

To

The Registrar  
SGT University, Gurugram

**Subject:** Permission to organize a **Hands-on Workshop** on **“Analysis of Structure and Detailing through Building Information Modeling (BIM) Software”**, **28 & 29 April 2023**

Respected Sir,

On behalf of the Department of Civil Engineering, FEAT, SGT University, we would like to request you to permit us to organize a **Hands-on-Workshop** on **“Analysis of Structure and Detailing through Building Information Modeling (BIM) Software”**, under the aegis of **Torque Club (FEAT)** on **28 & 29 April 2023**, for the students of the Department of Civil Engineering, FEAT. This workshop will enrich the students BIM software applications in the analysis of structures and detailing as well. BIM software is the upcoming technology in the civil engineering domain and students must be acquainted with that.

**Date:** 28 & 29 April 2023

**Students Count:** 15 (2<sup>nd</sup>, 6<sup>th</sup>, 8<sup>th</sup> Sem Students) in Lab 303, E block

**Resource Person:** Er. Satyam Aggarwal

Precast Tekla Modeller cum Engineer  
SWECO INDIA PVT. LTD.

★ **Remuneration:** Rs. 4500.0 (in total for 02 Days)

Kindly consider the request and give valuable permission for the same.

With Best Regards

*Dr. Kiran Devi*  
**Dr. Kiran Devi (AR-CE)** 30/03/23

*Dr. Neeraj Saini*  
**Dr. Neeraj Saini (HOD-CE)**

*Dr. Neeraj Saini*  
**DEAN (FEAT)**

*Dr. Neeraj Saini*  
Faculty of Engineering & Technology  
SGT University  
Gurugram (Haryana)

*Dr. Neeraj Saini*  
**Registrar**  
SGT University  
Gurugram

*Submitted for consideration & approval*  
30/3/23

*Approved*  
31/3/23

# Satyam Aggarwal

aggarwalsatyam642@gmail.com/+91-7508240836

## Overview

---

I bring on board 3.9 years of experience in BIM industry into Precast concrete, Steel Structures, Point Cloud, Scan to BIM. I have worked on tools i.e. TEKLA Structures, IMPACT Autocad for precast concrete and steel structures, REVIT Structures for Scan to BIM project. I am skilled in basic modeling for analysis of steel structure in STAAD.Pro.

## Technical Skills

---

**Tekla Structures** - BIM Modeling of Precast and Cast In-Situ concrete structures, Detailing of precast connections, Shop drawing generation, Rebar schedule creation, PXMLs preparation for precast elements, Template creation

**Impact AutoCad** - BIM Modeling of Precast, Detailing, Shop drawing generation, Report generation

**Revit Structures** - Cast In-Situ Structures, Modeling of Scan to BIM Building structures

**Naviswork Freedom** - Reference for the Modeling data, Model checking, Clash detection

**STAAD.Pro** - Basic Modeling of Steel Structures for the analysis

**AutoCAD** - Pro efficient in preparing Structural Layouts

**Adobe Photoshop** - Pro efficient in handling basic image editing

**MS Office** - Capable of handling MS excel, MS Power Point, MS Word

## Work Experience

---

### Sweco India Pvt Ltd.

(June '20 – till date)

(working under Sweco Sweden team)

*Designation – Precast Tekla Modeller cum Engineer*

### Projects and Roles

- **Elder Residence Villa Brogården, Alingsas, Sweden**

A retirement villa located in Alingsas district having 80 apartments divided in 5 floors. The building is completely constructed using prefabrication method in compliance with European standards. In this project I was responsible for BIM modelling, Rebar detailing, Shop drawings of precast elements using Tekla structures 2019.

- **Kiruna Vattenverk, Water treatment plant, Kiruna, Sweden**

A water treatment plant in the region of Kiruna in which extension of building is to be planned and constructed using precast concrete method in compliance with European standards. In this project I was responsible for BIM modelling, rebar detailing, shop drawings and assembly plans using IMPACT Autocad.

- **Mellanstadieskola, Middle School, Lomma, Sweden - Ongoing**

A middle school in the Lomma region is a project of Lomma municipality. The school building has 3 floors and there is one cafeteria having 2 floors. The building is constructed using precast concrete method in compliance with European standards. In this project I am responsible for BIM modelling, Rebar detailing, Shop drawings of precast elements using Tekla structures 2020.

- **Galleriet Hovås, Residential Tower, Hovås, Sweden – Ongoing**

A residential township in the Hovås region. The project has 4 towers and has 47 houses. The building is constructed using precast concrete method in compliance with European standards. In this project I am responsible for BIM modelling, Rebar detailing, Shop drawings of precast elements using Tekla structures 2020.

- **Pålsjöro, Residential Tower, Hovås, Sweden – Ongoing**

A residential township in the Helsingborg region. The project has 3 towers and has 49 flats. The building is constructed using precast concrete method in compliance with European standards. In this project I am responsible for BIM modelling, Rebar detailing, Shop drawings of precast elements using IMPACT Autocad.

**Intec Infra Technologies Pvt Ltd.**

(September '19 – May'20)

*Designation – Structure Engineer*

**Projects and Roles**

- **Providence Saint Joseph Medical Center, Burbank, California**

There were two units of the hospital “Urgent Care” and “Emergency Department” for which I was responsible for BIM modeling, Structural Layout of Cast In-Situ and precast concrete Structure using Tekla\_structures 2019.

- **Noman M. Cole Jr., Pollution Control Plant, Lorton, Virginia**

A Pollution Control plant in which retrofitting was to be executed. In this I was responsible for model a portion of plant by dividing different phases of building. It was based on Scan to BIM technology and in Revit Structures we have to model existing condition, demolish phase and new portion of building which is to be constructed as per the client requirement.

- **Churchill Downs Racetrack, Louisville, Kentucky**

A horse racing stadium in which extension of stands and staircase was to be executed. In this project I was responsible for 3D BIM Model in Tekla Structures, Structure Analysis and Modeling in STAAD.Pro and Quantity\_Surveying of the steel staircase structure adjoining to the seating of the stadium.

- **DLF EWS Building, Gurgaon, India**

It was a residential tower in which quantity of reinforcement to be calculated by creating 3D BIM model in Tekla structures. In this project I was responsible for the reinforcement modeling in this Cast in situ concrete structure.

- **G+8 Steel Structure**

This was a sample project as a part of training, in which I was responsible to learn the basics of Structure modeling in STAAD.Pro. Calculation related to design of steel structures as per AISC standard, 3D BIM model of Steel structures using Tekla.

**Melior Structural Solutions Pvt Ltd.**

(May '18 – September'19)

*Designation – Draughtsman*

**Projects and Roles**

- **Lusail Stadium, Qatar**

This project was a fully air conditioned football stadium having capacity of 80,000 seat in which FIFA 2022 finale to be organized. The entire concrete portion is divided in number of panels so as to use prefabrication technology. In this project I was responsible for BIM modeling, rebar detailing, shop drawing creation, Clash detection and Transmittal preparation for elements like Precast Rakers, Precast Bleachers Walls, Vomitory walls, Staircase, Columns and Solid slabs.

- **Club House by Vaishnavi Serene, Bangalore**

This project was a part of Vaishnavi serene residential tower for recreational activities within the society. This project was constructed on the basis of prefabrication technology. In this project I was responsible for the BIM modeling of the prefabricated structure, rebar detailing, shop drawing creation, production export files (PXMLs) as per factory standards using Tekla, Transmittal preparation, Virtual Client coordination with MEP and Architecture team.

- **Vaishnavi Serene, Bangalore**

This project was a residential township having G+4 floors and 8 towers in numbers. This project was spread in 10.82 acres. The entire project was constructed using prefabrication concrete technology. In this project I was responsible

the BIM Modeling, Rebar Detailing Shop drawing creation using Tekla and Transmittal record preparation of precast elements like Wall panels, Columns, Solid Slabs, Hollow Core slabs, Solid Slabs, Double Walls and Beams.

- **Kovai Medical Center and Hospital, Coimbatore**

This project was 1000 bedded multi specialty hospital spread in 25 acre land. Entire project was constructed using prefabrication technology. In this project I was responsible for shop drawing creation of Solid walls, columns, hollow core slabs, beams, parapets, Wall claddings, production export files (PXMLs) generation using Tekla structures, Transmittal preparation and MEP Coordinated structural plans.

## **Trainings**

---

- 4 months Industrial training at Melior Structural Solutions Pvt Ltd, Mohali. **(June'17 - September'17)**
- 6 weeks Topographical Surveying camp in Village Gochar, Distt. Mohali. **(June'16 - July'17)**
- 4 weeks Training in Construction and management at Sukh villas - The Oberoi's Group **(December'15)**

## **Education**

---

- Pursuing M.tech Structures from SGT University (2020-2022).
- B.tech in Civil Engineering from I.K. Gujral Punjab Technical University in year 2018 with an aggregate of 78.9%.
- 10+2 (Higher Senior Secondary Education) from CBSE board in year 2014 with an aggregate of 76.4%.
- 10<sup>th</sup> (Senior secondary Education) from CBSE board in year 2012 with an aggregate of 74.1%



Head CE <hodce@sgtuniversity.org>

## Invitation for hands on workshop

2 messages

Wed, Mar 29, 2023 at 3:32 PM

**Kiran Devi** <kiran\_feat@sgtuniversity.org>  
To: aggarwalsatyam642@gmail.com  
Cc: Head CE <hodce@sgtuniversity.org>

Dear Er. Satyam Aggarwal,  
We are willing to invite you for a **hands-on workshop on Analysis of structure and detailing through Building Information Modelling software** on 28th April and 29th April 2023 from 10am to 12pm. We hope students of civil engineers will learn a lot from this session and relate them to their upcoming job prospects.

Kindly acknowledge your presence in revert to this mail. Hope to have a wonderful session ahead.

Thanks and Regards.  
Dr. Kiran Devi  
Assistant Professor  
Civil Engineering Department  
SGT University  
M. 7015206997

Thu, Mar 30, 2023 at 12:06 PM

**satyam aggarwal** <aggarwalsatyam642@gmail.com>  
To: Kiran Devi <kiran\_feat@sgtuniversity.org>  
Cc: Head CE <hodce@sgtuniversity.org>

Hello Maam,

I will be there for the event on the mentioned date.

Regards  
Satyam Aggarwal  
+91-7508240836

On 29-Mar-2023, at 3:32 PM, Kiran Devi <kiran\_feat@sgtuniversity.org> wrote:

[Quoted text hidden]

engineers include environmental concerns in their designs and analyze them throughout the asset's life. The workshop's objective is to make aware of the interface of Revit software, the modeling of the different structural components, and its detailing through Revit software.

**About the Speaker/Guest:**

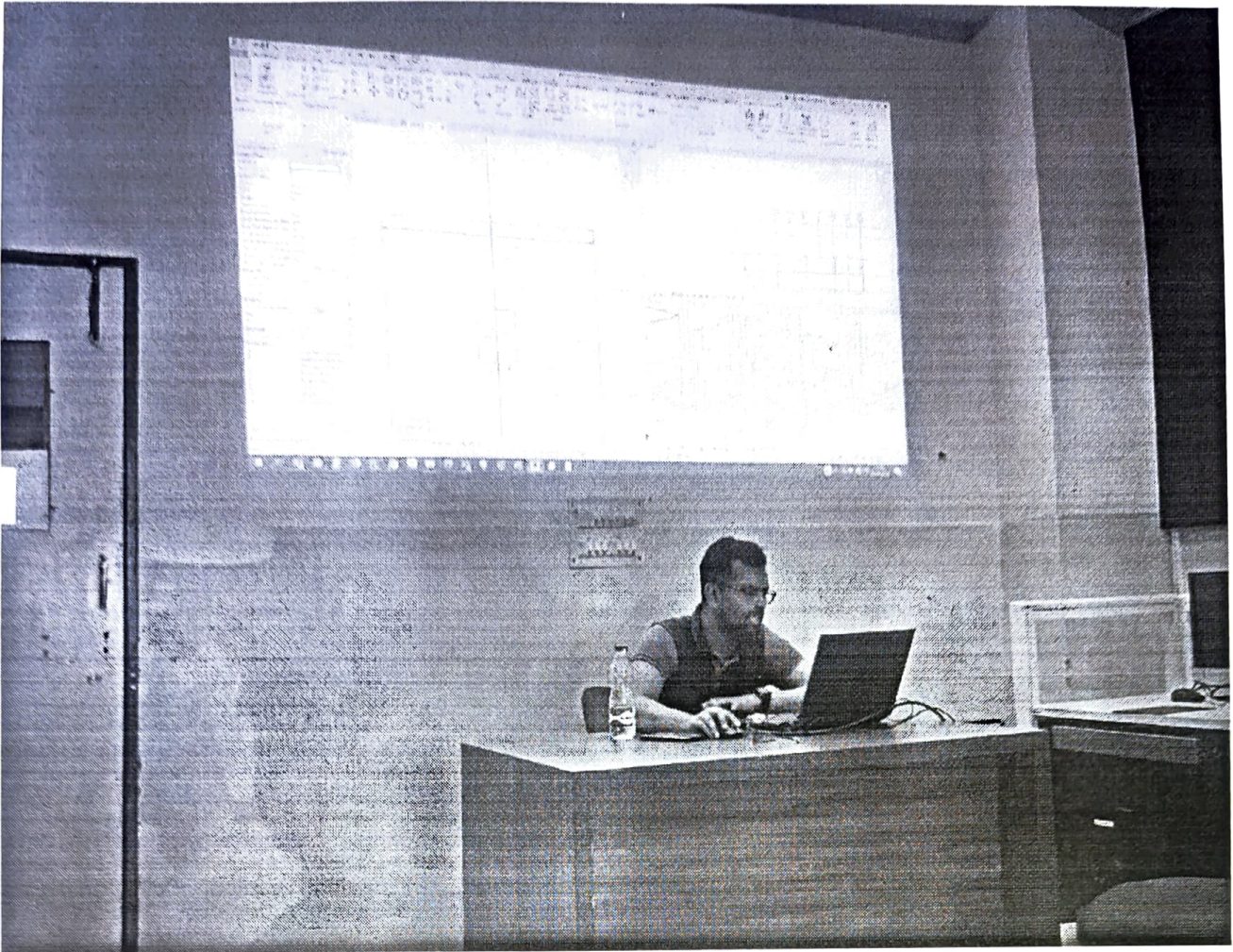
**Mr. Satyam Aggarwal, BIM Engineer, SWECO India Pvt. Ltd.** He has professional experience in the field of analysis of structure using BIM Software.

**Audience:**

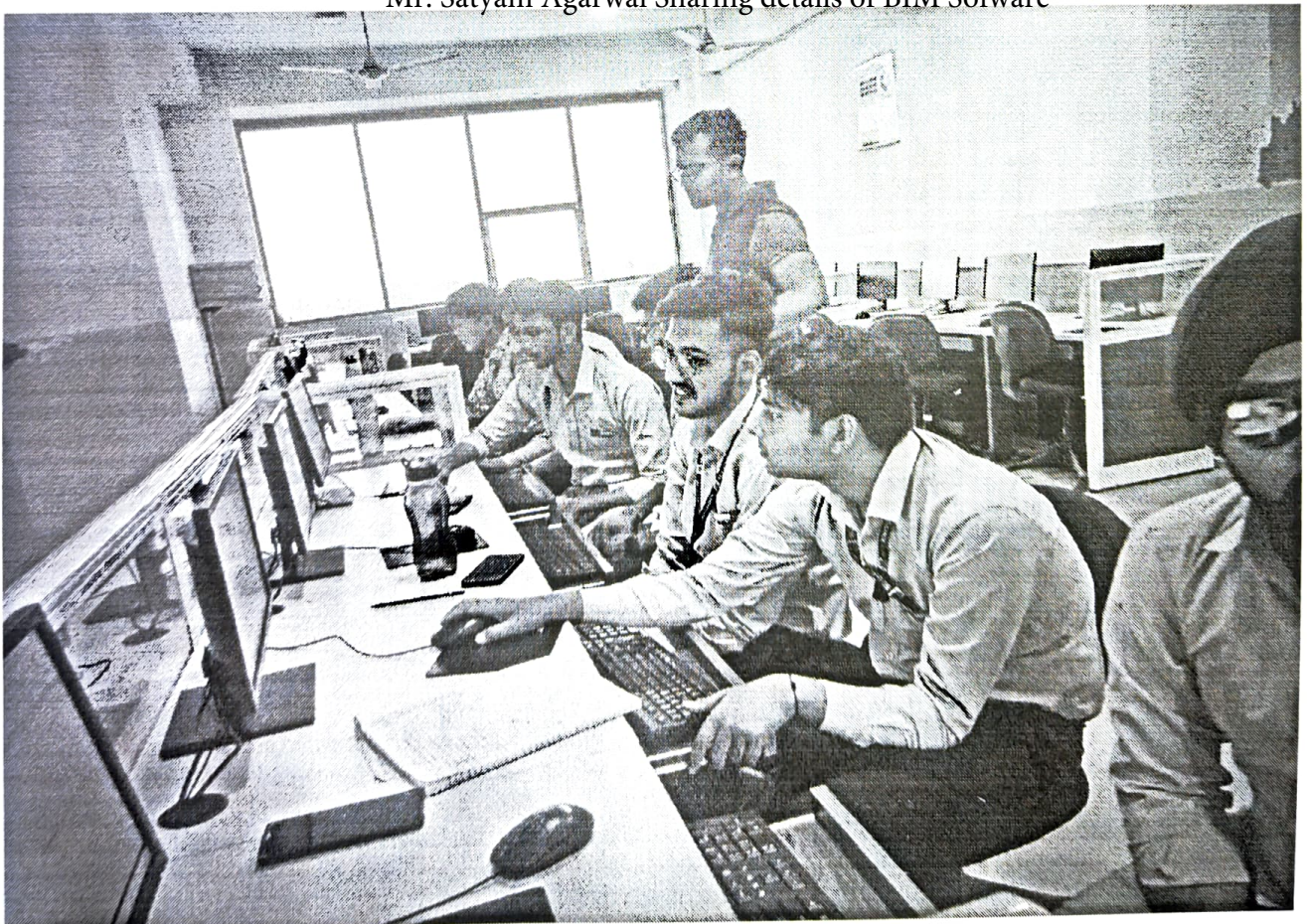
UG students (08)

**Brief Report:**

The Department of Civil Engineering, FEAT, SGTU organized a **Two-Days Hands-on-Workshop (Day-II)** on “**Analysis of Structure and Detailing through Building Information Modelling Software**”, under the aegis of **Torque Club**, on **28<sup>th</sup> and 29<sup>th</sup> April 2023**. On the second day of the workshop, the speaker takes the doubts of students regarding the first-day workshop. After doubts clarification, the speaker explained and demonstrated the modeling of the structural components, i.e., beam, column, slab, footing, etc., in the Revit software. The placement of rebar and rebar detailing in different structural components in the Revit software was demonstrated. The different levels, sections, plan, family, templates, and various short keys used in the Revit software was also explained during the workshop. The students actively participated in this workshop and prepared their models and placement of reinforcement for footing. Beam and column.



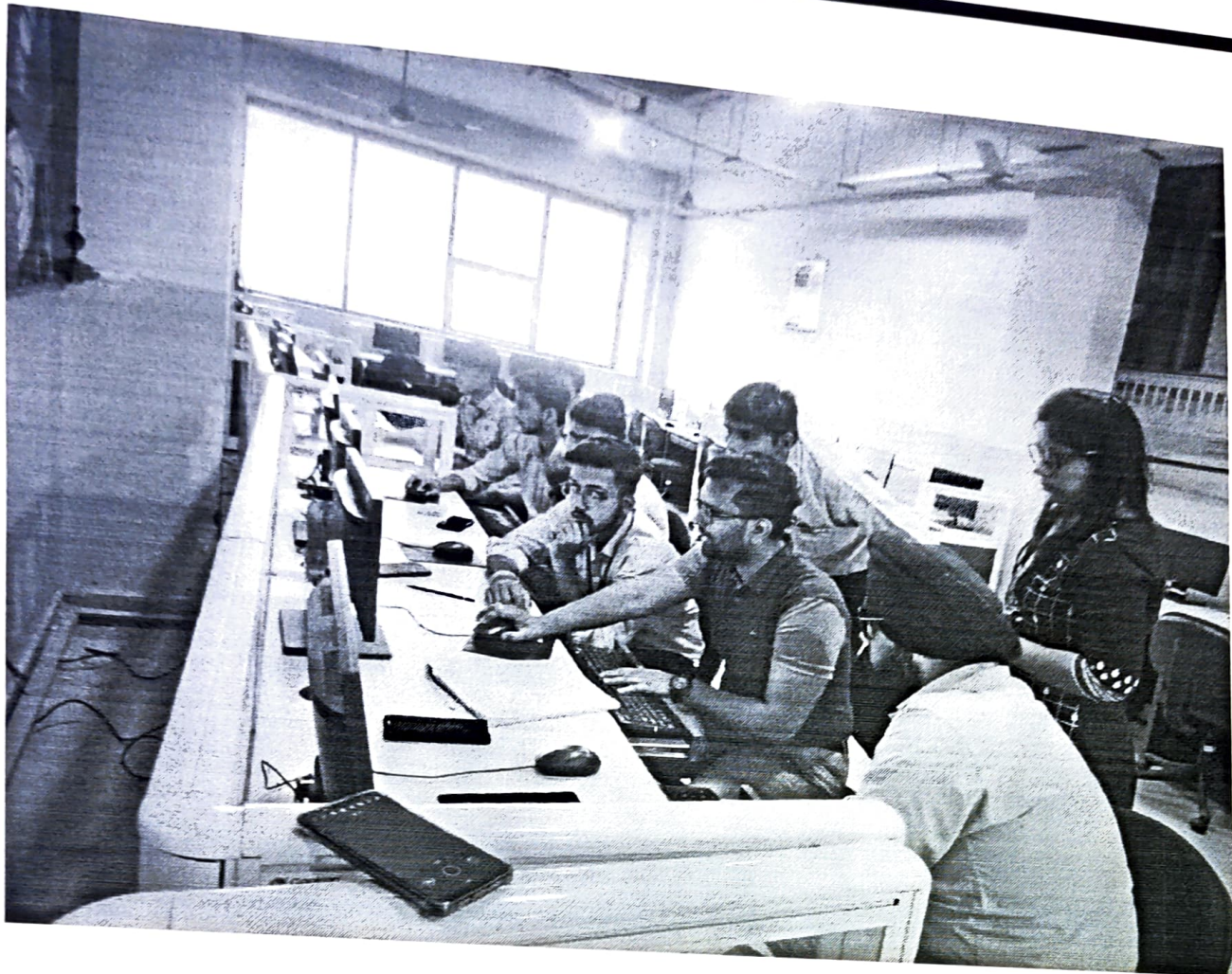
Mr. Satyam Agarwal Sharing details of BIM Software





Students implementing project on BIM Software





Faculty of Engineering & Technology  
SGT University  
Gurgaon (Haryana)

**List of Attendees:**

1. 201301003 SUMUKH
2. 201301003 HARSHJYOT SINGH
3. 221301001 NINJA
4. 221301002 RAHUL SHARMA
5. 221301003 KUNAL DALAL
6. 221301004 RISHAB KUMAR
7. 221301005 KHAGESH
8. 221301006 SUMIT

Shree Guru Gobind Singh Tricentenary University Haryana				
Faculty of Engineering and Technology				
Department: Civil Engineering			Date: 29/04/2023	
Event Title: Analysis of Structure and Detailing Through BIM Software			Course/Semester	
S.No	Enrollment no.	Name	Course/Semester	Signature
1	201301001	Sumukh	B.Tech.	SUV
2	201301003	Harshyot Singh	"	Harshyot
3	221301001	Vinja	"	Abhinav
4	221301002	Rahul Sharma	"	Rahul
5	221301003	Kunal Dalal	"	Kunal
6	221301004	Rishabh Kumar	"	Rishabh
7	221301005	Khagesh	"	Khagesh
8	221301006	Sumit	"	Sumit
9				
10				
11				
12				
13				
14				
15				
Coordinator(s) (Name, Department and signature)			Dr. Kiran Devi	

Department of Civil Engineering  
Faculty of Engineering & Technology  
SGT University  
Gurgaon (Haryana)

Department of Civil Engg.

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



# SGT UNIVERSITY

SHREE GURU GOBIND SINGH TRICENTENARY UNIVERSITY  
(UGC Approved University) GURGAON, Delhi-NCR

**Faculty of Engineering & Technology**

**Department of Civil Engineering**

**“Analysis of Structure and Detailing Through BIM Software”**

**Type of Event: Hands-on-Workshop**

**under the aegis of the Torque Club**

**Date: 29/04/2023**

**Time: 9:30 AM to 1:00 PM**

**Venue: Lab No. 419, E-Block**

**Organizer:**

**Dr. Neeraj Saini**, HOD and Assistant Professor, Department of Civil Engineering, FEAT

**Dr. Kiran Devi**, Assistant Professor, Department of Civil Engineering, FEAT

**Objectives:**

BIM (Building Information Modelling), a widely used idea in civil engineering, enables us to construct and maintain digital representations of the different structural components and functional qualities of any structure. Thousands of bits of structural data will be preserved in this model. BIM enables us to operate in a digital world and requires that teams know, and have skills. It is the foundation of digital transformation in the architecture, engineering, and construction industry. BIM in green building" can assist organizations in design, engineering, and construction in enhancing sustainability in the built environment. It can help architects and