

**Swami Keshvanand Institute of Technology, Management &  
Gramothan, Jaipur  
Department of Mechanical Engineering**

**Title of Event:** One Day State Level Workshop on Virtual Labs (6<sup>th</sup> April, 2019).

**Objectives:**

1. To provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to students at the undergraduate level, post graduate level as well as to research scholars.
2. To enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.
3. To provide a complete Learning Management System around the Virtual Labs where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self evaluation.
4. To share costly equipment and resources, which are otherwise available to limited number of users due to constraints on time and geographical distances.

**Technical Report:**

A State-Level Workshop on Virtual Labs was organized on 6<sup>th</sup> April, 2019 at SKIT for faculty members of different Engineering and Polytechnic Institutions from (ECE, ME, CE, CSE & EE) by Virtual Labs team, IIT Delhi and supported by MHRD Govt. of India. Virtual Labs mentors for this workshop were Mr. Ashish Ranjan, Mr. Ashish Mudgal & Mr. Prateek Sharma. Total of 41 faculty members attended this workshop. Workshop was started by welcome speech by Mr. Ajay Kumar Dhanopia-Nodal Coordinator, Virtual Labs, SKIT Jaipur. After this, mentors from Virtual Labs IIT Delhi, were presented flowers by Dr. S. L. Surana-(Director Academics). Director Academics said few words regarding the importance and utility of Virtual Labs in current academics. First session was held by presentation followed by demonstration of stream wise laboratories experiments. Hand on session was covered in post lunch session on Virtual Labs of exploring different laboratories experiments. Workshop was ended by distributing certificates to the participants.



*"Making Virtual Labs a Meaningful Experience"*

Sponsored by: IIT Delhi

**PATRONS**

- Shri Raja Ram Meel  
 Shri Surja Ram Meel, Chairman, SKIT  
**LOCAL ADVISORY COMMITTEE**  
 Mr. Jaipal Meel, Director  
 Prof. S. L. Surana, Director (Academics)  
 Ms. Rachna Meel, Registrar  
 Prof. R. K. Pachar, Principal  
 Prof. M. L. Bhargava, Advisor  
 Ms. Abha Meel, Advisor  
 Prof. N.K. Banthiya, Head-PAQIC  
 Prof. S.K. Bhatnagar, Director-Research  
 Prof. S. N. Vijayvargiya, Dean-Research  
 Prof. N.C. Bhandari, HOD- ME  
 Prof. Mukesh Arora, HOD-EC  
 Prof. C. M. Choudhary, HOD-CS  
 Prof. Anil Choudhary, HOD-IT  
 Prof. Akash Saxena, HOD-EE  
 Prof. RohitMukherjee, HOD\_B.Tech.-I Year  
 Prof. R. K. Jain, HOD-Physics  
 Dr. Niraja Saraswat, HOD-English  
 Prof. Archana Saxena, HOD-Chemistry

**NODAL CO-ORDINATOR**

- Er. Ajay Kumar Dhanopia  
**ORGANIZING COMMITTEE**  
 Dr. Om Ji Shukla  
 Er. Anirusdh Mathur  
 Er. Priyanka Sharma  
 Er. Garima Gupta  
 Mr. Anurag Sharma  
 Er. Sushant Kumar  
 Er. Arun Kumar Nayak

**WORKSHOP SCHEDULE**

06-April-2019

- 10:00 A.M. – 10:30 A.M. Registration  
 10:30 A.M. – 11:00 P.M. High-Tea  
 11:00 A.M. – 12:30 P.M. Inauguration/  
 Introduction &  
 Demonstration  
 Lunch Break  
 12:30 P.M. – 1:30 P.M. Hands-On Session  
 1:30 P.M. – 2:30 P.M. [CSE/ IT ]  
 1:30 P.M. – 2:30 P.M. Hands-On Session  
 [ECE/ EE ]  
 1:30 P.M. – 2:30 P.M. Hands-On Session  
 [ME/ APPLIED SCIENCE ]  
 2:30 P.M. – 3:00 P.M. Closing Ceremony

**ABOUT JAIPUR**

Jaipur was founded in AD 1727 by Sawai Jaisingh II. Jaipur, the capital of Rajasthan is popularly known as the Pink City with broad avenues and spacious gardens. Jaipur is steeped in history and culture. Here the past comes alive in magnificent forts and palaces, blushed pink, where once lived the maharajas. The bustling bazaars of Jaipur, famous for Rajasthan jewelry, fabric and shoes, possess a timeless quality and are surely a treasure-trove for the shoppers. This fascinating city with its romantic charm takes you to an epoch of royalty and tradition. Spread around it, in rows, are public buildings, the residences of noblemen, the living and trading quarters of merchants and artisans.

**CONTACT US**

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An MHRD Govt of India Initiative

**STATE-LEVEL WORKSHOP  
 ON  
 VIRTUAL LABS**

**6<sup>th</sup> April, 2019**



Venue:

**J.C. BOSE AUDITORIUM, SKIT, JAIPUR**

Organized By:



**Swami Keshvanand Institute of Technology,  
 Management and Gramothan  
 Ramnagar, Jagatpura, Jaipur-302017, Rajasthan**

### ABOUT SKIT

Swami Keshvanand Institute of Technology, Management & Gramothan (SKIT) inspired from the learning of Swami Keshvanand, was established in the year 2000 by Technocrats and Managers Society for Advanced learning. Today the institute is recognized as one of the centers of academic excellence in northern India. The Institute is affiliated to Rajasthan Technical University (RTU), Kota for offering postgraduate and undergraduate courses in engineering and management. SKIT is putting in efforts for making industry ready engineers and managers through effective Industry-Institute interface. SKIT has been declared 1<sup>st</sup> Rank by RTU for 2<sup>nd</sup> consecutive year. The institute is also accredited by NBA and IE(I).

### ABOUT VIRTUAL LABS

Virtual Labs are web-based platforms for conducting experiments via simulation. They are intended to provide remote access, encourage faculty and students for performing experiments and thereby getting them interested in their respective disciplines in a meaningful way. A consortium of 12 participating institutes, nationally coordinated by IIT Delhi is engaged in design and development of Virtual labs for a range of subjects in different disciplines. Web enabled experiments can be designed for remote operation and viewing so as to enthruse the curiosity and innovation into students. This would help students in learning basic and advanced concepts through remote experiments.

### OBJECTIVES

1. To provide remote-access to Labs in various disciplines of Science and Engineering. These Virtual Labs would cater to students at the undergraduate level, post graduate level as well as to research scholars.
2. To enthuse students to conduct experiments by arousing their curiosity. This would help them in learning basic and advanced concepts through remote experimentation.
3. To provide a complete Learning Management System around the Virtual Labs where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self evaluation.
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### BROAD AREAS OF VIRTUAL LABS

- Electronics & Communications
- Computer Science & Engineering
- Electrical Engineering
- Mechanical Engineering
- Chemical Engineering
- Biotechnology and Biomedical Engineering
- Civil Engineering
- Physical Sciences
- Chemical Sciences

### SALIENT FEATURES

1. Virtual Labs will provide to the students the result of an experiment by one of the following methods (or possibly a combination)
  - Modeling the physical phenomenon by a set of equations and carrying out simulations to yield the result of the particular experiment. This can, at-the-best, provide an approximate version of the 'real-world' experiment.
  - Providing measured data for virtual lab experiments corresponding to the data previously obtained by measurements on an actual system.
  - Remotely triggering an experiment in an actual lab and providing the student the result of the experiment through the computer interface. This would entail carrying out the actual lab experiment remotely.
2. Virtual Labs will be made more effective and realistic by providing additional inputs to the students like accompanying audio and video streaming of an actual lab experiment and equipment.







Swami Keshvanand Institute of Technology,  
Management & Gramothan, Jaipur

Department of Mechanical Engineering

One Day State Level Workshop on Virtual Labs on 6th April, 2019

List of Participants

S.NO.	Employee ID	NAME
1	18	Naveen Jain
2	604	Saurabh Gupta
3	64	Ankush Tandon
4	46	Swati Arora
5	736	Keshav Jakotia
6	792	Madhukar Kumar
7	60	Ramesh Pachar
8	1031	Banshi Lal
9	664	Amit Kumar Bansal
10	689	Sudesh Garg
11	689	Sudesh Garg
12	682	Ankit Agarwal
13	654	Priyanka Sharma
14	751	Vinay Singh Marwal
15	628	Monika Mathur
16	14	Sushila Vishnoi
17	183	Neeraj Jain
18	11	Pankaj Dadeech
19	139	Pramod Jain
20	103	Sharda Soni
21	31	Anjali Pandey
22	29	Rubal Deep Gill
23	30	Harpreet Singh Gill
24	785	Ajay Kumar Gautam
25	795	Kishan Lal Jain
26	867	Om Ji Shukla
27	662	Garvit Kumar Gupta
28	153	Dinesh Sharma
29	676	Ajay Kumar Dhanopia
30	830	Garima Gupta
31	855	Sushant Kumar
32	827	Arun Kumar Nayak
33	773	Anirudh Mathur