



# Winter School in Geospatial Science and Technology (Level 1)

**01 to 21 December, 2022**

**Organized by**  
Department of Geoinformatics,  
University of Kashmir,  
Jammu and Kashmir, India.

**Supported by**  
National Geospatial  
Program, Department of  
Science and Technology,  
Government of India, New  
Delhi.

**At**  
**Department of  
Geoinformatics,  
University of Kashmir,  
Jammu and Kashmir, India**

## **Principal Investigator**

Prof. Shakil Ahmad Romshoo, Professor, Department of  
Geoinformatics, Kashmir University (KU),  
Jammu & Kashmir, India

## **Co-Coordiators**

1. Dr. Irfan Rashid, Coordinator Geoinformatics,  
Department of Geoinformatics, Kashmir  
University
2. Dr. Khalid Omar Murtaza, Assistant Professor,  
Department of Geoinformatics, Kashmir  
University

## University of Kashmir

The University of Jammu and Kashmir was founded in the year 1948. In the year 1969 it was bifurcated into two full-fledged Universities: University of Kashmir at Srinagar and University of Jammu at Jammu. The University of Kashmir is situated at Hazratbal in Srinagar. It is flanked by the world famous Dal Lake on its eastern side and Nigeen Lake on the western side. The Main Campus of the University spread over 247 acres of land is divided into three parts – Hazratbal Campus, Naseem Bagh Campus and Mirza Bagh Campus (serving residential purpose). Additional land has been acquired at Zakura near the main campus for further expansion of the University. The tranquil ambience of the Campus provides the right kind of atmosphere for serious study and research. The University is committed to provide an intellectually stimulating environment for productive learning to enhance the educational, economic, scientific, business and cultural environment of the region. The University offers programmes in all the major faculties; Arts, Business & Management Studies, Education, Law, Applied Sciences & Technology, Biological Sciences, Physical & Material Sciences, Social Sciences, Medicine, Dentistry, Engineering, Oriental Learning and Music & Fine Arts. It has been constantly introducing innovative/ new programmes to cater to the needs and demands of the students and the society. Over the years, the University has marked towards excellence in its programmes and activities. It has been re-accredited as Grade-A+ University by the National Assessment & Accreditation Council (NAAC) of India. This is recognition and reflection of the high standard of quality in teaching and research at the University of Kashmir. Visit us on:-<https://www.kashmiruniversity.net>

## Department of Geoinformatics

We are running interdisciplinary Ph.D./I.Ph.D program and professional M.Sc. course in Geoinformatics since 2010. The University started teaching Remote Sensing and GIS since 2004 with the introduction of the PGD in RS/GIS. The master's course is aimed to build the technical ingenuity of the student in the application of geospatial technologies for some of the most pressing real-world challenges in environmental, social and economic domains and also to match-up their skills to the growing demands in the industry for Geoinformatics. The Program emphasizes on theory, practical applications through hands-on exercises, case studies and an independent dissertation. The syllabus of the courses is as per the latest developments and trends in geospatial science and technology with specific geographic focus on the Jammu, Kashmir and Ladakh Himalayan region. A wide exposure and encouragement to the students and research scholars to be a part of rich knowledge exchange programs such as national and international seminars, workshops pertaining to the promotion of Remote Sensing, GIS, and GPS, have remained a key strength of the program over the years. The Department has more than a dozen active research collaborations with a few reputed national and international institutes/organization and have successfully conducted more than a score of sponsored research projects during the last one decade, with the total funding of more than INR 300 million in various fields of earth and environmental science. The Department has set up state of the art laboratories and field infrastructure in the field of Geoinformatics, glaciology, hydro-meteorology and climate change including the national ice-core laboratory for studying Himalayan ice cores. Visit us on:- <http://geoinformatics.uok.edu.in>



**Fig 1. University of Kashmir ,Jammu and Kashmir, India**

## **What is the Summer/Winter Schools (Level 1)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 adaptation capacity of geospatial science and technology at across the country. The objective of the program is to build knowledge and various levels of governance in collaboration with academia and user agencies. The three week Summer/ Winter School in Geospatial technology is being conducted at two levels– Level 1 and Level 2. The 21-day summer/winter school in Geospatial Science and Technology (Level 1) supported by the National Geospatial Program (NGP) of the Department of Science and Technology, Government of India focuses on developing knowledge and capacity building in geospatial technologies through the use of open source geospatial software.

### **Who can apply?**

Faculty members, scientist, technologist, researchers from academia, national institutes of research, smart city cells, municipal corporation and other government departments, personnel from non government organizations are eligible to apply. Only 2-3 seats at each centre are reserved for research scholars.

### **How to apply?**

- Interested candidates should fill the online application form through the weblink available on <http://dst-iget.in>.
- Selected candidates will be informed by mail.
- For any further queries write to [dst-iget@bviier.edu.in](mailto:dst-iget@bviier.edu.in) or call on +91-20-24375684/24362155.
- Address all queries to PI through Email.

## Important Information

**Last date for registration: 20 November 2022**

**Dates of the program: 01 to 21 December 2022**

**Mode of conduct: Offline mode**

(According to the situation of Pandemic the mode of conducting the program will be changed to ONLINE)

**Number of Seats: 25.**

**Registration Fees: Nil**

**Principal Investigator:** Prof. Shakil Ahmad Romshoo, Professor,  
Department of Geoinformatics, University of Kashmir, Jammu and Kashmir,  
India.

**Email:** shakilrom@yahoo.com

**Phone:** Mob: +91-9419010924.

### For any queries contact:

Prof. Shakil Ahmad Romshoo, (*Principal Investigator*), 91-9419010924

**Address:** Department of Geoinformatics, University of Kashmir, Hazratbal  
Srinagar-190006, Jammu and Kashmir, India.

## Grading and Certification :

Grading and Certification Participants will be assessed based on assignments completed during the course, a mini project that they are expected to complete, active participation during the training program as well as attendance.

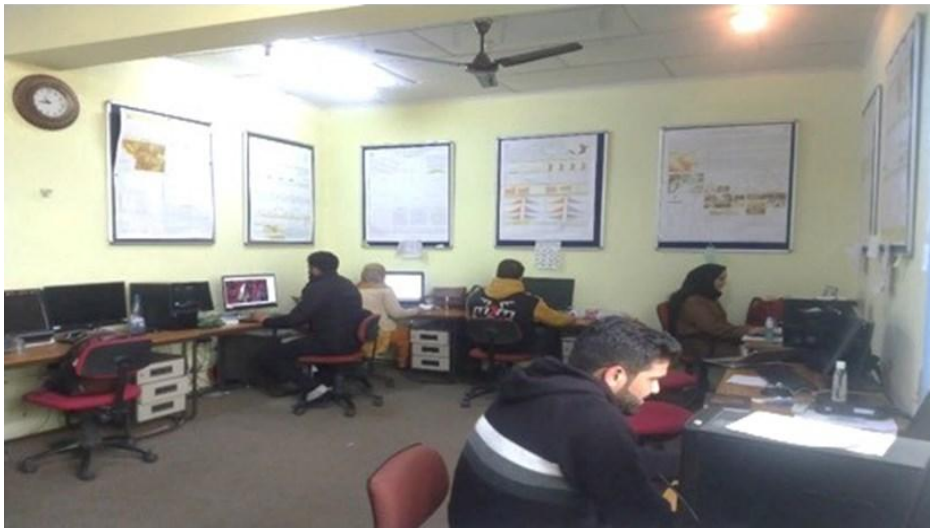
**Note:** In case the program is conducted online due to COVID 19 restrictions, participants must ensure that they have a laptop and a strong internet connection.

## Infrastructural facilities

The Department has set up state of the art laboratories and field infrastructure in the field of Geoinformatics, glaciology, hydro-meteorology and climate change including the national ice-core laboratory for studying Himalayan ice cores. That includes state of the art software such as PCI Geomatica, ERDAS Imagine, ArcGIS 10.2, IGIS Server; QGIS and ILWIS.

## Boarding and Lodging facilities

The University has a spacious guest house known as Sheikh Hamza Makhdoom Guest House within the university campus at Srinagar with a total capacity of 45 double bedded rooms with AC/non-AC rooms and has a 24x7 wi-fi facility across the campus.



**Fig 2,3,4 &5: Four Remote Sensing and GIS Labs at KU**



**Fig 6: Ground truth Survey Instrumentation in the Department**





Fig 7: Sheikh Hamza Makhdoom Guest House

## Program schedule for 21-Days Winter School Program in Geospatial Science and Technology (Level 1)

01 to 21 December 2022

Day & Date	Time	Topic	Resource Person
Day-1, 1 <sup>st</sup> Dec 2022	0900-0930 hrs	<b>Registration</b>	
	0930-1030 hrs	Inauguration (Video Presentation on UNGGIM Online Special Remarks)	Prof. Shakil A. Romshoo Dr. D. Dutta, DST, GOI Dr. Shamita Kumar, BVU
	1030-1100 hrs	<b>TEA BREAK</b>	
	1100-1200 hrs	1.1 Introduction of the group (trainers and trainees)	Prof. Shakil A. Romshoo
		Expectations from the training program Making groups for reporting, and grading of the course	Prof. Shakil A. Romshoo
	1200-1300 hrs	1.2 Geospatial Sciences: <ul style="list-style-type: none"> <li>• What, why and how??</li> <li>• Moving from data to information</li> </ul>	Prof. Shakil A. Romshoo
	1300-1400 hrs	<b>LUNCH</b>	
	1400-1600 hrs	1.3 Introduction to data types in geospatial information (GI): <ul style="list-style-type: none"> <li>• Overview of spatial and non-spatial data types (aerial photos, remote sensing, toposheets, databases, etc.).</li> <li>• Overview of data sources</li> </ul>	Invited Expert
	1600-1630 hrs	<b>TEA BREAK</b>	

	<b>1630-1800 hrs</b>	1.4 Exercise 1: Acquiring data (capture) (Downloading of ASTER, MODIS, Bhuvan, acquiring toposheets from SOI, ordering of IRS data, acquiring secondary data)	Dr. Sumaira Zaz
	<b>1800-1815 hrs</b>	1.5 Filling in feedback forms	KU TEAM
<b>Day-2, 2<sup>nd</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	2.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative) – led by Coordinator	KU TEAM
	<b>0930-1300 hrs</b>	2.2 Understanding scales and projections a. Scales b. Projections c. (with tea break)	Invited Expert/ Dr. Muzamil Amin
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	2.3 Ex. Overview of QGIS (Use IGET_GIS_001)	KU Team
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	2.4 Ex. Working with projections using QGIS ( use IGET_GIS_002) <ul style="list-style-type: none"> <li>· Using existing projection</li> <li>· Making a new projection</li> <li>· Importing a projection</li> </ul>	Dr. Muzamil Amin
	<b>1800-1815 hrs</b>	2.5 Fill in feedback forms	KU TEAM
	<b>Day-3, 3<sup>rd</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	3.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative) led by Coordinator

	<b>0930-1100 hrs</b>	3.2 Understanding data quality <ul style="list-style-type: none"> <li>· Elements of data quality</li> <li>· Sources and types of errors in geospatial data building</li> <li>· Importance of metadata</li> </ul>	Invited Expert/ Dr. Irfan Rashid
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	3.3 Extracting data - georeferencing and extraction of data	Dr. Irfan Rashid
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	3.4 Ex: Georeferencing (Use IGET_GIS_003 )	Dr. Irfan Rashid and Dr. Sumaira Zaz
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	3.5 Ex: Extracting data (Use IGET_GIS_004)	Dr. Irfan Rashid and Dr. Sumaira Zaz
	<b>1800-1830 hrs</b>	3.6 Fill in feedback forms	KU TEAM
<b>Day-4, 4<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	4.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative) led by Coordinator	KU TEAM
	<b>0930-1100 hrs</b>	4.2 Understanding map making <ul style="list-style-type: none"> <li>· Cartographic evolution</li> <li>· Map classification</li> <li>· Map elements</li> <li>· Principles of map design</li> </ul>	Invited Expert/ Dr. Muzamil Amin
	<b>1000-1130 hrs</b>	<b>TEA BREAK</b>	

	<b>1130-1300 hrs</b>	4.3 Group exercise on analysis of good and bad maps with reasons (to be based on map design principles) Group work and presentation	Dr. Muzamil Amin and Dr. Sumaira Zaz
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	4.4 Ex: Map preparation (Use IGET_GIS_006)	Dr. Muzamil Amin
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	Continue with ex. (IGET_GIS_006)	Dr. Muzamil Amin
	<b>1800-1815 hrs</b>	Fill in Feedback Forms	KU TEAM
<b>Day-5, 5<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	5.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)- led by coordinator	KU TEAM
	<b>0930-1300 hrs With tea break</b>	5.2 Understanding attribute data <ul style="list-style-type: none"> <li>· Importance of database</li> <li>· Database management systems</li> <li>· Building attribute data</li> </ul>	Dr. Irfan Rashid
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	5.3 Ex: Data exploration (Use IGET_GIS_007)	Dr. Sumaira Zaz
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	5.4 Ex: Working with tables (use IGET_GIS_008)	Dr. Sumaira Zaz
	<b>1800-1815 hrs</b>	5.5 Fill in Feedback Forms	KU TEAM

<b>Day-6, 6<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	6.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative) – led by coordinator	KU TEAM
	<b>0930-1300 hrs (with tea break)</b>	6.2 Visualizing data through queries	Dr. Sumaira Zaz
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	6.3 Ex: Working with queries (use IGET_GIS_009)	Dr. Sumaira Zaz and Muzamil
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	6.4 Ex: Working with queries (IGET_GIS_010)	Dr. Sumaira Zaz and Muzamil
	<b>1800-18.15 hrs</b>	6.5 Feedback	
<b>Day-7, 7<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	7.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	7.2 Introduction to GPS	Dr. Irfan Rashid
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	7.3 Ex: Field exercise for collecting points using GPS	Dr. Irfan Rashid
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	7.4 Ex : Importing GPS data into QGIS (Use IGET_GIS_011)	Dr. Irfan Rashid
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	7.5 Ex: Using Google Earth / Bhuvan (Use IGET_GIS_012)	Dr. Irfan Rashid
	<b>1800-1815 hrs</b>	Fill in Feedback Forms	KU TEAM
<b>Day-8, 8<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	8.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	8.2: Types of remote sensing	Invited Speaker/Dr. Khalid Omar

	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	8.3 Applications of remote sensing	Prof. Shakil Ahmad Romshoo
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1800 hrs With tea break</b>	8.4 Ex: Intro to SAGA (Use IGET_RS_001)	KU Team
	<b>1800-1815 hrs</b>	8.5 Fill in Feedback Forms	KU TEAM
<b>Day-9, 9<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	9.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	9.2 Understanding the image – elements of visual interpretation	Invited Expert/ Dr. Khalid Omar
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	9.3 Understanding the image -understanding image statistics	Dr. Khalid Omar
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	1. Ex: Image interpretation (Use IGET_RS_002) 2. Ex: Understanding the image (histogram) (Use IGET_RS_003)	Dr. Khalid Omar
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	9.6 Role of Geospatial technology in measuring SDGs using various indicators	Prof. Shakil Ahmad Romshoo
	<b>1800-1815 hrs</b>	9.7 Fill in Feedback	KU TEAM
<b>Day-10, 10<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	10.1 Feedback (analysis by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	10.2 Geometric correction	Dr. Khalid Omar
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	10.3 Atmospheric and Radiometric corrections	Dr. Khalid Omar

	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1800 hrs With tea break</b>	10.4 Ex: Image registration (use IGET_RS_0004)	Dr. Khalid Omar
	<b>1800-1815 hrs</b>	Fill in the Feedback Form	KU TEAM
<b>Day-11, 11<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	11.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1300 hrs With tea break</b>	11.2 : Introduction to image enhancements <ul style="list-style-type: none"> <li>· Contrast enhancements, . Principal Components Analysis</li> <li>· Band rationing, . Spatial filtering</li> <li>· Vegetation Indices</li> </ul>	Prof. Shakil Romshoo and Dr. Khalid Omar
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	11.3 Ex: Working with images – subsetting and mosaicking (Use IGET_RS_005)	Dr. Khalid Omar
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	11.4 Ex: Using enhancements (use IGET_RS_006 )	Dr. Khalid Omar
	<b>1800-1815 hrs</b>	Fill in Feedback Forms	KU TEAM
<b>Day-12, 12<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	12.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	12.2 Introduction to image classification: Unsupervised	Invited Speaker/Dr. Khalid Omar
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	12.3 Introduction to image classification: Supervised	Dr. Khalid Omar
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1800 hrs With tea break</b>	12.4 Ex: Extracting information for satellite image using unsupervised classification (Use IGET_RS_007 )	Dr. Khalid Omar



	<b>1800-1815 hrs</b>	12.5 Fill in Feedback Forms	KU TEAM
<b>Day-13, 13<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	13.1 Feedback (analysis by participants and presented – quantitative & qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	13.2 Accuracy assessment: why and how	Prof. Shakil Romshoo
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1600 hrs With lunch break</b>	1. Ex: Extracting information from satellite image using supervised classification (Use IGET_RS_008 ) 1. Ex: Accuracy assessment (Use IGET_RS_009)	Dr. Khalid Omar
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	SDI framework and role of Geospatial science and technology	Prof. Shakil Ahmad Romshoo
	<b>6.00-6.15</b>	13.5 Fill in Feedback forms	KU TEAM
<b>Day-14, 14<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	14.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	14.2 Change detection	Dr. Irfan Rashid
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	14.3 Understanding terrain data	Dr. Irfan Rashid
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	14.4 Ex: Terrain analysis (Use IGET_RS_010)	Dr. Irfan Rashid
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	14.5 Ex: Change detection with SAGA (use IGET_RS_011)	-----
<b>1800-1815 hrs</b>	14.6 Fill in Feedback forms		
<b>Day-15, 15<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	15.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM

	<b>0930-1300 hrs With tea break</b>	15.2 Spatial data analysis	Invited Expert/ Dr. Sumaira Zaz
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1800 hrs With tea break</b>	15.3 Exercise on spatial data analysis (Use IGET_SA_001)	Dr. Sumaira Zaz
	<b>1800-1815 hrs</b>	15.4 Feedback	KU TEAM
<b>Day-16, 16<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	16.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1100 hrs</b>	16.2 Introduction to PostGRE/PostGIS and demos	Dr. Irfan Rashid
	<b>1100-1130 hrs</b>	<b>TEA BREAK</b>	
	<b>1130-1300 hrs</b>	16.3 Understanding Geoserver –Open layer, web services and demos	Dr. Irfan Rashid
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	16.4 Catalogue Services -Geonetwork	Dr. Irfan Rashid
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	16.5 Exercise Using PostGRE/PostGIS (use IGET__)	Dr. Irfan Rashid
	<b>1800-1815 hrs</b>	16.6 Feedback	KU TEAM
	<b>Day-17, 17<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	17.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)
<b>0930-1100 hrs</b>		17.2 Applications on RS/GIS in planning (urban/rural) with specific case studies highlighting detailed methodology	Invited Expert
<b>1100-1130 hrs</b>		<b>TEA BREAK</b>	
<b>1130-1300 hrs</b>		17.3 Applications of RS/GIS in natural resource management (forest, wildlife/agriculture/watershed)	Invited Expert

	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1600 hrs</b>	17.4 Applications of RS/GIS in climate studies with specific case studies highlighting detailed methodology	Invited Expert
	<b>1600-1630 hrs</b>	<b>TEA BREAK</b>	
	<b>1630-1800 hrs</b>	17.5 Group exercise: Participants to make a methodology flow chart for given applications	Dr. Khalid Omar
	<b>1800-1815 hrs</b>	17.6 Feedback	KU TEAM
<b>Day-18, 18<sup>th</sup> Dec 2022</b>	<b>0900-0930 hrs</b>	18.1 Feedback (analysis to be done by participants and presented – quantitative and qualitative)	KU TEAM
	<b>0930-1300 With tea break</b>	18.2 Discussion of possible minor projects to be done by the participants. Institutions to give projects according to data available with them or using data that can be generated easily.	Prof. Shakil Romshoo, Dr. Irfan Rashid, Dr. Sumaira, Dr. Khalid Omar and Dr. Muzamil Amin
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1800 hrs With tea break</b>	18.3 Working on projects	Dr. Sumaira, Dr. Khalid Omar and Dr. Muzamil Amin
	<b>1800-1815 hrs</b>	18.4 Filling in feedback forms	KU TEAM
<b>Day-19, 19<sup>th</sup> Dec 2022</b>	<b>09.00-18.00 hrs</b>	Working on projects	Dr. Sumaira, Dr. Khalid Omar and Dr. Muzamil Amin
<b>Day-20, 19<sup>th</sup> Dec 2022</b>	<b>09.00-18.00 hrs</b>	Working on projects	Dr. Sumaira, Dr. Khalid Omar and Dr. Muzamil Amin

<b>Day-21, 21<sup>st</sup> Dec 2022</b>	<b>0900-1300 hrs</b>	Final project presentation by participants (GroupWise) including tea break	Prof. Shakil Romshoo, Dr. Irfan Rashid, Dr. Sumaira, Dr. Khalid Omar and Dr. Muzamil Amin
	<b>1300-1400 hrs</b>	<b>LUNCH</b>	
	<b>1400-1530 hrs</b>	Feedback and Valedictory	Prof. Shakil Romshoo