# Winter School In Geospatial Science & Technology (Level 2)

## Theme: Geospatial Data Gathering And Processing Technologies

**25 November to 15 December 2024**

### Organized by

Department of Geography,
Mohanlal Sukhadia University,
Udaipur, Rajasthan, India

### Supported by

National Geospatial
Program, Department of
Science & Technology,
Government of India,

## Principal Investigator

Prof.  Seema Jalan (PI)
Head,  Department of Geography,
Chairperson, Faculty of Earth Sciences, MLSU, Udaipur, Rajasthan

# Summer/Winter School Capacity Building Program in Geospatial Science and Technology

Recently knowledge has been identified as the most important driving factor for India's sustainable economic growth. India has adopted a new information regime for sustainable economic growth through its 'Digital India' program to support good governance, sustainable development goals and empowerment of its citizens. Over the last three decades, the widespread adoption of geospatial technologies into various sectors have proven to be an effective enabler to meet these challenges. The capacity building program initiatives of the National Geospatial Program (NGP) erstwhile Natural Resource Data Management System (NRDMS) Department of Science and Technology, Government of India to develop national capacity for geospatial science and technology development through diverse programs in collaboration with various partner organizations. The three week program is being conducted at three levels, Level 1 (Standard), Level 1 (Spatial thinking) and Level 2.

The objective of the program is to build knowledge and various levels of governance in collaboration with academia and user agencies and foster innovation.

## Level 2 Summer / Winter School In Geospatial Science and Technology

This three week program is a theme specific advanced training being implemented by eight institutions across the country. A one week online refresher session will be held prior to the commencement of the three week program. The 21-day summer/winter school in Geospatial Science and Technology (Level 2) supported by the Natural Resource Data Management System of the Department of Science and Technology, Government of India focuses on developing knowledge and capacity building in geospatial technologies through the use of geospatial software.

## About the National Geospatial Program of the Department of Science and Technology, Government of India

In the heart of India's technological advancement lies the National Geospatial Programme (NGP) of the Department of Science and Technology, Government of India. The Geospatial Capacity Building Program initiated in 2010 has over the years flourished, fostering capacities in geospatial science, technology, solutions, and entrepreneurship. Its transformative journey initiated with a modest ambition has  evolved into a robust program, igniting minds and expanding horizons.

For a decade, the Geospatial Capacity Building Program under DST has been a cornerstone, conducting 166 comprehensive three-week programs conducted as Summer and Winter Schools in Geospatial Technologies at a basic (Level 1) and advanced level (Level 2). The 2024 cycle  includes a 11 three week Level 1-(Standard)  programs, 4 three week Level 1-(Spatial Thinking) programs, 8 Level 2-(Advanced) three week programs and 7 Geo Innovation Challenge Programs  being conducted by various Universities across India selected through a stringent process by the DST.

The sessions at these programs comprise classroom, lab, fieldwork, and mini-projects. Central to this success is a structured curriculum and the advocacy of open-source software. The dedicated portal, https://dst-iget.in, is a reservoir of  learning materials, connecting educators, professionals, and scientists, and catalyzing India's geospatial domain. The NGP-DST's geospatial capacity building program is coordinated nationally by the Bharati Vidyapeeth Deemed University, Department of Geoinformatics, Institute of Environment Education and Research, Pune.

The Mohanlal Sukhadia University, Udaipur, Rajasthan, is one of the selected institutions for conducting the Level 2 Program.

## Mohanlal Sukhadia University (erstwhile Udaipur University)

Mohanlal Sukhadia University (erstwhile Udaipur University) located amidst the vivid and spectacular Aravali Hills at Udaipur is a State University established in the year 1962. It is one of the most prestigious Universities in Rajasthan, providing academic leadership to the tribal belt of southern part of the state. The University has more than 180 affiliated colleges spread across the districts of Udaipur, Sirohi, Rajasamand, Chittorgarh and Pratapgarh with an enrolment of over 2,00,000 students. It is a multi-faculty University imparting higher education in all streams of Science, Engineering, Earth Science, Social Science, Humanities, Law, Commerce, Management and Education. The University has been accredited with 'A' Grade by the National Assessment and Accreditation Council (NAAC) in 2023.

Besides prestigious programs like DST-FIST, UGC-SAP etc. the University has received financial assistance of approx. Rs. 70 Crores from the Ministry of Human Resource Development (MHRD) under the two phases of Rashtriya Ucchtar Shiksha Abhiyan (RUSA). Presently there are approx. 60 ongoing major research projects, and a Career Hub comprising 10 Skill Development Centres and Entrepreneurship Cells is being established under Entrepreneurship, Innovation and Career Hub component of RUSA 2.0.

## Department of Geography

Department of Geography, Mohanlal Sukhadia University has the proud distinction of being the first post graduate Department of Geography in the State of Rajasthan. As a constituent unit of Faculty of Earth Science, presently the Department is running undergraduate (UG), post graduate (PG) and Ph.D programme in Geography. The Department presently has 06 young and dynamic faculty members actively engaged in research. Present 04 major research projects are ongoing.  Primary research thrust areas are socio-cultural and development dynamics of Tribal Sub Plan Area (TSP) region; socio-geographical implications ofelectoral processes and their relationship with welfare/ development patterns; SDGs, development disparities and policies; natural resource management; urban environmental issues; industrial development and environmental implications etc. It has been one of the pioneer centres in the State to integrate geospatial technology in its curriculum. Recently a *Geospatial Skill Development and Entrepreneurship Cell has been established under RUSA 2.0* with a mandate of offering inter-disciplinary multi-level professional programmes and capacity building in the field of geospatial technology. Besides to these several academic activities are also conducted from time to time in collaboration with Department of Science and Technology (DST), Indian Space Research Organization (ISRO) and eminent higher education institutions. It has successfully conducted the DST-NGP (earstwhile NRDMS) Level-1 21 Day Winter/ Summer Schools in Geospatial Technologies in years 2016, 2019 and 2022. Visit us on www.dogeography.mlsu.ac.in

*Mohanlal Sukhadia University, Udaipur, Rajasthan, India*

## Who can apply?

Faculty members, scientists, technologists, researchers from academia, national institutions of research, smart city cells, municipal corporations and other government departments are eligible to apply.
• Personnel from non government organizations (NGO)
• School Teachers
• Only 2-3 seats are reserved for research scholars. Only candidates who have a high degree of experience with geospatial technologies should apply for these advanced programs.

No basics will be covered in the Level 2 program. Candidates who have no knowledge of geospatial technologies should apply for the Level 1 program.

## How to apply?

• Interested candidates should fill the online application form through the web link available on http://dst-iget.in. Kindly keep a digital copy of your photograph, LinkedIn Id / ORCID Id / Researchgate Id / Google Scholar Id (atleast one is needed) and deputation letter (format

available on http://dst-iget.in website) handy while filling in the form.

• For any further queries write to dst.iget@bharatividyapeeth.edu or call on 7559288803

• Address all queries regarding the program once selected to the Prof. Seema Jalan (PI), seemajalan1@gmail.com ; seemajalan1@mlsu.ac.in, 9841159199

## Theme of the Level 2 program: Geospatial Data Gathering And Processing Technologies

The role and importance of geospatial technology is increasing day by day in not only all areas of governance, planning, business and industry but also in daily lives of the common man. Geospatial applications broadly involve a four stage process – data acquisition, data processing and input to databases, modelling and designing, and finally publication. Ramified applications of geospatial technologies – remote sensing, geographic information system (GIS) and positioning technologies (GPS, GNSS etc.) – aim at understanding, problem solving, planning, monitoring, management, decision making and/ or policy framing in the fields ranging from health, utilities, resource utilization, environment, weather and climate, demographics, disaster, defence, social welfare, urban and infrastructure development and so on. Robustness and performance of a geospatial workflow essentially rests on the quality and correctness of geospatial data acquisition and processing workflow. Data acquisition and processing technologies have evolved very fast in recent years. Increasing emphasis on wide unrestricted access to geospatial databases has revolutionised data standardization and publishing components. This program titled 'Geospatial Data Gathering and Processing Technologies' aims at developing a sound understanding of the Geospatial Data Cycle. The three weeks will cover the basic as well as advanced technologies for geospatial data gathering, management, processing and development of applications in open source environment. Topics will range from fundamental concepts like defining location on the Earth's surface through geospatial project execution at national level, to United Nations (UN) initiatives in Sustainable Development Goals (SDG) framework.

## Important Information
**Last date for registration: 10 September 2024**
**Date of intimation of selection: 13 September 2024**
**Date of online orientation: 11-15 November, 2024**
**Dates of the program: 25 November to 15 December 2024**

**Mode of conduct:** Offline
**No. of seats:** 25
**Registration Fees:** Nil

**Principal Investigator:** Prof. Seema Jalan (PI), Head, Department of Geography, Chairperson, Faculty of Earth Sciences, MLSU, Udaipur, Rajasthan
**Email:** seemajalan1@gmail.com ; seemajalan1@mlsu.ac.in
**Phone:** +91 98876 43513

### For any queries contact:
Prof. Seema Jalan, (Principal Investigator), seemajalan1@gmail.com ; seemajalan1@mlsu.ac.in, +91 98876 43513

### Address
Department of Geography , Mohanlal Sukhadia University, Udaipur, University Rd, Ganapati Nagar, Udaipur, Rajasthan 313001

## Certificate

An e- certificate /certificate of participation will be awarded to each participant only after attending the full course.

## Travel and Lodging

Each participant will be reimbursed with 3 AC train fare. Lodging and boarding on a double sharing basis will be provided by the host institution.

## Infrastructure and Facilities

### Laboratory

The Department has a rich infrastructure with two well-equipped GIS laboratories having a network of 50 computer systems, statistical and geo-spatial data analysis softwares viz. ArcGIS, SPSS etc.; one Smart Class Room and one Lecture Theatre equipped with sophisticated audio-visual and video-conferencing facilities; a library and a cartography laboratory.

## Lodging and Boarding

The University has a comfortable guest house with 23 double occupancy rooms, meeting room, conference hall and cafeteria. Boarding and lodging for the programme will be arranged in University guest house on sharing basis.

*Computer Lab*


*Smart Class Room*


*Guest House*


*Guest House Room*

**Deputation Letter (Format) for DST Summer/Winter School/ Geoinnovation Program 2024-25 <span style="color:red">(Prospective participant must submit this on the letter-head of the respective institution where they are working)</span>**

This is to state that Dr./Mr./Ms._____working at _____( name of the institute) as _____ (Designation), since _____ ( year ) is being deputed/nominated to_____(program name in detail) from ------------------( date, month, year) to----------------------- ( date, month, year) . He/she will be relieved from his/her duties during this period.

<span style="color:red">Signature and Seal (Head of the Institute)</span>

# Program Schedule for 21 Days Summer School in Geospatial Science and Technology (Level 2)

## Theme: Geospatial Data Gathering and Processing Technologies
### 25 November to 15 December 2024

| Day and Date | Session | Time | Topic |
|---|---|---|---|
| | | | **WEEK 1: Introduction to Advanced Technologies for Data Gathering** |
| 25.11.2024 | **Morning Session** | 09:30-11:00 | Inaugural Session & Introduction of the trainees |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | **Lead lecture:** Trends and Traits of Earth Observation Systems: Enabling 'Ease of Living' |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Review lecture on Components of Geospatial Technologies and their potential applications – An Entrepreneur's Perspective<br>**Resource Person:** Expert Lecture / Internal faculty |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Overview of Remote Sensing, Digital Image Processing & GIS<br>**Resource Person:** Expert Lecture / Internal faculty |
| 26.11.2024 | **Morning Session** | 09:30-11:00 | Basics of Geodesy – Scale, Datum and Coordinate Systems<br>**Resource Person:** Prof. Seema Jalan |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | Elevation data – structure & modeling – DEM, DTM, DSM, TIN, 2D, 2.5 D, 3D, Sources of Elevation Data<br>**Resource Person:** Prof. Seema Jalan |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Hands-on Session:<br><br>- Modelling Surfaces<br>- Acquisition of elevation data from Geodata repositories |

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| | | | Accuracy evaluation of DEMs<br>**Resource Person:** Prof. Seema Jalan |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Hands-on Session: (Continued from the last session)<br><br>**Resource Person:** Prof. Seema Jalan |
| **27.11.2024** | **Morning Session** | 09:30-11:00 | Basics of Positioning & levelling technology – GPS receivers, processing methods, errors & accuracy<br>**Resource Person:** Dr. Akhil Kumar Dwivedi (IF) |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | GNSS – GPS, IRNSS & others<br>**Resource Person:** Dr. Akhil Kumar Dwivedi (IF) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Collection of Geo-coded data using Mobile/ Hand – held GPS<br>**Resource Person:** Dr. Urmi Sharma (IF) |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Primary survey using open source solutions (Q-field)<br>**Resource Person:** Dr. Urmi Sharma (IF) |
| **28.11.2024** | **Morning Session** | 09:30-11:00 | The Internet of Things (IoT) in Remote Sensing – An Introduction<br>**Resource Person:** Industry/Academia Expert |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | The Internet of Things (IoT) in Remote Sensing – An Introduction (Continued from the last session)<br>**Resource Person:**   Industry/Academia Expert |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | **Hands on Session**<br>Environmental data acquisition through IoTs<br>**Resource Person:** Industry/Academia Expert |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | **Hands on Session** (Continued from the last session)<br>**Resource Person:** Industry/Academia Expert |
| **29.11.2024** | **Morning Session** | 09:30-11:00 | Introduction to Drone/UAVs - I<br><br>- Technology & It's Application – Remote Sensing Perspective<br><br>Drone regulation in India<br>**Resource Person:** Industry/Academia Expert from MapIT, Bhopal / NESAC |

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| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | Introduction to Drone/UAVs - I<br><br>  -  Technology & It's Application – Remote Sensing Perspective<br><br>Drone regulation in India  (Continued from the last session)<br>**Resource Person:**  Industry/Academia Expert from MapIT, Bhopal / NESAC |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Hands-on Session-I<br>  •  Drone Manoeuvring / Data acquisition<br>**Resource Person:**   Industry/Academia Expert from MapIT, Bhopal / NESAC |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Hands-on Session-I (Continued from the last session) |
| **30.11.2024** | **Morning Session** | 09:30-11:00 | Introduction to Drone/UAVs – II<br>-     Drone Data Acquisition & processing<br>-     Uncertainty, Error and Rectification<br>**Resource Person:**   Industry/Academia Expert from MapIT, Bhopal / NESAC |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | Introduction to Drone/UAVs – II (Continued from the last session) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | | 14:00-15:30 | Hands-on Session-II<br>  •  Drone data processing<br>**Resource Person:**    Industry/Academia Expert from MapIT, Bhopal / NESAC |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Hands-on Session-II (Continued from the last session) |
| **01.12.2024** | | Field Work: Methods of Ground Truth and Sampling – Remote Sensing Approach<br>(GEOTECH Team) | |
| | | **WEEK  2 -  Advanced Technologies for Data Gathering (Contd.) & Data Management** | |
| **02.12.2024** | **Morning Session** | 09:30-11:00 | Introduction to LiDAR Data: Applications of NASA ICESat-2 Photon Data in Earth Sciences<br>**Resource Person:**     Dr. D. Giribabu RRSC-W, Jodhpur |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | Introduction to LiDAR Data: (Continued from the last session) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Hands-on session on ICESat-2 data for Urban, inland-water bodies and bathymetric applications<br>**Resource Person:**    GEOTECH Team |

| | | 15:30-16:00 | **Tea break** |
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| | | 16:00-17:30 | Hands-on  session (Continued from the last session) |
| **03.12.2024** | **Morning Session** | 09:30-11:00 | Introduction to Data Science in Remote Sensing – Concepts <br> **Resource Person**:     Dr. Gaurav Kumar, RRSC-W, Jodhpur |
| | | 11:00-11:30 | **Tea break** |
| | | 11:30-13:00 | Introduction to Data Science in Remote Sensing(Continued from the last session) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Hands-on  session <br> •     Classification of remote sensing data with Linked Open Data, Semantics and Ontology approaches <br> **Resource Person:**     GEOTECH Team |
| | | 15:30-16:00 | **Tea break** |
| | | 16:00-17:30 | Hands-on  session (Continued from the last session) |
| **04.12.2024** | **Morning Session** | 09:30-11:00 | • Data Modelling <br> • Data Standardization <br> **Resource Person:**     Dr. Sameer Saran <br> DGM, RRSC-N, ISRO, New Delhi |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | • Data Modelling <br> • Data Standardization <br> (Continued from the last session) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Demo & Hands On <br> • Geonetwork SDI <br> • Using Metadata Standards <br> **Resource Person:**    Dr. Sameer Saran |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Demo & Hands On (Continued from the last session) |
| **05.12.2024** | **Morning Session** | 09:30-11:00 | Basic Programing with Geospatial Data – An Introduction <br> • R for Geospatial Data <br> • Python for Geospatial Data Analysis <br> •  JavaScript <br> **Resource Person:**     Dr. Kamal Pandey (IIRS) |
| | | 11:00-11:30 | **Tea Break** |

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| | | 11:30-13:00 | Basic Programing with Geospatial Data – An Introduction (Continued from the last session) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | Afternoon Session | 14:00-15:30 | Hands on Session<br>Geospatial data analysis using R and Python<br>JavaScript for Geosciences<br>**Resource Person:** Dr. Kamal Pandey (IIRS) |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Hands on Session (Continued from the last session) |
| 06.12.2024 | Morning Session | 09:30-11:00 | Overview of AI/ Machine and integration with geospatial technology<br>**Resource Person:** Dr. Shafique Matin, MapIT, Bhopal |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | AI/ML based information extraction using VHR Images<br>**Resource Person:** Dr. Shafique Matin, MapIT, Bhopal |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | Afternoon Session | 14:00-15:30 | Hands-on session<br>**Resource Person:** GEOTECH Team |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Hands-on session (Continued from the last session)<br>**Resource Person:** GEOTECH Team |
| 07.12.2024 | Morning Session | 09:30-11:00 | Processing of VHR Images using OBIA<br>**Resource Person:** Dr. Shafique Matin, MapIT, Bhopal |
| | | 11:00-11:30 | **Tea break** |
| | | 11:30-13:00 | Overview of Big Data Analytics<br>**Resource Person:** Dr. Shafique Matin, MapIT, Bhopal |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | Afternoon Session | 14:00-15:30 | Hands-on sessions for Urban and agricultural applications<br>**Resource Person:** Dr. Urmi Sharma |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Hands-on sessions for Urban and agricultural applications(Continued from the last session) |
| 08.12.2024 | Morning Session | 09:30-11:00 | Introduction to Google Earth Engine, and Interface, Components.<br>**Resource Person:** Dr. Prasun Gupta (IIRS) / Ujjwal Gandhi |
| | | 11:00-11:30 | **Tea Break** |

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| | | 11:30-13:00 | Applications: Supervised classification / Water body extraction / Change detection<br>**Resource Person:**    Dr. Prasun  Gupta (IIRS) / Ujjwal Gandhi |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Rasters: Working with images and image collections. Creating indices and exporting datasets<br>**Resource Person:**    Dr. Urmi Sharma |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | Vectors: Working with feature collections. Visualization, filtering and reducers<br>**Resource Person:**    Dr. Urmi Sharma |
| | | | **WEEK  3 - Applications** |
| **09.12.2024** | **Morning Session** | 09:30-11:00 | Computational Infrastructure for Geospatial Applications – A Practitioner's Perspective<br>•      High Performance Computing<br>•      Cloud computing<br>•      Citizen Science<br>•      Data dissemination services<br>**Resource Person:**    Dr. Harish Chandra Karnatak (IIRS) |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | (Continued from the last session)<br>**Resource Person:**    Dr. Harish Chandra Karnatak (IIRS) |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Setting up 'Space-Enabled Regional Disaster Risk Reduction Units' – An Introduction<br>•      Landslides/land subsidence<br>•      Near Real Time Floods<br>•      Cyclones<br>•      Earthquakes<br>**Resource Person:**     Dr. Harish Chandra Karnatak (IIRS) |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | (Continued from the last session)<br>**Resource Person:**     Dr. Harish Chandra Karnatak (IIRS) |
| **10.12.2024** | **Morning** | 09:30-11:00 | 1. Overview of Web- GIS |

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| | **Session** | | 2.  Web Application Development<br>**Resource Person:**     Dr. Shailesh Chaure Web GIS Expert |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | (Continued from the last session)<br>**Resource Person:**     Dr. Shailesh Chaure Web GIS Expert |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | Hands-on Session<br>-       Setting up Web Server<br>-       Setting up Application Server<br>-       Setting up Db Server<br>-       Enabling WMS/WMTS<br>   GeoServer and Open layers<br>**Resource Person:**     GEOTECH Team |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | (Continued from the last session)<br>**Resource Person:**     GEOTECH Team |
| **11.12.2024** | **Morning Session** | 09:30-11:00 | UN Framework on Geospatial Technologies<br>-       Technologies<br>-       Policies and Partnerships<br>-       UN-SPIDER<br>**Resource Person:**      Dr. Shirish Ravan, Former Head, UN-SPIDER |
| | | 11:00-11:30 | **Tea Break** |
| | | 11:30-13:00 | (Continued from the last session)<br>**Resource Person:**     Dr. Shirish Ravan, Former Head, UN-SPIDER |
| | | 13:00-14:00 | **LUNCH BREAK** |
| | **Afternoon Session** | 14:00-15:30 | How to execute a Remote Sensing Based Project?<br>-       Lessons learned from State level projects<br>-       Issues and challenges – Data, Diversified Landforms of State/ India and technical limitations<br>-       Regional level projects, National mission projects, EIA<br>**Resource Person:**      Experts from Department of IT & Communications, Government of Rajasthan/ ISRO Expert |
| | | 15:30-16:00 | **Tea Break** |
| | | 16:00-17:30 | (Continued from the last session) |

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| | | | **Resource Person:** Experts from Department of IT & Communications, Government of Rajasthan/ ISRO Expert |
| **12.12.2024-14.12.2024** | | | **Project (Internal Faculty)**<br><br>(A)  Team formation and Supervisor/Project Lead Identification<br><br>(B)  Identification of problem statement, Study area*, Materials and methods<br><br>(C)  Project Execution<br><br>* The study area will comprise at least one entire district of India. |
| **15.12.2024** | | Project Evaluation & Test | Feedback & Valedictory Session |