

Report on the "Virtual Lab" Workshop with collaboration of IIT Roorkee Held at the Faculty of Engineering and Technology, GurukulKangari (Deemed to be University), Haridwar

Date: October 5, 2024

Venue: Electrical Engineering Department, Faculty of Engineering and Technology, GurukulKangari, Haridwar

Organized by: Electrical Engineering Department

Coordinated by: Mr. Gajendra Singh Rawat & Mr. Gaurav Kumar

Experts from IIT Roorkee: Mr. Pankaj Saini and Mr. Akash Saini

Introduction

On October 5, 2024, the Electrical Engineering Department of the Faculty of Engineering and Technology, GurukulKangari (Deemed to be University), Haridwar, hosted a highly insightful workshop on "Virtual Labs." The session was conducted by expert representatives from IIT Roorkee, Mr. Pankaj Saini and Mr. Akash Saini. This workshop was organized with the aim of enhancing the practical knowledge of students through the innovative use of virtual lab technology, which is being spearheaded by the Ministry of Education (MoE), Government of India.

Objective of the Workshop

The main objective of the workshop was to familiarize students with the concept of virtual labs, their significance in engineering education, and how they are helping bridge the gap between theoretical knowledge and practical application. The workshop aimed to introduce students to the Ministry of Education's Virtual Lab initiative and how this tool can revolutionize learning by providing remote access to lab environments and simulations.

Key points covered in the workshop included:

An introduction to virtual labs and their growing role in modern education.

The involvement of IITs and centrally funded institutes in the development and promotion of virtual labs.

Benefits of virtual labs in enhancing students' skills and preparing them for real-world applications.

Potential opportunities for internships at IIT Roorkee for students who actively participate in these virtual lab projects.

Workshop Highlights

Inauguration and Welcome Address

The workshop commenced with a warm welcome by the Head of the Electrical Engineering Department, Mr. Gajendra Singh Rawat, who emphasized the importance of integrating practical knowledge with theoretical learning. He encouraged students

to actively participate and make the most of the session, as it would provide a unique opportunity to enhance their understanding of engineering concepts through virtual labs.

Expert Guidance by IIT Roorkee Representatives

The highlight of the workshop was the presence of Mr. Pankaj Saini and Mr. Akash Saini from IIT Roorkee. They delivered comprehensive presentations on the working of virtual labs and how students can use them to conduct experiments and simulations remotely. They stressed how the Ministry of Education has been pushing for this technological advancement to ensure that students from all over India, including those from institutions with limited physical lab resources, have access to high-quality practical learning tools. They also provided a detailed walkthrough of how students can access and utilize the virtual lab platform.

During their session, the experts shared some exciting news: students who demonstrate strong participation in virtual lab activities have excellent opportunities to apply for internships at IIT Roorkee. This announcement garnered considerable attention and enthusiasm from the student participants.

Encouragement by the Dean

The Dean of the Faculty of Engineering and Technology, Professor Vipul Sharma, attended the workshop and commended the department for organizing such a progressive and forward-looking event. He encouraged students to leverage the potential of virtual labs to sharpen their technical skills and ensure they stay competitive in the ever-evolving field of engineering.

Participation and Interaction

The workshop witnessed participation from students across various branches, including Electrical Engineering, Computer Science, Mechanical Engineering, and Electronics and Communication. The interactive session provided students with the opportunity to ask questions, clarify doubts, and engage in a healthy discussion about the practical application of virtual labs in their curriculum.

Workshop Management and Execution

The workshop was smoothly coordinated by Mr. Gajendra Singh Rawat & Mr. Gaurav Kumar, with strong support from the entire Electrical Engineering Department. Faculty members including Dr. Brijesh Kumar, Dr. Ashish Dhamandha, Mr. Yogesh Kumar, Mr. Lokesh Bhardwaj, and Mr. Aviral Awasthi played key roles in ensuring the event ran without any disruptions. Their involvement extended from organizing the logistics to managing the technical setup required for the virtual lab demonstration.

Additionally, several faculty members from other departments, including Dr. Mayank Pokhriyal, Mr. Sanjay Singh, Mr. Ashwani Kumar, and Mr. Prateek Aggarwal, were present to observe and contribute to the session. Their presence

emphasized the cross-departmental interest in adopting virtual labs as an educational tool.

Impact and Feedback

The workshop was received positively by both students and faculty members. Students appreciated the in-depth explanation and hands-on demonstration provided by the experts from IIT Roorkee. The opportunity to gain practical knowledge through virtual simulations, especially for those without immediate access to physical labs, was seen as a significant step forward in their academic journey.


Faculty members also expressed their satisfaction with the event, noting that virtual labs can complement the existing curriculum and help students develop a deeper understanding of theoretical concepts. They further acknowledged the potential of virtual labs to foster innovation and encourage independent learning among students.

Conclusion



With the enthusiastic participation of students from multiple disciplines and the active support of faculty members, this workshop marks the beginning of a new chapter in the integration of technology-driven education at the university.

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Virtual Labs
An MoE Govt of India Initiative

ATTENDANCE RECORD - 2024

NCID | Nodal Centre: F.E.T. Gurgaon Kangri (annex to b) university
 Workshop Date: 22/11/24
 Workshop Type: offline

S. No.	Roll No.	Name	Department
1	226310010	Prem Suresh Nagak	ME - 5 th Sem
2	226310029	Yashu Anishok Kumar	ME - 5 th Sem
3	226310001	Anvi Thakur	ME - 5 th Sem
4	226310014	Sahil Golemani	ME - 5 th Sem
5	226310005	Deepak Raj	ME - 5 th Sem
6	226310007	Harman Singh	ME - 5 th Sem
7	226310002	Aditya Kumar	ME - 5 th SEM
8	226310009	Naveen Chandra Joshi	ME - 5 th Sem
9	226310011	Rachet Barnes	ME - 5 th SEM
10	226310021	Shobha Dhiman	ME - 5 th Sem
11	226310012	Rahul K. Purohit	ME - 5 th Sem
12	226310015	Vijayal Kr. Mishra	ME - 5 th Sem
13	226310014	Vishwas	M.M. - 5 th Sem
14	226310016	Shivam Raj	M.E - 5 th Sem
15	226310006	Vaibhav Jaiswal	M.E - 5 th Sem
16	226310004	Anurag Kumar	ME - 5 th Sem
17	226310008	Kartik	ME - 5 th Sem
18	226310006	Hari Chatterjee	ME - 3 rd Sem
19	226310014	Sunny Kumar	ME - 3 rd Sem
20	226310012	Vaibhav Pandey	ME - 3 rd Sem
21	226310011	Arya Kalwansa	ME - 3 rd Sem
22	226310013	Rishabh Choudhary	M.E - 3 rd Sem

Nodal Coordinator

Signature: *Gyada Singh*

Faculty of Engineering & Technology
Gurukul Kangri (D.U.)

Head of Institute / Principal

Signature & Stamp



ATTENDANCE RECORD - 2024

NCID | Nodal Centre: F.E.T Gurukul Kangri (deemed to be) university
Workshop Date: 5/10/24
Workshop Type: offline

S. No.	Roll No.	Name	Department
1	246310001	Aaryan Sharma	Mechanical
2	246310021	Yashveer Singh	M.E
3	246310012	Mayank Yadav	M.E
4	246310012	KARTIK YADAV	M.E
5	246310014	Nitin Nautiyal	M.E
6	246310008	Manish Choudhary	M.E
7	246310013	Nadipalli Ajay	ME
8	246310004	Aman Soni	ME
9	246310006	Aryan Saini	ME
10	246310005	Aman	ME
11	246310007	Bishal Roy	ME
12	246310002	Abhishek Gupta	ME
13	246310022	Shobhit Verma	ME
14	246310009	Harsheer	ME
15	246310010	Vishal Sharma	ME
16	246310002	Azeem 3rd Year	M.E.

Nodal Coordinator
Signature

Head of Institute / Principal
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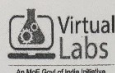
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NCID | Nodal Centre: F.E.T Gurukul Kangri (deemed to be) university
Workshop Date: 5/10/24
Workshop Type: offline

S. No.	Roll No.	Name	Department
1	236330023	Sachin Singh Bishnoi	EE (2nd year)
2	236330020	Shubham Rai	EE (2nd year)
3	236330019	Shreyansh Sharma	EE (2nd year)
4	236330010	Deepak Kumar Bernal	EE (2nd year)
5	236330015	Pravleen Jadaun	EE (2nd year)
6	236330004	Ankit K	EE (2nd year)
7	236330023	Shishupal Kumar	EE (2nd year)
8	236330022	Somesh Patel	EE (2nd year)
9	246330001	Abhinav Bhan	EE (1st year)
10	246330016	Naman Kumar Jaiswal	EE (1st year)
11	246330026	Yashvi Saini	EE (1st year)
12	246330020	Ayush Jadaun	EE (1st year)
13	246330021	Pavan Rastula	EE (1st year)
14	246330009	Deep Singh	EE (1st year)
15	246330019	Prashant Kumar Rai	EE (1st year)
16	246330009	Jashwanth chandra	EE (1st year)
17	246330008	R. Dhruv	EE (1st year)
18	246330009	Anish Kumar	EE (1st year)
19	246330007	Yogesh Gupta	EE (1st year)
20	246330043	Rubesh Kumar	EE (1st year)
21	246330014	Sahib Verma	EE (1st year)

Nodal Coordinator
Signature

Dean
Faculty of Engineering & Technology
Gurukul Kangri (D.U.)
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S. No.	Roll No.	Name	Department
1	236330003	Abhishek Kumar	EE (2nd Year)
2	236330007	Bikram Singh	Electrical (IIIrd sem)
3	236330026	Rishabh Chaurasiya	EE (2nd Year) IIIrd sem
4	236330039	Surya Pratap Singh	ECE (2nd Year) IIIrd sem
5	236330050	Rahul Sharma	ECE (2nd Year) IIIrd sem
6	236330042	Vaibhav Dhiman	ECE (2nd Year) IIIrd sem
7	236330049	Mohit Verma	ECE (2nd Year) IIIrd sem
8	236330044	Vijay Kumar	ECE (2nd Year) IIIrd sem
9	236330040	Abhay Rajgopal	ECE (2nd Year) IIIrd sem
10	246330007	Anupama Kulkarni	ECE (2nd Year) IIIrd sem
11	236330009	Anurag Singh Bhatnagar	ECE (2nd Year) IIIrd sem
12	236330020	Gudshan Kumar	ECE (2nd Year) IIIrd sem
13	236330047	Devesh K. Singh	ECE (2nd Year) IIIrd sem
14	236330053	K. Nishant Moh	ECE (2nd Year) IIIrd sem
15	236330020	Arun Solanki	ECE (2nd Year) IIIrd sem
16	236330021	Abhishek	ECE (2nd Year) IIIrd sem
17	236330023	Harish Choudhary	ECE (2nd Year) IIIrd sem

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