

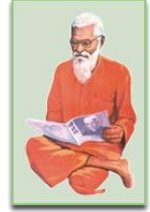


**Swami Keshvanand Institute of Technology, Management & Gramothan, Ramnagar, Jagatpura, Jaipur-302017, INDIA**

Approved by AICTE, Ministry of HRD, Government of India  
Recognized by UGC under Section 2(f) of the UGC Act, 1956

Tel. : +91-0141- 5160400 Fax: +91-0141-2759555


E-mail: [info@skit.ac.in](mailto:info@skit.ac.in) Web: [www.skit.ac.in](http://www.skit.ac.in)



## **Analysis & Design of RCC Building on ETABS**

**Date of the event: 16 Oct to 20 Oct 2023**




### **Workshop Notice**

 SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY,  
MANAGEMENT & GRAMOTHAN JAIPUR-302017  
DEPARTMENT OF CIVIL ENGINEERING

Ref.: SKIT/CE/23-24/ 1340 02/10/2023

**NOTICE**

The student workshop for final year Civil Engineering students on "Structural Analysis and Design using ETABS " is scheduled from October 16, 2023 to October 21, 2023.

 Mr Ankur Mishra Event Co-ordinator	 Dr. Sunita Tolani Event Co-ordinator	 Prof. D.K. Sharma HoD-CE
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Copy to:

- i. Director (Academics)
- ii. Principal
- iii. Dean
- iv. All Faculty Members of CE
- v. All Notice Board
- vi. NBA/ NAAC File



Swami Keshvanand Institute of Technology,  
Management & Gramothan, Jaipur



## Department of Civil Engineering

Organizes  
Six Days  
Student Workshop  
On

# ETABS

Structural Analysis and Design  
16 to 21 October 2023

### Highlights

Basics of Software  
Hands-on Training  
Minor Project  
Expert Talk



**Faculty Coordinator**  
**Dr. Sunita Tolani (CE)**  
**Mr. Ankur Mishra (CE)**

For Registration: <https://forms.gle/KJstPhhcHkZEaPrQ6>  
Or Scan QR code

For more information: Mail us at  
[sunita.tolani@skit.ac.in](mailto:sunita.tolani@skit.ac.in) or [ankur.mishra@skit.ac.in](mailto:ankur.mishra@skit.ac.in)



## Schedule of Workshop

Sr. No.	Date	Topic	Delivered by
1	16/10/23	Software installation, advantages of using ETABS, Geometry generation (assign material, assign properties of members)	Mr. Ankur Mishra
2	17/10/23	Assign dead load and live load on different member of frame. (Using IS 875 part 1 and 2) , Earthquake load static (IS 1893:2016)	Dr. Sunita Tolani
3	18/10/23	Earthquake Dynamic Load (Response spectrum analysis and Time history analysis)	Dr. Sunita Tolani
4	19/10/23	Wind load and its effect on building (IS 875-part 3). Design and detailing of reinforcement (IS 13920)	Ankur Mishra
5	20/10/23	Site Visit of IPD tower SMS Hospital (25 floor steel Structure)	Dr. Sunita Tolani, Ankur Mishra

## Detail list of Participants

Sr. No.	Name of Student	RTU Roll no.	Semester	Branch	Affiliation
1	Aakanksha Sharma	20ESKCE001	7th	CE	SKIT
2	Abhishek Bansal	20ESKCE003	7th	CE	SKIT
3	Aditya Bagdi	20ESKCE006	7th	CE	SKIT
4	Arpit gothwal	20ESKCE020	7th	CE	SKIT
5	Avdesh Meena	20ESKCE025	7th	CE	SKIT
6	Devesh Kumar Dhaked	20ESKCE031	7th	CE	SKIT
7	Dilkhush meena	20ESKCE034	7th	CE	SKIT
8	Gaurav Meena	20ESKCE036	7th	CE	SKIT
9	Gourav Pooniya	20ESKCE038	7th	CE	SKIT
10	Hemant Kumar Mina	20ESKCE041	7th	CE	SKIT
11	Himanshu Meena	20ESKCE042	7th	CE	SKIT
12	Komal Kanwar Korawat	20ESKCE055	7th	CE	SKIT
13	Kritika Meena	20ESKCE056	7th	CE	SKIT

14	Kunal Sharma	20ESKCE060	7th	CE	SKIT
15	Kunal Singh solanki	20ESKCE061	7th	CE	SKIT
16	Maahi kaur Disanj	20ESKCE065	7th	CE	SKIT
17	Mitali Saini	20ESKCE073	7th	CE	SKIT
18	Neha Meena	20ESKCE080	7th	CE	SKIT
19	Pretesh Kakhani	20ESKCE091	7th	CE	SKIT
20	Rahul Choudhary	20ESKCE093	7th	CE	SKIT
21	Rahul Sherawat	20ESKCE098	7th	CE	SKIT
22	Rohit Lamba	20ESKCE103	7th	CE	SKIT
23	Tushar Kumar Verma	20ESKCE120	7th	CE	SKIT
24	Ankit rajwania	20ESKCE300	7th	CE	SKIT
25	Moheet Alam	21ESKCE200	7th	CE	SKIT
26	Navdeep Jarwal	21ESKCE201	7th	CE	SKIT
27	Vishnu kant bairwa	21ESKCE203	7th	CE	SKIT

# Attendance Record

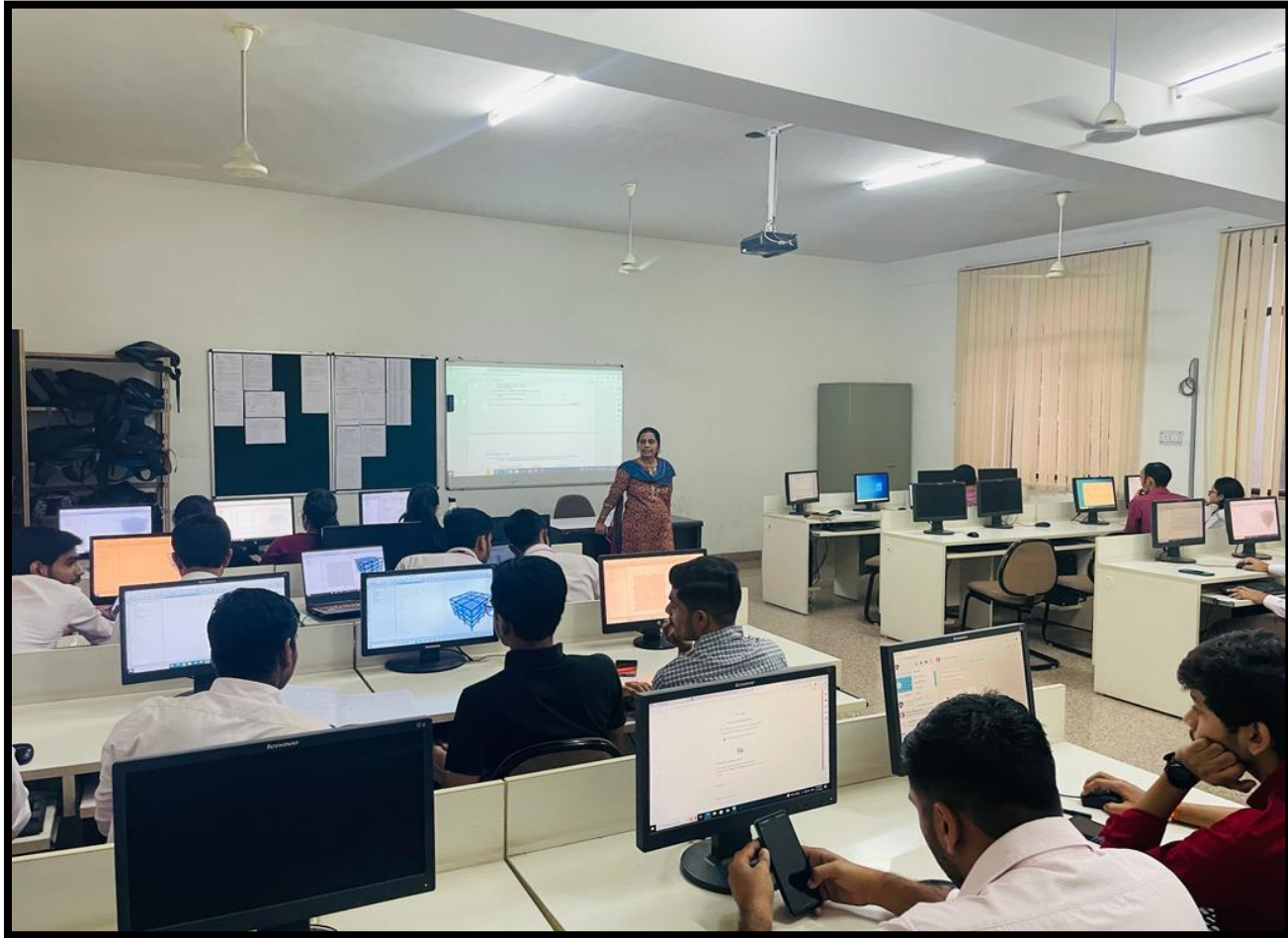
Attendance Sheet (Student Workshop on "Structural Analysis and Design using ETABS")

S. No.	Detail of Participants		Attendance				
	Name of Student	RTU Roll no.	16/10/23	17/10/23	18/10/23	19/10/23	20/10/23
1	Aakanksha Sharma	20ESKCE001	AS	AS	AS	AS	AS
2	Abhishek Bansal	20ESKCE003	Abansal	Abansal	Abansal	Abansal	Abansal
3	Aditya Bagdi	20ESKCE006	AdB	AdB	AdB	AdB	AdB
4	Arpit gothwal	20ESKCE020	Arpit	Arpit	Arpit	Arpit	Arpit
5	Avdesh Meena	20ESKCE025	Ameeena	Ameeena	Ameeena	Ameeena	Ameeena
6	Devesh Kumar Dhaked	20ESKCE031	DK	DK	DK	DK	DK
7	Dilkhush meena	20ESKCE034	DM	DM	DM	DM	DM
8	Gaurav Meena	20ESKCE036	GM	GM	GM	GM	GM
9	Gourav Pooniya	20ESKCE038	Gourav	Gourav	Gourav	Gourav	Gourav
10	Hemant Kumar Mina	20ESKCE041	Hkm	Hkm	Hkm	Hkm	Hkm
11	Himanshu Meena	20ESKCE042	Hm	Hm	Hm	Hm	Hm
12	Komal Kanwar Korawat	20ESKCE055	KK	KK	KK	KK	KK
13	Kritika Meena	20ESKCE056	Kritika	Kritika	Kritika	Kritika	Kritika
14	Kunal Sharma	20ESKCE060	Kun	Kun	Kun	Kun	Kun
15	Kunal Singh solanki	20ESKCE061	Kun	Kun	Kun	Kun	Kun
16	Maahi kaur Disanj	20ESKCE065	M	M	M	M	M
17	Mitali Saini	20ESKCE073	Mitali	Mitali	Mitali	Mitali	Mitali
18	Neha Meena	20ESKCE080	Nm	Nm	Nm	Nm	Nm
19	Pretesh Kakhani	20ESKCE091	PK	PK	PK	PK	PK
20	Rahul Choudhary	20ESKCE093	R	R	R	R	R
21	Rahul Sherawat	20ESKCE098	R	R	R	R	R
22	Rohit Lamba	20ESKCE103	R	R	R	R	R

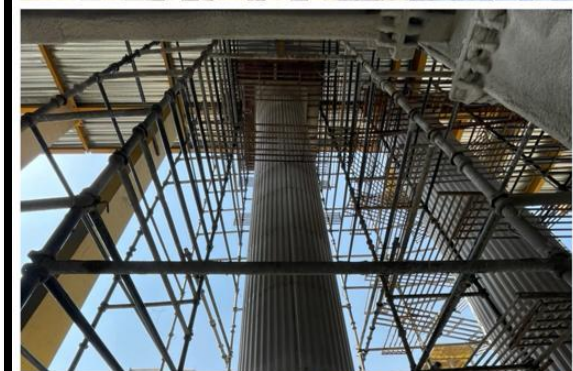
23	Tushar Kumar Verma	20ESKCE120	Tushar	Tushar	Tushar	Tushar	Tushar
24	Ankit rajwania	20ESKCE300	Ank	Ank	Ank	Ank	Ank
25	Moheet Alam	21ESKCE200	Moh	Moh	Moh	Moh	Moh
26	Navdeep Jarwal	21ESKCE201	NJ	NJ	NJ	NJ	NJ
27	Vishnu kant bairwa	21ESKCE203	Vishu	Vishu	Vishu	Vishu	Vishu



## Photographs









# CERTIFICATES



**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY**  
**MANAGEMENT & GRAMOTHAN, JAIPUR**  
5 DAYS  
STUDENT WORKSHOP ON  
**ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS**  
ORGANISED BY  
**DEPARTMENT OF CIVIL ENGINEERING**


## CERTIFICATE

This is to certify that Ankanksha Sharma has successfully participated in 5-Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.

*Sunita*  
Dr. Sunita Tolani  
Coordinator

*Ankur*  
Mr. Ankur Mishra  
Coordinator

*D.K. Sharma*  
Dr. D. K. Sharma  
HOD CE



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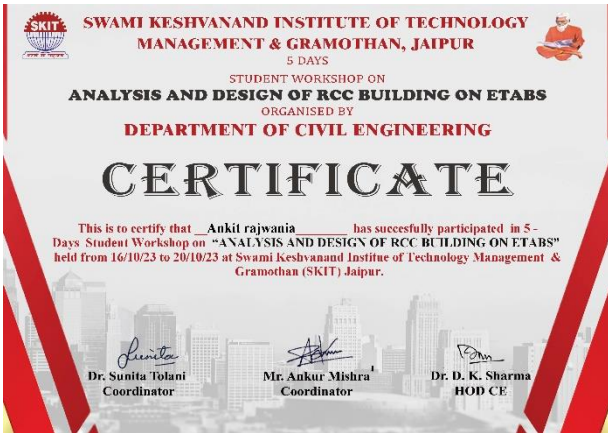
## CERTIFICATE

This is to certify that Abhishek Bansal has successfully participated in 5-Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.

*Sunita*  
Dr. Sunita Tolani  
Coordinator

*Ankur*  
Mr. Ankur Mishra  
Coordinator

*D.K. Sharma*  
Dr. D. K. Sharma  
HOD CE



**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY**  
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**DEPARTMENT OF CIVIL ENGINEERING**

## CERTIFICATE

This is to certify that Ankit Rajwani has successfully participated in 5-Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.

*Sunita*  
Dr. Sunita Tolani  
Coordinator

*Ankur*  
Mr. Ankur Mishra  
Coordinator

*D.K. Sharma*  
Dr. D. K. Sharma  
HOD CE



**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY**  
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ORGANISED BY  
**DEPARTMENT OF CIVIL ENGINEERING**

## CERTIFICATE

This is to certify that Aditya Bagdi has successfully participated in 5-Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.

*Sunita*  
Dr. Sunita Tolani  
Coordinator

*Ankur*  
Mr. Ankur Mishra  
Coordinator

*D.K. Sharma*  
Dr. D. K. Sharma  
HOD CE



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ORGANISED BY  
**DEPARTMENT OF CIVIL ENGINEERING**

## CERTIFICATE

This is to certify that Dilkhush Meena has successfully participated in 5-Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.

*Sunita*  
Dr. Sunita Tolani  
Coordinator

*Ankur*  
Mr. Ankur Mishra  
Coordinator

*D.K. Sharma*  
Dr. D. K. Sharma  
HOD CE



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**ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS**  
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## CERTIFICATE

This is to certify that Devesh Kumar Dhaked has successfully participated in 5-Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.

*Sunita*  
Dr. Sunita Tolani  
Coordinator

*Ankur*  
Mr. Ankur Mishra  
Coordinator

*D.K. Sharma*  
Dr. D. K. Sharma  
HOD CE





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5 DAYS

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**ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS**  
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**DEPARTMENT OF CIVIL ENGINEERING**

# CERTIFICATE

This is to certify that Avdesh Meena has successfully participated in 5 - Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.





Dr. Sunita Tolani  
Coordinator

Mr. Ankur Mishra  
Coordinator

Dr. D. K. Sharma  
HOD CE



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**ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS**  
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# CERTIFICATE

This is to certify that Arpit Gothwal has successfully participated in 5 - Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.





Dr. Sunita Tolani  
Coordinator

Mr. Ankur Mishra  
Coordinator

Dr. D. K. Sharma  
HOD CE



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**DEPARTMENT OF CIVIL ENGINEERING**

# CERTIFICATE

This is to certify that Gaurav Meena has successfully participated in 5 - Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.





Dr. Sunita Tolani  
Coordinator

Mr. Ankur Mishra  
Coordinator

Dr. D. K. Sharma  
HOD CE



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**DEPARTMENT OF CIVIL ENGINEERING**

# CERTIFICATE

This is to certify that Gourav Pooniya has successfully participated in 5 - Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.





Dr. Sunita Tolani  
Coordinator

Mr. Ankur Mishra  
Coordinator

Dr. D. K. Sharma  
HOD CE



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# CERTIFICATE

This is to certify that Hemant Kumar Mina has successfully participated in 5 - Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.






Dr. Sunita Tolani  
Coordinator

Mr. Ankur Mishra  
Coordinator

Dr. D. K. Sharma  
HOD CE





**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY  
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STUDENT WORKSHOP ON  
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**DEPARTMENT OF CIVIL ENGINEERING**

# CERTIFICATE

This is to certify that Himanshu Meena has successfully participated in 5 - Days Student Workshop on "ANALYSIS AND DESIGN OF RCC BUILDING ON ETABS" held from 16/10/23 to 20/10/23 at Swami Keshvanand Institute of Technology Management & Gramothan (SKIT) Jaipur.





Dr. Sunita Tolani  
Coordinator

Mr. Ankur Mishra  
Coordinator

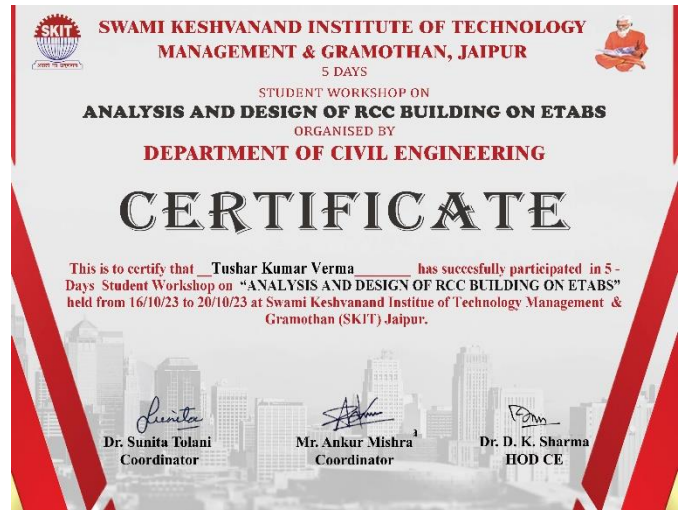
Dr. D. K. Sharma  
HOD CE











## Feedback of students

Sr. No.	Email Address	The workshop content was useful. It provided me valuable and practical information.	Hands-on activities were interesting/engaging.	Instructors were knowledgeable about the topic.	Instructors' style of teaching was good.	What did you like BEST about the workshop?	What did you like LEAST about the workshop?	Which software would you like to learn in future workshops?
1	b200362@skit.ac.in	5	5	5	5	To know about response spectrum method and time history method to analyse the structure	Noo	Safe and csi detailing
2	b200959@skit.ac.in	5	5	5	5	Learning about etabs	Nothing	Etabs and primavera p6
3	b200957@skit.ac.in	5	5	5	5	Hands on Practice and brief Introduction about software	Refreshments were repeating. There should be variety in refreshments	Staad Pro
4	b200992@skit.ac.in	4	4	5	5	Learning and the faculties	Need to improve the working of cad computers	Related to etab
5	l210001@skit.ac.in	5	5	5	5	This workshop really amazing lot's of things learnt during workshop	I like how to make model and apply all cases of loads	Staad
6	b200965@skit.ac.in	5	5	5	5	Teaching method	Time management	Staad.prp
7	l210004@skit.ac.in	5	5	5	5	Expert talks	During workshop I learn about how to utilise softwar	Revit

							e knowle dge in civil	
8	b201120@ skit.ac.in	5	5	5	5	Good environment	Nothing	Any
9	b200991@ skit.ac.in	5	4	4	5	This session is very informative for me.	All things are good in that worksh op.	Staad pro

## Media Coverage

# एसकेआइटी में स्ट्रक्चर डिजाइन कार्यशाला का समापन



**जयपुर।** स्वामी केशवानंद इंस्टिट्यूट ऑफ टेक्नोलॉजी, मैनेजमेंट एंड ग्रामोथान (एसकेआइटी), जगतपुरा में सिविल अभियांत्रिकी विभाग द्वारा 'स्ट्रक्चरल एनालिसिस एंड डिजाइन' विषय पर विद्यार्थियों के लिए पांच दिवसीय कार्यशाला आयोजित की गई। कार्यशाला के अंतर्गत विद्यार्थियों को भूकम्परोधी बिल्डिंग डिजाइन के गुर सिखाए गए तथा कंस्ट्रक्शन साइट का दौरा कराया गया। कार्यशाला का समापन

समारोह 21 अक्टूबर को आयोजित किया गया। समापन समारोह में भूकम्परोधी बिल्डिंग डिजाइन एक्सपर्ट श्री शैलेंद्र पाल सिंह उपस्थित रहे। सिविल अभियांत्रिकी विभागाध्यक्ष प्रो डी के शर्मा ने सभी का अभिवादन किया। प्रो बी एल शर्मा ने विद्यार्थियों का उत्साहवर्धन किया। कार्यशाला के समन्वयक असिस्टेंट प्रोफेसर अंकुर मिश्रा एवं डॉ सुनीता तोलानी ने सभी को धन्यवाद ज्ञापित किया।



## **Day Wise report**

### **Day 1: 16/10/23**

Mr. Ankur Mishra initiated the workshop with a focus on establishing the foundational elements. The day commenced with the installation of relevant software, providing students with the necessary tools for structural analysis. Following this, participants explored the advantages of utilizing ETABS, delving into the software's capabilities. The practical aspect of the day involved hands-on experience with geometry generation, emphasizing the importance of assigning materials and properties to structural elements.

### **Day 2: 17/10/23**

Dr. Sunita Tolani took charge, guiding students through the intricacies of load analysis. The day began with the meticulous process of assigning dead and live loads to various members of a frame, adhering to the standards outlined in IS 875 part 1 and 2. The session then transitioned into a comprehensive exploration of earthquake loads, with a specific focus on static analysis following the guidelines of IS 1893:2016.

### **Day 3: 18/10/23**

Dr. Sunita Tolani continued to deepen the understanding of earthquake dynamics. The day's agenda included an in-depth exploration of Response Spectrum Analysis and Time History Analysis, offering students a profound insight into the dynamic forces that structures may encounter during seismic events.

### **Day 4: 19/10/23**

Ankur Mishra returned to the forefront, shifting the workshop's focus towards environmental factors impacting structural design. Wind loads and their effects on buildings, as per the standards outlined in IS 875-part 3, were meticulously examined. Additionally, the day covered the critical aspect of design and detailing of reinforcement, aligning with the guidelines set by IS 13920.

### **Day 5: 20/10/23**

Activity (Site Visit): The workshop reached its pinnacle with a practical and enlightening site visit to the IPD tower at SMS Hospital. Dr. Sunita Tolani and Ankur Mishra led the expedition, providing students with a unique opportunity to witness firsthand the application of the theoretical concepts discussed throughout the week. The site visit aimed to bridge the gap between classroom learning and real-world scenarios, enhancing students' comprehension of structural engineering principles.

## **Objectives of Workshop**

The "Analysis and Design of RCC Buildings on ETABS" workshop is designed with the following objectives:

1. **Introduction to ETABS Software:** Familiarize participants with ETABS, highlighting its features and applications in RCC building analysis and design.
2. **Software Installation and Configuration:** Provide hands-on experience in installing and configuring ETABS for effective utilization.
3. **Geometry Generation and Material Assignment:** Instruct participants on creating accurate building geometry and assigning materials within the ETABS platform.
4. **Load Analysis:** Train participants in load analysis principles, covering dead loads, live loads, and seismic loads following standards and codes.
5. **Dynamic Analysis Techniques:** Introduce dynamic analysis methods, enhancing understanding of structural behavior under varying conditions.
6. **Wind Load Considerations:** Explore the impact of wind loads on RCC buildings and guide participants in incorporating wind load factors into designs.
7. **Design and Detailing of Reinforcement:** Instruct participants on designing and detailing reinforcement for RCC structures following IS 13920 guidelines.
8. **Site Visit for Practical Exposure:** Provide a practical exposure through a site visit, allowing participants to witness real-world applications of theoretical concepts.
9. **Interdisciplinary Learning:** Foster collaboration by involving experts like Dr. Sunita Tolani and Mr. Ankur Mishra for a holistic educational experience.
10. **Problem-Solving Sessions:** Conduct interactive problem-solving sessions to address participant queries, encouraging active engagement.
11. **Hands-on Design Projects:** Engage participants in hands-on design projects, allowing them to apply acquired skills to solve practical design problems using ETABS.

12. Certificate of Completion: Recognize participants' successful completion with a certificate, acknowledging their skills in RCC building analysis and design using ETABS.

## **Outcome of workshop**

The outcomes of the "Analysis and Design of RCC Buildings on ETABS" workshop include participants acquiring:

1. **Proficiency in ETABS:** Participants gain a solid understanding of ETABS software, from installation to practical application in RCC building analysis and design.
2. **Practical Skills:** Hands-on experience in geometry generation, material assignment, load analysis, and dynamic analysis, providing practical skills applicable in real-world scenarios.
3. **Wind Load Expertise:** Knowledge and expertise in considering and incorporating wind loads according to relevant standards, ensuring buildings are designed to withstand environmental forces.
4. **Reinforcement Design Knowledge:** Understanding of the principles behind designing and detailing reinforcement for RCC structures in adherence to IS 13920 guidelines.
5. **Interdisciplinary Exposure:** Exposure to interdisciplinary learning through interactions with experts like Dr. Sunita Tolani and Mr. Ankur Mishra, enriching participants' perspectives on structural engineering.
6. **Real-World Insight:** Practical exposure through a site visit, allowing participants to witness the application of theoretical concepts in an actual construction setting.
7. **Problem-Solving Competence:** Improved problem-solving skills through interactive sessions, enabling participants to address challenges encountered in RCC building analysis and design.
8. **Project Application:** Application of acquired skills in hands-on design projects, demonstrating participants' ability to solve practical design problems using ETABS.