRS website <https://admissions.iirs.gov.in/>.
- Offline applications will not be considered.
- A non-refundable application fee of INR 500/- is to be submitted.
- The last date to apply for the course is 14.07.2024 [17:30 hrs]
- Govt.-sponsored candidates must submit the Nomination Form from the Competent Authority of their parent organization/institute at the time of submitting the online application. The template of the Nomination Form can be downloaded from <https://admissions.iirs.gov.in/nominations>.

About IIRS

Indian Institute of Remote Sensing (IIRS) is a premier institute with a primary aim to build capacity in Remote Sensing and Geoinformatics technologies and their applications through training & education, research and outreach programmes. IIRS is a Centre of Indian Space Research Organisation (ISRO), Department of Space, Government of India. Formerly known as Indian Photo-Interpretation Institute (IPI), founded in 1966, the Institute is the first of its kind in Remote Sensing in entire South-East Asia. While nurturing its primary endeavour to build capacity among the user community by training mid-career professionals since its inception in 1966, the Institute has enhanced its programmes to meet the requirements of various stakeholders, ranging from fresh graduates to policy makers including academia, industry, different government departments and NGOs. IIRS is one of the most sought-after institutes for conducting specially designed courses for the officers from the Ministries of the Government of India and State Governments for effective

use of Earth Observation (EO) data from satellites for the benefit of society. Ministry of External Affairs, Government of India has recognised IIRS to conduct international training courses for the participants from ITEC (Indian Technical & Economic Cooperation) Member countries in Asia, Africa, Latin America, Central and Eastern Europe, and several Pacific and Caribbean nations. IIRS also hosts the headquarters of the Centre for Space Science & Technology Education in the Asia and Pacific (CSSTEAP), affiliated to the United Nations, and conducts its training and education courses in RS & GIS.

Location & Accessibility

Indian Institute of Remote Sensing (IIRS) is located in Dehradun, the capital city of the State of Uttarakhand, at a distance of about 260 km from Delhi and is well-connected by air, rail and road. The city is famous for its picturesque landscape, pleasant climate and high quality school education. The city also hosts several headquarters of Central Govt. organisations and it is the gateway to several tourist places, such as Haridwar, Rishikesh, Mussoorie, etc. Map Link to reach IIRS Campus is available at <https://www.iirs.gov.in/how-to-reach>.

Contact details

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