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SGTU/FEAT/CE-151  
Dated: 10 September 2022

To

The Registrar  
SGT University, Gurugram

**Subject:** Permission to organize a **Hand-on-Workshop Session-II (SDP)** on “**Advance Features of QGIS Software**”, on **14 September 2022**.

Respected Sir,

On behalf of the Department of Civil Engineering, SGT University, we would like to request you permit us for organizing a **Hand-on-Workshop Session-II (SDP)** on “**Advance Features of QGIS Software**”, under the aegis of **Torque Club, on 14 September 2022, at Room No. G12 (Geospatial Research Laboratory), E-Block, SGTU**, for the students of the Faculty of Engineering & Technology, SGTU. This SDP will advance the knowledge of students in the domain of QGIS software. Kindly consider the request and give valuable permission for the same.

No financial commitments are involved in this session.

**Date:** 14 September 2022

**Timing:** 02.00-04.00 PM

**Hand-on-Workshop Session-II (SDP) Speaker:** Dr. Aditya Kapoor

With Best Regards

*[Signature]*  
10/9/22  
Dr. Aditya Kapoor (AP-CE)

*[Signature]*  
10/9/22  
Dr. Neeraj Saini (HOD CE)

DEAN (FEAT)

*[Signature]*

*[Signature]*  
*[Signature]*  
Dean FEAT  
*[Signature]*  
12/9/22  
Registrar  
SGT University,  
Budhera, Gurugram

# GGT UNIVERSITY

THREE GURU GOBIND SINGH TRICENTENARY UNIVERSITY

(UGC Approved University)

GURGAON, Delhi-NCR

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Department of Civil Engineering,

Faculty of Engineering & Technology

“Advanced Features of QGIS Software”

Type of event: Hands-on-Workshop

Date: 14/09/2022

Time: 02:00 PM to 04:00 PM

Geospatial Research Laboratory, Ground floor, E-Block

## Coordinator

Dr. Anil Kumar, HOD & Assistant Professor, Department of Civil Engineering, FEAT.

Mr. Anand Kumar, Assistant Professor, Department of Civil Engineering, FEAT.

## Trainers

Ms. Monika Deshwal (Assistant Professor, Department of Mechanical Engineering, FEAT).

Mr. Kaushal Sharma (Assistant Professor, Department of Civil Engineering, FEAT).

Mr. Asad Habeeb (Assistant Professor, Mechanical Engineering Department, FEAT).

## Content

Geographic Information System (GIS) is a system that helps to capture, manage, store, analyze spatial data. This system has been used for the last 200 years to solve various problems such as efficient telecom network design, hotspot analysis, algorithm optimization. However, with the advent of computers, GIS is being implemented

digitally with the use of sophisticated software. Such software broadly falls under two categories- commercial and open source. In the present era, the open-source software domain is gaining traction on the account of its customizability and community-driven approach. The most commonly used open-source software in the domain of GIS is QGIS (another known as Quantum GIS). Its knowledge can greatly enhance the skills of the students which will greatly enhance their employability of students.

In the light of this discussion, the Department of Civil Engineering, FEAT under the aegis of the college club, organized a **hands-on-workshop** titled '**Advanced Features of QGIS Software**' for students of FEAT and FASC on 14<sup>th</sup> September 2022 from 2 PM to 4 PM in the research laboratory, Ground floor of E-block. The session started with a recap of the previous session in which they were familiarized with historical application of GIS, basic functionalities of QGIS software such the tabs, icons, setting the display style, and some advanced capabilities of QGIS such as vector and raster files. Previously they were also instructed about the procedure to add base maps from online repository and download the topographical maps from the online repository of US Army.

In this session, the students were familiarized with the procedure of obtaining updated raster data from google earth pro software. Then, they were instructed to add three types of vector layers to the raster image- points, vector, and polygon. Subsequently, they were taught about the procedure of editing the properties of these layers.

#### **About the Speaker/Guest:**

**Dr. Anil Kumar Kapoor** is an Assistant Professor at the Department of Civil Engineering, FEAT. He obtained his Ph.D. degree from IIT Ropar. During his Ph.D. and bachelor's, he extensively worked with GIS software such as QGIS and ArcGIS. Additionally, he underwent a month QGIS certificated training course organized by GIS Vision India Pvt. Ltd. in 2022.

#### **Audience:**

Faculty of Engineering & Technology  
SGT University  
Gurgaon (Haryana)

38 students (enumerated at the end of this document) from FEAT and FASC were present in this event.

### **Brief Report**

Geographic information systems, or GIS, are computer systems for managing, analyzing, and displaying geographic information and data. GIS can show many different kinds of data on one map. This enables users to more easily see, analyze, and understand geographic patterns and relationships. An open-source software named QGIS is being extensively used by research and academic community to capture, store, manipulate, analyze, manage, and present all types of geographical data. Its knowledge can greatly enhance the skill set and employability of students. With this viewpoint, the **Department of Civil Engineering, Faculty of Engineering & Technology, SGTU**, organized a **Hands-on-workshop** titled '**Advanced features of QGIS Software**' on **14<sup>th</sup> September 2022** from **02 pm to 04 pm** at the **Geospatial Research Laboratory, Ground Floor, E Block** for the students of FEAT and FASC. The speaker for the session was **Dr. Anil Kapoor, Assistant Professor, CE-FEAT, SGTU**. The speaker initiated the session with a recap of the previous session (5<sup>th</sup> September 2022) and later demonstrated the method for downloading the latest raster file from google earth pro and its georeferencing. Further, in the session, adding the three types of vector layers (shape files)- point, line, and polygon were deciphered. The speaker concluded the session with a demonstration of altering the properties of vector layers.

### **Learning Outcomes:**

In this session, the students of FEAT and FASC were enlightened about the procedure of adding a new updated raster layer. Then they were instructed about the types of vector layers (point, line, and polygons) followed by the procedure to add them to the workspace. Finally, the participants were familiarized with the method of editing the properties of these layers.

Being an open-source standard software, such sessions enhance the employability of the students.

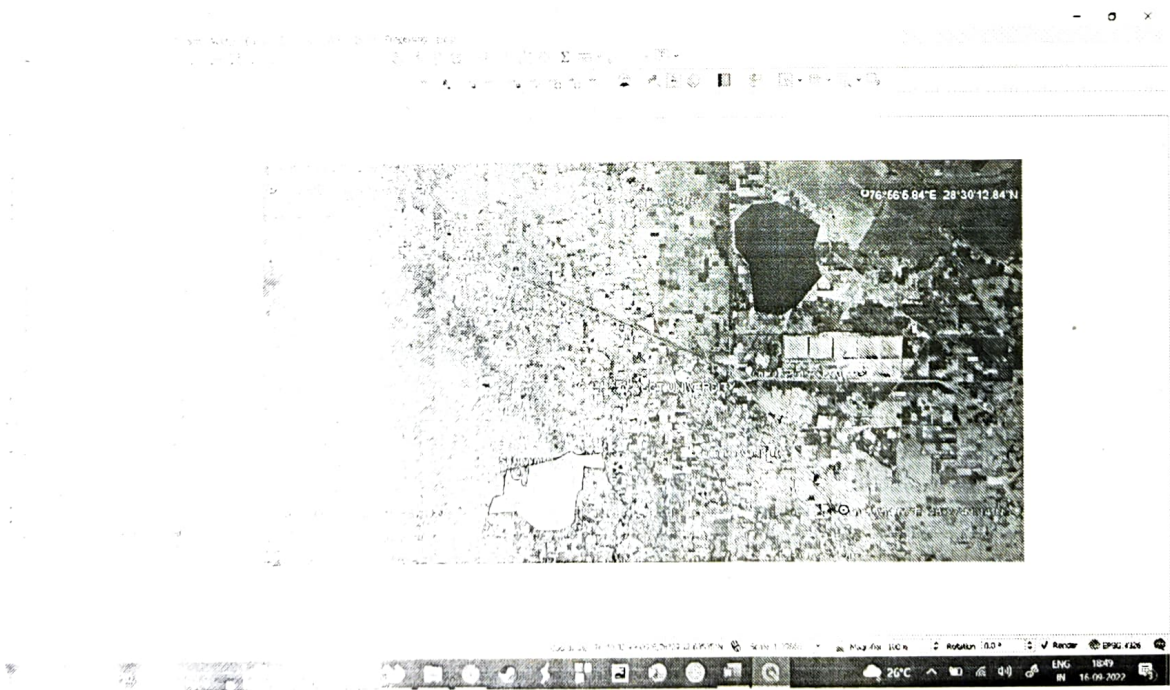


Students attending Workshop on Advance Features of QGIS Software

Faculty of Engineering & Technology  
SGT University  
Gurgaon (Haryana)



Students implementing QGIS Software



Results derived through Software

Faculty of Engineering & Technology  
SGT University  
Gurgaon (Haryana)



QGIS Software showing different Scenarios

**List of Students:**

Sl. No.	Registration No.	Student's Name	Program
1	2022000002	SARA SHEORAN	B.Sc. (Hons.) Agriculture
2	2022000003	SHUBHAM SHARMA	B.Sc. (Hons.) Agriculture
3	2022000004	ABHISHEK SHARMA	B.Sc. (Hons.) Agriculture
4	2022000005	ASHIKA	B.Sc. (Hons.) Agriculture
5	2022000007	MRITYUNJAYA SHARMA	B.Sc. (Hons.) Agriculture
6	2022000008	YASHIWANI	B.Sc. (Hons.) Agriculture
7	2022000009	MUSKAN	B.Sc. (Hons.) Agriculture
8	2022000010	KANIKA	B.Sc. (Hons.) Agriculture
9	2022000013	ANJALI SHARMA	B.Sc. (Hons.) Agriculture
10	2022000014	REENKI	B.Sc. (Hons.) Agriculture
11	2022000015	AYOTI SAINI	B.Sc. (Hons.) Agriculture

12	16	RUCHIKA CHHILLAR	B.Sc. (Hons.) Agriculture
13	17	SUHAIL KHAN	B.Sc. (Hons.) Agriculture
14	18	SUCHETA	B.Sc. (Hons.) Agriculture
15	19	SEIJAL	B.Sc. (Hons.) Agriculture
16	20	VARNIKA ARYA	B.Sc. (Hons.) Agriculture
17	21	RAVEENA YADAV	B.Sc. (Hons.) Agriculture
18	22	MAYANK	B.Sc. (Hons.) Agriculture
19	23	PAYAL KATARIA	B.Sc. (Hons.) Agriculture
20	24	POOJA	B.Sc. (Hons.) Agriculture
21	25	NAMITA	B.Sc. (Hons.) Agriculture
22	26	CHIMANSHU YADAV	B.Sc. (Hons.) Agriculture
23	27	SUBHAM	B.Sc. (Hons.) Agriculture
24	28	PALLAVI	B.Sc. (Hons.) Agriculture
25	29	RAKHI YADAV	B.Sc. (Hons.) Agriculture
26	30	DIPESH KUMAR	B.Sc. (Hons.) Agriculture
27	31	ANSHUL	B.Sc. (Hons.) Agriculture
28	32	SAURABH SHARMA	B.Sc. (Hons.) Agriculture
29	33	Vicky Rajput	B.Tech. Mechanical Engineering
30	34	Aditya Negi	B.Tech. Mechanical Engineering
31	35	Naman Chauhan	B.Tech. Mechanical Engineering
32	36	Yatharth Bhardwaj	B.Tech. Mechanical Engineering
33	37	Ayush Kumar Singh	B.Tech. Mechanical Engineering
34	38	Harender Kumar	B.Tech. Mechanical



		<b>Engineering</b>
	Ankit Yadav	<b>B.Tech. Mechanical Engineering</b>
	Shubham Jha	<b>B.Tech. Mechanical Engineering</b>
	Kamesh	<b>B.Tech. Mechanical Engineering</b>
	Sharan	<b>B.Tech. Mechanical Engineering</b>

Faculty of Engineering & Technology  
SGT University  
Gurgaon (Haryana)

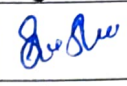
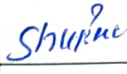
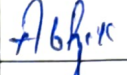
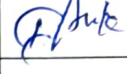
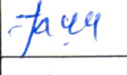

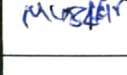
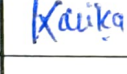

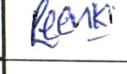
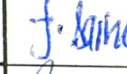
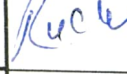



**Shree Guru Gobind Singh Tricentenary University Haryana**

**Faculty of Engineering and Technology**

Department: Civil Engineering

Event Title: Advanced Features of  
OOPS Software

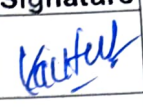
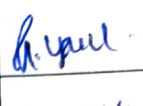

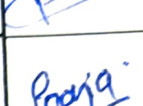
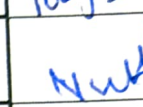
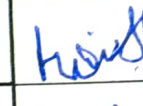
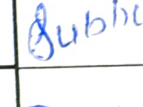
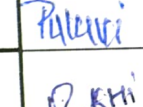
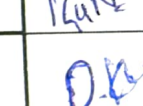
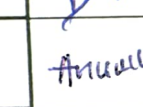
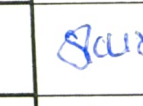
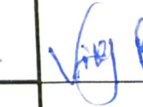
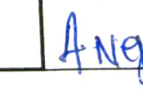


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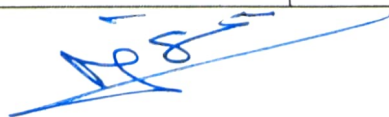
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1	201101002	Sara Sheoran	B. Sc.	
2	201101003	Shubham Sharma	"	
3	201101004	Abhishek Sharma	"	
4	201101006	Tshika	"	
5	201101007	mrityunjaya	"	
6	201101008	Yashwani	"	
7	201101009	Muskan	"	
8	201101011	Kanika	"	
9	201101013	Anjali Sharma	"	
10	201101014	Reenki	"	
11	201101015	Jyoti Saini	"	
12	201101016	Ruchika Chhillar	"	
13	201101019	Suhail Khan	"	
14	201101020	Sucheta	"	
15	201101021	Sejal	"	
Coordinator(s) (Name, Department and signature)				



**Shree Guru Gobind Singh Tricentenary University Haryana**  
**Faculty of Engineering and Technology**

Department:

Event Title:			Date:	
S.No	Enrollment no.	Name	Course/Semester	Signature
1	201101022	Varnika arya	B.Sc.	
2	201101023	Raveena Yadav	"	
3	201101024	Mayank	"	
4	201101025	Pabul kataria	"	
5	201101026	Pooja	"	
6	201101027	Namita	"	
7	201101028	Himanshu Yadav	"	
8	201101030	Subham	"	
9	201101031	Pallavi	"	
10	201101041	Rakhi Yadav	"	
11	201101049	Dipesh Kumar	"	
12	201101044	Anshul	"	
13	201101045	Saurabh Sharma	"	
14	211303001	Vicky Rajput	B.Tech.	
15	211303002	Aditya Negi	"	
Coordinator(s) (Name, Department and signature)				



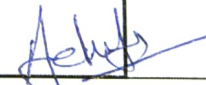
# Shree Guru Gobind Singh Tricentenary University Haryana

## Faculty of Engineering and Technology

Department: Civil Engineering

Event Title: Advance Features of AEC

Date: 14/09/22

S.No	Enrollment no.	Name	Course/Semester	Signature
1	211303003	Naman Chauhan	B.Tech.	Naman
2	211303004	Yatarth Bardwaj	"	Yatarth
3	211303005	Ayush Kumar	"	Ayush
4	211303006	Harender Kumar	"	Harender
5	211303007	Ankit Yadav	"	Ankit
6	211303008	Shubham Jha	"	Shubham
7	211303003	Kamesh	"	Kamesh
8	211303011	Sharan	"	Sharan
9				
10				
11				
12				
13				
14				
15				
Coordinator(s) (Name, Department and signature)			 Dr. Aditya Kapoor Department of Civil Engg.	

  
 Dean  
 Faculty of Engineering & Technology  
 SGT University  
 Gurgaon (Haryana)