



# Short Course On **Remote Sensing and GIS in Climate and Water Management - 2026**

**Date:** 09 June to 28 July 2026

**Location:** Remote Sensing and GIS Lab, IWFM, BUET

Participants will receive certificates upon completion of the course

**Water professionals from any organization are open to register**

## **Registration Details**

Course Fee: 15,000 BDT

Application Deadline:

30<sup>th</sup> May 2026

**Seats are Limited**

**APPLY NOW** →

Application form link:

<https://forms.gle/FRiBRtL3WVPiQeUw9>



\*The authority may decide to drop/reschedule the course in case of a lack of sufficient applicants



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Institute of Water and Flood Management (IWFM)  
Bangladesh University of Engineering and Technology

For more details: [Check IWFM Website](#)

**Contact email:** [shortcourse@iwfm.buet.ac.bd](mailto:shortcourse@iwfm.buet.ac.bd)

## Course Overview

This course offers a comprehensive exploration of Remote Sensing and GIS in climate monitoring and water management for water professionals. Throughout the training course, participants will master the use of mapping frameworks essential for processing, analyzing, and visualizing geospatial data, machine Learning use in prediction, and advanced application of Remote Sensing and GIS tools using Python, R, and Google Earth Engine.

### What to Learn

**Fundamentals of GIS:** Start with the basics— GIS interface, data types and sources, different GIS tools, Georeferencing, geodatabase handling and visualization, map projections and layout etc.

**Applications of RS-GIS in Climate and Water Sector:** Learning principals and integration of Remote Sensing and GIS in the geospatial realm - planform analysis using satellite images, use of different platforms and techniques in advanced water sector applications, such as, flood extent estimation; land use and land cover detection; crop identification; water and vegetation indices calculation; and climate change monitoring using modeled Data. The participants will engage in handling geospatial data, surface hydrologic analysis, assessing rainfall data, digital image processing, including planform analysis, classification, and prediction of land-use patterns, using online platforms to analyze cloud-based Remote Sensed data, visualizing global climate projection datasets including bias corrections.

**Hands-On Experience:** Hands-On Experience: Engage in practical labs and projects designed to reinforce the concepts covered in lectures. The participants will be able to apply this practical application in their working fields in the water and environmental sectors.

By the end of the course, the participants will have a robust understanding of RS-GIS application in Water Management and Global Climate data handling, specifically tailored to geospatial analysis and visualization.

The course will be offered for 8 weeks, two days per week (Sundays and Tuesdays), from 06:00 PM to 09:00 PM.

Seats are limited

**Apply Online!**

<https://forms.gle/FRiBRtL3WVPiQeUw9>

(QR code available on the Front Page)

# Programme

Time	Topic
<b>Day 1: 09 June 2026, Tuesday</b>	
06:00PM-06:30PM	Registration and Inauguration
06:30PM-07:30PM	Principles of Remote Sensing
<b>07:30PM-07:45PM</b>	<b>Tea Break</b>
07:45PM-08:45PM	RS-GIS for Climate Change Impact Analysis and Adaptation
<b>Day 2: 14 June 2026, Sunday</b>	
06:00PM-07:15PM	Introductory Lab Session: Principles of GIS
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Geodatabase handling and visualization-I
<b>Day 3: 16 June 2026, Tuesday</b>	
06:00PM-07:15PM	Types and Sources of RS-GIS Data
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Geodatabase handling and visualization-II
<b>Day 4: 21 June 2026, Sunday</b>	
06:00PM-07:15PM	Earth Observation Systems
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Georeferencing
<b>Day 5: 23 June 2026, Tuesday</b>	
06:00PM-07:15PM	Addressing Water Challenges through RS-GIS
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Spatial analyst
<b>Day 6: 28 June 2026, Sunday</b>	
06:00PM-07:15PM	Application of RS in Climate Monitoring
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Application of GIS
<b>Day 7: 30 June 2026, Tuesday</b>	
06:00PM-07:15PM	Mid-term Group Presentation
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Surface hydrologic analysis using GIS

# Programme

Time	Topic
<b>Day 8: 05 July 2026, Sunday</b>	
06:00PM-07:15PM	RS-GIS Application in Water Pollution Management
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Digital image processing-I
<b>Day 9: 07 July 2026, Tuesday</b>	
06:00PM-07:15PM	Application of Planform Analysis using satellite images
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Digital image processing-II
<b>Day 10: 12 July 2026, Sunday</b>	
06:00PM-07:15PM	Introduction to Synthetic Aperture Radar (SAR)
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Flood mapping using SNAP
<b>Day 11: 14 July 2026, Tuesday</b>	
06:00PM-07:15PM	Earth Observation Systems: Interferometry-I
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Interferometry-I
<b>Day 12: 19 July 2026, Sunday</b>	
06:00PM-07:15PM	Earth Observation Systems: Interferometry-II
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Interferometry-II
<b>Day 13: 21 July 2026, Tuesday</b>	
06:00PM-07:15PM	GEE and Python in the application of RS-GIS
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Flood inundation using Sentinel in GEE platform
<b>Day 14: 26 July 2026, Sunday</b>	
06:00PM-07:15PM	Machine Learning in downscaling GRACE/GLDAS data
<b>07:15PM-07:30PM</b>	<b>Tea Break</b>
07:30PM-09:00PM	Hands-on: Machine Learning in LULC prediction
<b>Day 15: 28 July 2026, Tuesday</b>	
06:00PM-07:30PM	Final Group Presentation
<b>07:30PM-07:45PM</b>	<b>Tea Break</b>
07:45PM-08:30PM	Certification and Closing