Swami Keshvanand Institute of Technology, Management & Gramothan,
Ramnagaria, Jagatpura, Jaipur-302017, INDIA
Approved by AICTE, Ministry of HRD, Government of India
Recognized by UGC under Section 2(f) of the UGC Act, 1956
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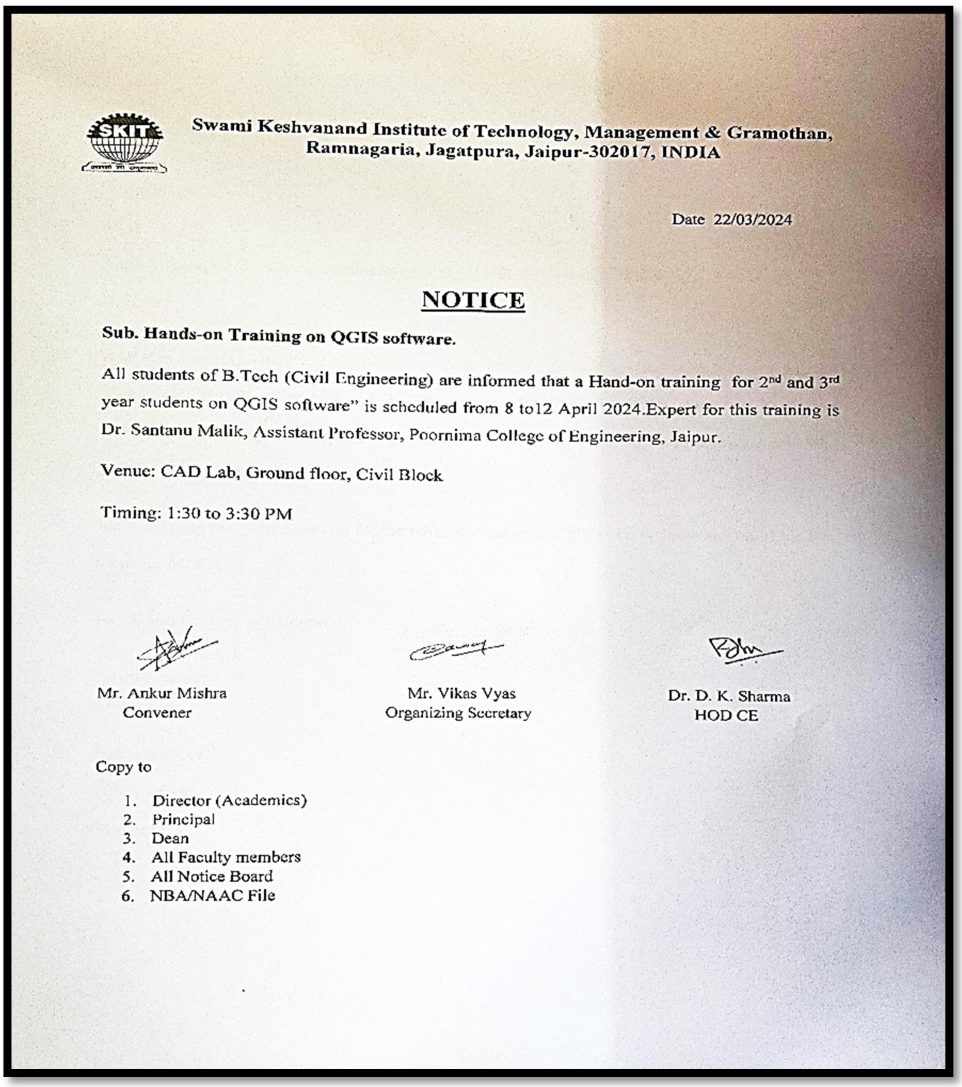
Hand-on Training of QGIS Software
Date of the event: 8 April to 12 April 2023

Workshop Notice



Swami Keshvanand Institute of Technology, Management & Gramothan,
Ramnagaria, Jagatpura, Jaipur-302017, INDIA

Date 22/03/2024

NOTICE

Sub. Hands-on Training on QGIS software.

All students of B.Tech (Civil Engineering) are informed that a Hand-on training for 2nd and 3rd year students on QGIS software" is scheduled from 8 to12 April 2024.Expert for this training is Dr. Santanu Malik, Assistant Professor, Poornima College of Engineering, Jaipur.

Venue: CAD Lab, Ground floor, Civil Block

Timing: 1:30 to 3:30 PM

Mr. Ankur Mishra
Convener

Mr. Vikas Vyas
Organizing Secretary

Dr. D. K. Sharma
HOD CE

Copy to

1. Director (Academics)
2. Principal
3. Dean
4. All Faculty members
5. All Notice Board
6. NBA/NAAC File

Workshop Poster

असतो मा सदगमय

SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY MANAGEMENT & GRAMOTHAN JAIPUR

DEPARTMENT OF CIVIL ENGINEERING

Organizing

Student Workshop on

QGIS

[8 to 12 April 2024]

Module

- Introduction of QGIS, Data structure, Interface of QGIS
- Map Projection, Topo Sheet, Google Earth Engine
- Working with Vector Data, Shape File
- Working with Raster data
- Map Layout

Dr.Santanu Mallik
Associate Professor
Poornima College of Engineering Jaipur

Timing : 1:30 t
VENUE : COE Transportation

CAD LAB

FACULTY COORDINATOR

1. ANKUR MISHRA
   ankur.mishra@skit.ac.in
   VIKAS VYAS
   vikas.vyas@skit.ac.in

Schedule of Workshop

Sr. No.	Date	Topic	Delivered by
1	8/4/2024	Introduction to GIS, GIS function, Data structure, Storing data, Introduction to QGIS frame-work, Q-GIS interface, Tool bar and panel, plug-in.	Dr. Santanu Mallik
2	9/4/2024	Map projection, Geo-refrencing, GSI Topo sheet, its application in GIS, Google Earth Engine its application in GIS.	Dr. Santanu Mallik
3	10/4/2024	Working with vector data, Point, line polygon feature, Create shapefile, edit shapefile, properties of shapefile.	Dr. Santanu Mallik
4	11/4/2024	Working with raster data clip, moisac, mask, raster in QGIS, DEM data download, elevation, slope, aspect etc	Dr. Santanu Mallik
5	12/4/2024	Map layout, new composition, adding map element, legend, data frame property, export map	Dr. Santanu Mallik

Detail list of Participants

Sr. No.	Name of Student	RTU Roll no.	Semester	Branch	Affiliation
1	PRIYANSHU PRAJAPAT	21ESKCE069	6th	CE	SKIT
2	RENU KUMARI	21ESKCE077	6th	CE	SKIT
3	Reva Verma	21ESKCE078	6th	CE	SKIT
4	SAARTHAK CHOPRA	21ESKCE084	6th	CE	SKIT
5	Sachin Meena	21ESKCE085	6th	CE	SKIT
6	UDAY SINGH SISODIA	21ESKCE097	6th	CE	SKIT
7	URVASHI GAUTAM	21ESKCE098	6th	CE	SKIT
8	YASH MATHUR	21ESKCE105	6th	CE	SKIT
9	Sumit Meena	21ESKCE093	6th	CE	SKIT
10	Avinash Suthar	22ESKCE021	4th	CE	SKIT
11	Nupur Agarwal	22ESKCE067	4th	CE	SKIT
13	RAHUL KUMAWAT	22ESKCE074	4th	CE	SKIT
13	ANUJ BHATNAGAR	22ESKCE201	6th	CE	SKIT
14	RAJKUMAR SHARMA	22ESKCE202	6th	CE	SKIT

Swami Keshvanand Institute of Technology, Management & Gramothan

Department of Civil Engineering

Student Workshop on QGIS

8 to 12 April 2024

Attendance List

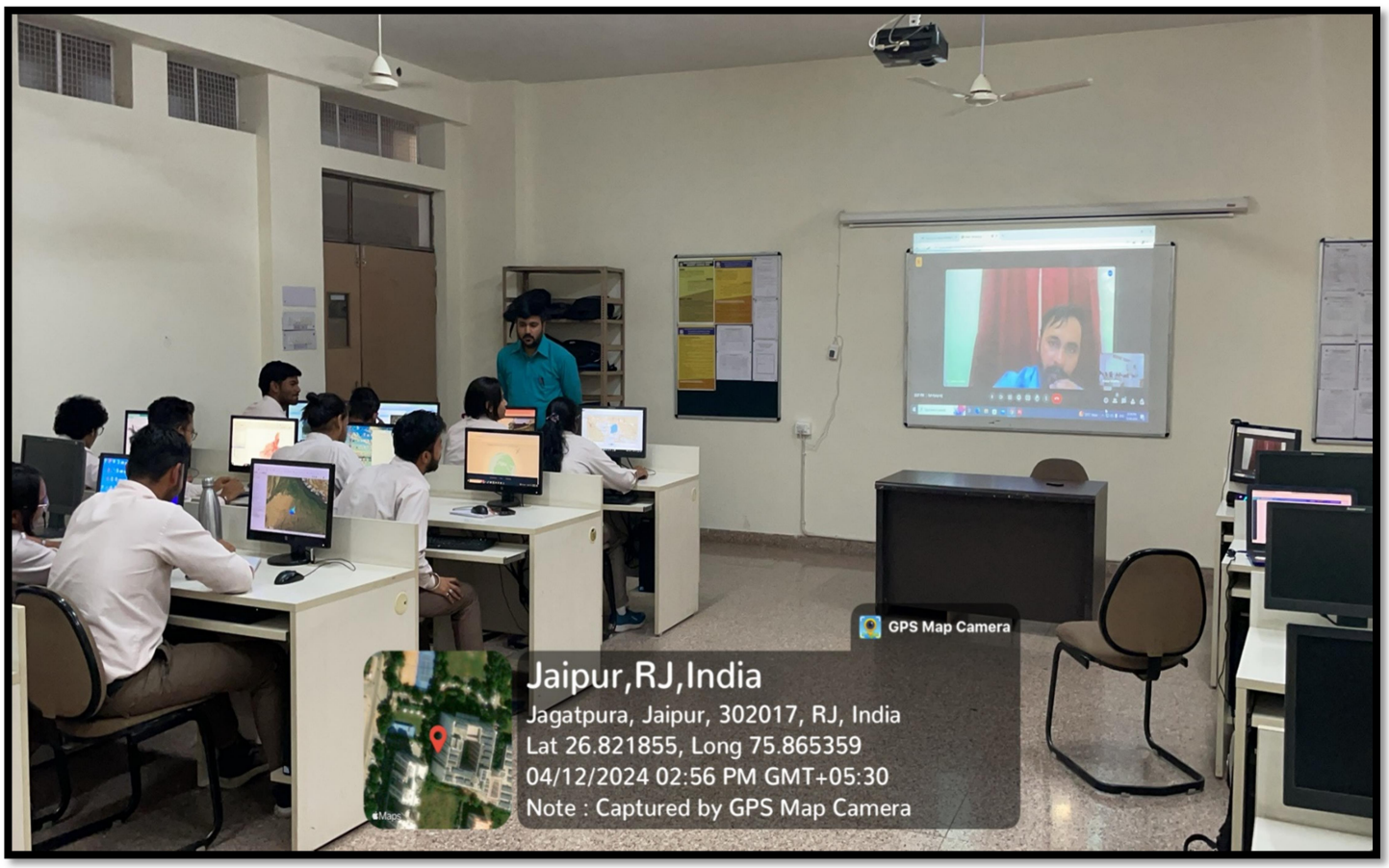
Sr. No.	Name of Student	Roll No.	Semester	08-Apr	09-Apr	10-Apr	11-Apr	12-Apr
1	Priyanshu Prajapat	21ESKCE069	6th	Priyanshu.	Priyanshu.	Priyanshu.	Priyanshu.	Priyanshu.
2	Vijay Kumar	21ESKCE100	6th					
3	Sajid Khan	21ESKCE086	6th					
4	Urvashi Gautam	21ESKCE098	6th	Urvashi		Urvashi	Urvashi	Urvashi
5	Shreyansh nagarwal	21ESKCE092	6th					
6	Deepjyoti Mech	21ESKCE017	6th					
7	Reva Verma	21ESKCE078	6th					
8	Sachin Meena	21ESKCE085	6th					
9	Yuvraj sharma	21ESKCE107	6th					
10	Saarthak chopra	21ESKCE084	6th					
11	Anuj Bhatnagar	22ESKCE201	6th	Anuj	Anuj	Anuj	Anuj	Anuj
12	Yash Mathur	21ESKCE105	6th					
13	Raj kumar Sharma	22ESKCE202	6th	RKS	RKS	RKS	RKS	RKS
14	Nupur Singh Choudhary	21ESKCE061	6th					
15	Uday Singh Sisodia	21ESKCE097	6th	Uday	Uday	Uday.	uday	uday.
16	Anil Sharma	23ESKCE201	4th					
17	Avinash Suthar	22ESKCE021	4th		avinash		avinash	avinash
18	Aman Jain	22ESKCE010	4th					
19	Kaynat Ansari	22ESKCE053	4th					
20	Nupur Agarwal	22ESKCE067	4th	Kdal	Kdal	Kdal	Kdal	Kdal
21	Juned khan	22ESKCE047	4th					
22	SUMIT KUMAR MEENA	22ESKCE093	4th					
23	Rahul Kumawat	22ESKCE074	4th	Rahul	Rahul	Rahul	Rahul	Rahul
24	Wilson Meel	22ESKCE104	4th					
25	Mannat Jasrotia	22ESKCE060	4th					
Renu Kumari	21ESKCE077	6th	रेणुकुमारी	रेणुकुमारी	रेणुकुमारी	रेणुकुमारी	रेणुकुमारी

Facult Coordinator

1. Ankur Mishra
2. Vikas Vyas

Attendance Record

Photographs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Note : Captured by GPS Map Camera


GPS Map Camera
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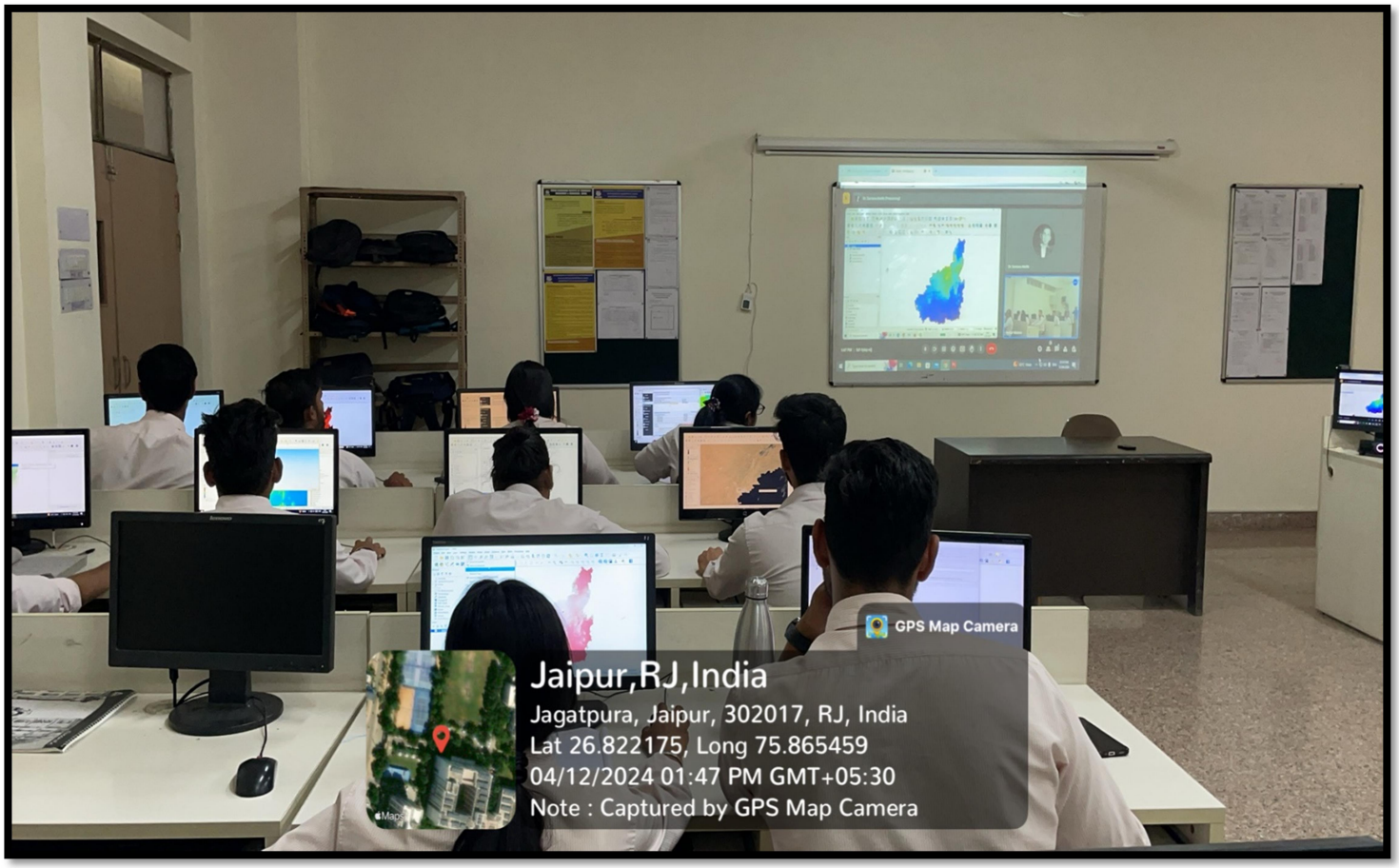
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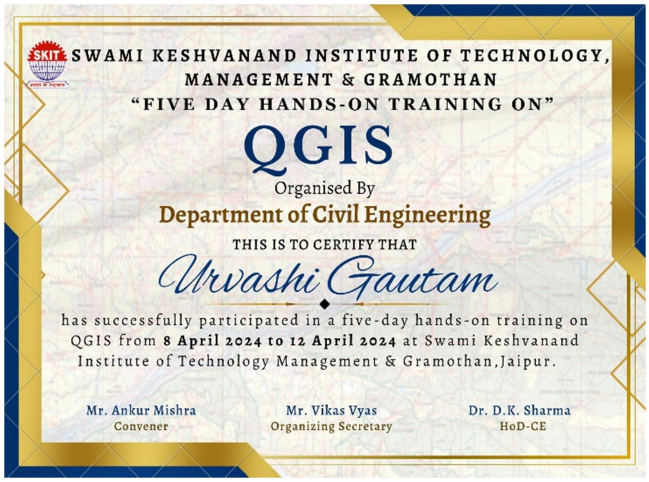
CERTIFICATES



Feedback of students

Sr.No.	Name of Student (IN CAPITAL LETTERS)	University Roll No.	Mention at least 5 points which you have learned from the class.	Was this training fruitful?	How would you rate the content of training?	How effective was the instructor in explaining concept and facilitating hands on exercise?	Overall Experience?	Suggestions, if any?
1	PRIYANSHU PRAJAPAT	21ESKCE069	Geo referencing Vector data analysis Raster data analysis Map making Google earth	Yes	5	5	4	Nice workshop
2	RENU KUMARI	21ESKCE077	1.Georefrence 2.Raster layer 3.Vector layer 4.Plugins 5.Extract file	Yes	5	5	5	Nothing
3	Reva Verma	21ESKCE078	1)Georeferencing 2) Import vector file & analyse it 3) import raster file & analyse it. 4) Google Earth 5) map making	Yes	1	1	1	No suggestions overall great experience
4	SAARTHAK CHOPRA	21ESKCE084	Something very new Scope in this QGIS Field How remote sensing change the world	Yes	1	1	1	Need kofte in refreshment next time 😂
5	Sachin Meena	21ESKCE085	Raster layer Vector layer Shp file Extract tool Map service	Yes	5	1	1	No
6	UDAY SINGH SISODIA	21ESKCE097	Type of data Topography Work on vector data Work on raster Work on mapping	Yes	5	5	5	Provide more training program
7	URVASHI GAUTAM	21ESKCE098	1. Learn how to import topographic file and done geo referencing. 2. Learn import vector file and analysis this. 3. Learn import raster file and analysis it.	Yes	1	1	1	More days in work shop.

			4. Learn making layers 5. Map making of layers and Google Earth.					
8	YASH MATHUR	21ESKCE105	Raster layer Vector layer shp file Extract tool Map services	Yes	2	2	2	More days should be added to the workshop.
9	Avinash Suthar	22ESKCE021	Geo refrancing Vector data analysis Raster data analysis Map making Good Earth	Yes	1	1	1	No
10	Nupur Agarwal	22ESKCE067	Raster layer Vector layer Georeference Pluggins Export	Yes	1	1	1	Overall the workshop was very informative
11	RAHUL KUMAWAT	22ESKCE074	1. Raster layer. 2. Vector layer. 3. Plugins. 4. Export. 5. Georefersing. 6. Projections. 7. Adding data on attribute table. 8. Draw a Digital Elevation Modal.	Yes	1	2	1	Audio quality.
12	ANUJ BHATNAGAR	22ESKCE201	Raster data analyse Geo referencing vector data analyse map making Google Earth coordinating	Yes	5	5	5	Full design project
13	RAJKUMAR SHARMA	22ESKCE202	Geo referencing, vector data ,raster data analysis , importing file from Google Earth, map making	Yes	1	1	1	Nil

Day 1: 8/4/2024

Session Title: Introduction to GIS, GIS function, Data structure, Storing data, Introduction to QGIS framework, Q-GIS interface, Tool bar and panel, plug-in.

Instructor: Dr. Santanu Mallik

Summary: The first day of the workshop focused on providing participants with a foundational understanding of Geographic Information Systems (GIS). Dr. Santanu Mallik introduced the basic concepts of GIS, its functions, and the structure of spatial data. Participants learned about storing data in GIS, were introduced to the QGIS framework, explored the QGIS interface, and familiarized themselves with various tools, panels, and plugins within the software.

Day 2: 9/4/2024

Session Title: Map projection, Geo-referencing, GSI Topo sheet, its application in GIS, Google Earth Engine its application in GIS.

Instructor: Dr. Santanu Mallik

Summary: On the second day, participants delved into advanced topics such as map projection and geo-referencing. Dr. Santanu Mallik discussed the significance of GSI Topo sheets in GIS applications and how to utilize them effectively. Additionally, participants learned about the application of Google Earth Engine in GIS and its practical implications.

Day 3: 10/4/2024

Session Title: Working with vector data, Point, line polygon feature, Create shapefile, edit shapefile, properties of shapefile.

Instructor: Dr. Santanu Mallik

Summary: Dr. Santanu Mallik guided participants through the manipulation of vector data on the third day. Participants learned how to work with point, line, and polygon features, create and edit shapefiles, and explored the properties associated with shapefiles. This session provided practical skills for data management and analysis in GIS.

Day 4: 11/4/2024

Session Title: Working with raster data clip, mosaic, mask, raster in QGIS, DEM data download, elevation, slope, aspect etc.

Instructor: Dr. Santanu Mallik

Summary: The fourth day focused on raster data manipulation in GIS. Dr. Santanu Mallik demonstrated techniques such as clipping, mosaicking, and masking raster data within QGIS. Participants also learned how to work with Digital Elevation Model (DEM) data, including downloading, analyzing elevation, slope, aspect, and other related parameters.

Day 5: 12/4/2024

Session Title: Map layout, new composition, adding map element, legend, data frame property, export map.

Instructor: Dr. Santanu Mallik

Summary: The final day of the workshop centered on map layout design and composition. Dr. Santanu Mallik provided insights into creating visually appealing maps, including adding map elements such as legends, adjusting data frame properties, and preparing maps for export. Participants gained practical skills in presenting GIS data effectively.

Objectives of Workshop

The " Hands-on training of QGIS ”is designed with the following objectives:

1. Provide participants with a comprehensive understanding of Geographic Information Systems (GIS) including its functions, applications, and significance in various fields.
2. Familiarize participants with the QGIS framework, interface, tools, and plugins to enable them to effectively navigate and utilize GIS software for data management and analysis.
3. Equip participants with the knowledge and skills to work with both vector and raster data formats, including creating, editing, and managing shapefiles, as well as manipulating raster data for analysis and visualization purposes.
4. Enable participants to understand map projection techniques, geo-referencing methods, and their importance in ensuring spatial accuracy and precision in GIS applications.

5. Provide participants with advanced techniques for analyzing spatial data, including clipping, mosaic-ing, masking raster data, and conducting terrain analysis using DEM data.
6. Train participants in designing visually appealing map layouts, including creating new compositions, adding map elements such as legends, and adjusting data frame properties to enhance map presentation.
7. Offer practical, hands-on experience through exercises and real-world examples, allowing participants to apply GIS concepts and techniques to solve spatial problems and address real-world challenges.
8. Introduce participants to the integration of GIS with remote sensing technologies, such as Google Earth Engine, to enhance their understanding of spatial data analysis and visualization capabilities.
9. Empower participants with enhanced GIS skills and knowledge, enabling them to utilize GIS effectively in their academic pursuits, research endeavors, and professional careers across various domains including environmental science, urban planning, natural resource management, and disaster management.
10. Facilitate networking opportunities among participants and foster collaboration in GIS research and applications, creating a supportive learning environment conducive to sharing knowledge and best practices in the field of GIS.

Outcome of workshop

The outcomes of the "Hands-on training of QGIS" include participants acquiring:

1. Enhanced Understanding of GIS: Participants will gain a thorough understanding of Geographic Information Systems (GIS), including its principles, functions, and applications across various disciplines.
2. Proficiency in QGIS: Participants will develop proficiency in using QGIS software, including navigating the interface, utilizing tools, and leveraging plugins to perform spatial data analysis and visualization tasks.
3. Effective Spatial Data Management: Participants will acquire skills in managing both vector and raster data formats, including creating, editing, and analyzing spatial datasets for various purposes.
4. Improved Spatial Analysis Skills: Participants will learn advanced techniques for spatial analysis, including map projection, geo-referencing, terrain analysis, and

remote sensing integration, enabling them to conduct in-depth spatial analyses and derive meaningful insights from spatial data.

5. Map Design and Visualization: Participants will be able to design visually appealing maps and layouts, incorporating map elements such as legends, scale bars, and north arrows, and effectively communicate spatial information through map visualization.
6. Problem-Solving Abilities: Participants will develop problem-solving abilities by applying GIS concepts and techniques to solve real-world spatial problems and address challenges in diverse domains such as environmental management, urban planning, and disaster response.
7. Enhanced Research and Analytical Skills: Participants will strengthen their research and analytical skills through hands-on exercises, case studies, and practical applications of GIS, empowering them to conduct independent research and analysis using spatial data.
8. Career Advancement Opportunities: Participants will enhance their professional skills and credentials in GIS, making them more competitive in the job market and opening up career advancement opportunities in fields such as environmental science, geography, urban planning, and natural resource management.