SHORT COURSE
ON
"Geospatial Technology and Modelling for Urban Climate Resilience & DRR"

May 4-15, 2026

Last date for receipt of application: March 10, 2026

Organized By

CSSTEAP

Conducted By

IIRS, ISRO

Background

Rapid urbanization and climate change have significantly increased the vulnerability of urban areas to climate-related hazards. Urban areas, with their complex built environments and high population densities, are particularly susceptible to these impacts. Enhancing urban climate resilience has therefore emerged as a critical priority in contemporary urban planning and governance. The integration of geospatial data with advanced modelling and machine learning approaches supports systematic climate risk assessment, monitoring, and evidence-based urban planning, thereby contributing to the development of effective strategies for enhancing urban climate resilience.

About CSSTEAP and IIRS

CSSTEAP was established in India in November 1995, with its headquarters in Dehradun. The center has emerged as a Centre of Excellence in capacity building in the field of space science and technology applications. For more information, visit www.cssteapun.org.

IIRS, a constituent unit of Indian Space Research Organization (ISRO), is a key player for training and capacity building in geospatial technology and its applications through training, education, and research in Southeast Asia. The training, education, and capacity building programmes of the Institute are designed to meet the requirements of professionals at working levels, fresh graduates, researchers, academia, and decision makers

Objective of the course

The primary objective of this two-week training programme is to provide a comprehensive overview of the applications of geospatial technologies and modelling approaches in assessing and enhancing urban climate resilience. The programme aims to equip participants with the conceptual understanding and practical skills required to analyse urban climate risks through the use of Earth Observation data, GIS, spatial modelling, and machine learning techniques. Emphasis is placed on the role of satellite-based and geospatial tools in supporting climate risk assessment, monitoring, mitigation, and evidence-based urban planning for resilient cities.

Faculty & Medium of Instruction

The core faculty for the programme is drawn from IIRS and other premier national and international institutions engaged in urban climate studies, geospatial technology. The faculty members possess extensive experience in the application for urban climate risk assessment and resilience planning. The medium of instruction for the programme will be English, and participants with proficiency in spoken and written English will be given preference..

Course Content

Course will cover lectures, demonstration and field visits.

- Overview of remote sensing & GIS technology
- Introduction to Urban Climate Resilience
- Remote Sensing for Land Surface Parameters
- Remote Sensing for Urban Form, Function & Climate
- Urban Heat Island
- Urban Pollution
- Urban Flooding
- Urban Microclimate Modelling
- Blue-Green Infrastructure for Climate Resilience
- Machine Learning for Urban Features
- Digital Twin for Urban Climate Resilience

Number of seats

:20 (Government Nominated Candidates)
:05 Paid Seats (Private & Self-Sponsored Candidates)

Course Fee & Accommodation

A course fee of US $300 (equivalent to INR for Indian participants) is applicable for paid seats which includes course materials. However, for government sponsored candidates from Asia Pacific region, the Director CSSTEAP may waive off the course fee.

Preference in admission will be given to the candidates who are financially supported by their organizations. Accommodation for the participants will be arranged in the International Hostel at IIRS, Campus on chargeable basis of Rs. 120/day . Course fee may be sent through online transfer/ NEFT/RTGS/SWIFT in favor of CSSTEAP, payable at Dehradun with following bank details:

Banking Institution: Punjab National Bank
Account Name: Centre for Space Science and Technology Education in Asia and the Pacific
Account Number: 0111032100000236
SWIFT: PUNBINBBDPR
IFSC Code: PUNB0445600
Address Bank: Survey of India Branch, New Cantt. Road, Dehradun, India

Fellowship

A few fellowships covering to and fro international air travel, domestic travel in India and living expenses (INR15,500 for two weeks) in India are available from the Government of India.

However, first preference will be given to the fully self-sponsored candidates and then to the candidates whose sponsoring organization will be bearing international to and fro travel.

Medical Insurance

Medical, life, and disability insurance should be undertaken before leaving their country for India by the participants themselves or on their behalf by their sponsoring institute/organization for covering entire health and disability risks. No medical expenses will be borne by the Centre. Candidates in sound physical and mental health only need to apply.

Medical fitness certificate from Authorized Government medical officer covering status of Eye, Chest (Tuberculosis), Vaccinations, heart, lungs, liver, spleen, Hydrocele, skin & V.D., Hepatitis, HIV, Yellow fever and other contagious diseases be enclosed with the application form. In case if any information requiring medical attention is hidden and if found during the course, the Centre will be obliged to send the candidate back to their home country any time. The travel cost will be borne either by the nominating/sponsoring authority or by the candidates themselves.

Eligibility and Selection Procedure

- Masters in in Science/ Engineering (Planning/Civil Eng./ Architecture/Comp. Sci. & Eng./ Agri. Eng./ Water Resources/ Environmental Science/ Geology/ Geoscience/ Geophysics/ Physics/ Mathematics/Hydro-informatics/ Remote Sensing/ Geoinformatics/ Computer Sci. / Disaster Management/or equivalent)
- Working professionals in Govt. organisations & Academic institutions will be given preference
- Preference would be given to professionals working in the field of Human settlements and DRR would be given priority.
- Limited seats are available for this course, which will be filled with participants from different Asia Pacific countries
- Five paid seats are available for Private & Self sponsored candidates from different Asia Pacific countries.
- The candidates have to pay full course fee of US$ 300 (equivalent to INR for Indian participant) which includes course materials and field trips.
- For Paid Seats or Self-Sponsored Participants travel from place of work to Dehradun and back, tour allowance and daily allowance during the entire period of training will be borne by the candidate/ organization.
- Candidate should have proficiency in the English language as the course will be conducted in English.
- The selection of candidates will be carried out by a selection committee.

How to Apply

- Eligible candidates can apply online through the CSSTEAP website. https://admissions.cssteapun.org
- Applicants are requested to send the application forwarded by the Head of their respective institute/Organisation.
- Self-sponsored candidates can directly submit application
- Incomplete applications will not be considered for selection
- ***Last date for application: March 10, 2026***

Contact Details

Dr. Kshama Gupta
(Course Director)

Mr. C.M.Bhatt
(Course Director, RS&GIS)

Indian Institute of Remote Sensing (IIRS)
Department of Space, Government of India
4, Kalidas Road, Dehradun, India
www.iirs.gov.in, www.cssteapun.org

Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP)
(Affiliated to the United Nations)
www.cssteapun.org

Indian Institute of Remote Sensing (IIRS)
Indian Space Research Organisation (ISRO),
Department of Space, Government of India
Dehradun, India
www.iirs.gov.in