

I. Best Practice - Virtual Labs

1. Title of the Practice

Virtual Labs-Laboratory learning through remote experimentation.

2. Objectives of the Practice

Virtual lab refers to a virtual teaching and learning environment aimed at developing students' laboratory skills. As one of the most important eLearning tools, they allow the student to conduct various experiments without any constraints to place or time, in contrast to the constraints of real labs.

Virtual Labs is a project initiated by the Ministry of Education, Government of India, under the National Mission on Education through Information and Communication Technology.

The following aims are achieved by implementing this best practice:

- Facilitated remote access to simulation-based laboratories across a range of scientific and engineering fields.
- Enthused students to conduct experiments by arousing their curiosity. This helped them in learning basic and advanced concepts through remote experimentation.
- Provided a complete Learning Management System around the Virtual Labs where the students availed the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation.

3. The Context

Features of a virtual lab include:

- Offer a safe workspace around lab material, where virtual labs allow the students to work from-a-far and not get in direct contact with hazardous, toxic or radioactive substances. This way of work is effective in avoiding laboratory accidents.
- Facilitate and give accurate results of some experiments that may require complicated and expensive appliances.
- In cases of limited equipment and funding, virtual labs provide teachers with practical applications of the curriculum to help them cover the different aspects of their courses and give students a chance of understanding the practical concepts well.
- Enable students and teachers to study and prepare their experiments from any place and at anytime with 24/7 unlimited accessibility.
- Allow the students to re-conduct their desired experiments many times, until they grasp all the information.
- Without being put at risk, virtual labs give students the chance to determine and control the experiment's various inputs, change the conditions and observe the resulted readings and outputs.

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Karnal, Haryana, India - 144030

- Add entertainment factors to the experiment, in order to grab the students' attention and focus while conducting their experiments.

4. The Practice

The world is now witnessing what can be described as the technological invasion of all fields of life. It is the result of the unprecedented advances in scientific and technological fields throughout history. This new age of technology has helped us use digital devices in many fields, including education, which also helped spread e-learning platforms and distance education.

One way technology has benefited education is the emergence of virtual labs. Virtual labs are virtual environments designed for various experiments, through them the real labs are simulated to link the practical side with the theoretical side.

All students have the freedom to do experiments without a supervisor and without exposure to any kind of danger. This is done through computer applications that cover all fields of science and engineering. This saves a lot of effort and time for students and teachers. Students are protected from directly handling dangerous chemicals and devices.

Virtual lab users only need computers with suitable capabilities, and need to be connected to the Internet so the user can work on all the experiments. This is one of the advantages of virtual labs as computers and digital devices have become available in universities and homes. The virtual labs' distinctive characteristics are as follows:

- Virtual labs motivate students to conduct laboratory experiments.
- They satisfy the passion of students, allowing them to access the various experiments easily regardless of time or place.
- Increase the understanding of various courses and increase student achievement.
- Eliminate boredom, as it provides fun during the experiments.
- The virtual labs will increase the scientific research rates because it saves time and effort and enables researchers to use their time more effectively.
- The virtual labs will enable students to use modern technology and enable them to follow the tremendous progress of the information revolution.
- Students will be able to use the scientific method of problem-solving.
- Developing teaching and learning methods that will lead to the effectiveness of the educational process.
- Increased communication between students and each other on the Internet, which helps with the exchange of ideas and experiences.

5. Problems Encountered and Resources Required

Problems encountered in implementing the virtual labs are as follows:

- Virtual laboratories are only available for particular subjects in certain disciplines. As a result, use of virtual labs is not available in all courses.
- Additionally, not all of the experiments mandated by the curriculum are available in virtual laboratories.




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 Sant Baba Bhag Singh University
 VIII-Khiala, Jalandhar-144030


- Use of online laboratories sometimes impossible because of IIT Delhi's website maintenance work.

Resources required for more effective implementation of the practice are:

- Virtual laboratories for more disciplines and subjects need to be developed.
- All of the experiments mandated by the curriculum should be available in virtual laboratories.
- Website maintenance might be performed at the end of a semester.

6. Notes

- Virtual Labs do not require any additional infrastructural setup for conducting experiments at user premises. The experiments can be performed accessed remotely via internet.
- Additional experiments can be performed using an interfaced setup.



Registrar
Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030



Virtual Labs



An initiative of Ministry of Human Resource Development
under the National Mission on Education through ICT

Wireless Research Lab, Bharti School of Telecom

Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016. Tel : 011-26597244, 011-64674687

www.vlab.co.in

Ref. No. : UTR/VLAB/NCS

Date : 3/6/2017

To,
The Vice-Chancellor,
Sant Baba Bhag Singh University
Village- Khiala, Distt-Jalandhar
Punjab

Sub: Virtual Labs Nodal Center


With reference to your Expression of Interest for Virtual Labs, it gives me immense pleasure to designate your college as a Nodal Center for Virtual Labs. As nominated by you, Dr. Gurmanik Kaur has been accepted to act as the Nodal Coordinator from your college. This approval is valid up to 31st December 2017. Subject to the following Terms and Conditions and any subsequent directives as issued by MHRD from time to time:


1. Approved status of AICTE/STEB/UGC is mandatory for your college.
2. The necessary infrastructure (dedicated space having personal computers with 1Mbps broadband internet connectivity) to be maintained at your own cost for Virtual Labs.
3. Nodal centers will get operational technical as well as financial support as given below
4. Nodal Coordinator will get an honorarium of Rs 5000 /- at the end of semester after submission of Vlabs usage report from the Institute, duly signed by the Director/Principal of the Institute.
5. Each Nodal Center will organize at least one workshop per semester as an outreach activity of Virtual Labs and the expenses of the workshop up to Rs 5000 /- will be reimbursed by Vlabs, IIT Delhi on submission of bills and workshop report.
6. Students are not to be charged any extra fee for providing Virtual Labs facility for their usage
7. Nodal Coordinator should attend the meeting held at IIT Delhi as per schedule and a semester wise report of Vlabs usage and feedbacks by the faculty members and students should be submitted.
8. Strict adherence to the standard lab procedures and cyber security laws need to be followed
9. Any violation of the above will result in automatic cancellation of Nodal Centre status for your college without giving any notice.

Kindly acknowledge the receipt of this letter and the acceptance of the Terms & Conditions mentioned above
We thank you again for your interest in the Virtual Labs project and appreciate your endeavor in the service of the student community. Wish you all the best!

Thank You,

Sincerely,


Prof. Ranjan Bose
Project Virtual Labs
IIT Delhi - 110016
bose@ee.iitd.ac.in


Registrar
Sant Baba Bhag Singh University
Jalandhar, Jalandhar-14030



SANT BABA BHAG SINGH UNIVERSITY

VIII, Khiala, P.O. Padhlana, Distt. Jalandhar - 144 030 (PB.)

Call : 0181-2711163 | Fax : 0181-2711611 | Website : www.sbbsuniversity.in

VIRTUAL LABS REPORT

(July 2017-December 2017)

Name of Nodal Center: SANT BABA BHAG SINGH UNIVERSITY, Vill.: Khiala, P.O.:

Padhlana, Distt.: Jalandhar, Punjab, INDIA

Affiliated to:

Semester wise Virtual Labs usages

Semester: 1st

Number of Virtual labs experiments performed = $681 \times 44 \times 136 = 40,75,104$

Semester: 3rd

Number of Virtual labs experiments performed = $226 \times 16 \times 37 = 1,33,792$

Semester: 5th

Number of Virtual labs experiments performed = $450 \times 20 \times 38 = 3,42,000$

Signature
Nodal Co-ordinator
16/01/2017

Registrar
Sant Baba Bhag Singh University
VIII, Khiala, Jalandhar-144030

Signature

Director



Virtual Labs



An initiative of Ministry of Human Resource Development
under the National Mission on Education through ICT

Wireless Research Lab, Bharti School of Telecom
Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016. Tel : 011-26597244, 011-64674687
www.vlab.co.in

Ref. No. : VLABS/IITD/MC

Date : 14/03/2018

To,
The Director,
Sant Baba Bhag Singh University
Village Khiala
Jalandhar, Punjab

Sub: Virtual Labs Nodal Center

With reference to your Expression of Interest for Virtual Labs, it gives me immense pleasure to designate your college as a Nodal Center for Virtual Labs. As nominated by you, Dr. Gurmanik Kaur has been accepted to act as the Nodal Coordinator from your college. This approval is valid up to 30th June 2018. Subject to the following Terms and Conditions and any subsequent directives as issued by MHRD from time to time:

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We thank you again for your interest in the Virtual Labs project and appreciate your endeavor in the service of the student community. Wish you all the best!

Thank You,

Sincerely,

R Bose

Prof. Ranjan Bose
Project Virtual Labs
IIT Delhi - 110016
rbosetee@iitd.ac.in

Koy

VM

Registrar
Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala, P.O. Padhiana, Distt. Jalandhar-144030

Website: www.sbsu.ac.in Phone: 0191-2711163 Fax: 0191-2711555

Ref. No. SBUSO/18/2018

10/04/2018

VIRTUAL LABS REPORT

(March 2018 - April 2018)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill. Khiala, P.O. Padhiana,

Distt. Jalandhar, Punjab, INDIA

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 2nd

Number of Virtual labs experiments performed = $112 * 8 * 34 = 30,464$

Semester: 4th

Number of Virtual labs experiments performed = $141 * 6 * 16 = 13,536$

Semester: 6th

Number of Virtual labs experiments performed = $42 * 2 * 5 = 420$

Signature

Nodal Co-ordinator

Registrar
Sant Baba Bhag Singh University
Vill. Khiala, Jalandhar-144030

Signature

Director



Virtual Labs



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An initiative of Ministry of Human Resource Development
under the National Mission on Education through ICT

Wireless Research Lab, Bharti School of Telecom
Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016. Tel : 011-26597244, 011-64674687

Ref. No. : Vlabs/NCS/IITD

www.vlab.co.in

Date : 19-9-2018

To,
The Director
Sant Baba Bhag Singh University,
Distt. Jalandhar,
Punjab

Sub: Virtual Labs Nodal Center

With reference to your Expression of Interest for Virtual Labs, it gives me immense pleasure to designate your college as a Nodal Center for Virtual Labs. As nominated by you, Dr. Gurmanik Kaur has been accepted to act as the Nodal Coordinator from your college. This approval is valid up to 31st December 2018. Subject to the following Terms and Conditions and any subsequent directives as issued by MHRD from time to time.

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We thank you again for your interest in the Virtual Labs project and appreciate your endeavor in the service of the student community. Wish you all the best!

Thank You,

Sincerely,

Prof. Suresh Bhalla
Project Virtual Labs
IIT Delhi
sbhalla@iitd.ac.in

Registrar
Sant Baba Bhag Singh University
Campus, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Date 6/2/2018

Ac. S.B.S. 18/1031

Village Khiala, Dist. Patiala, Punjab (India) Jalandhar-144030

Website: www.sbsu.ac.in (84601) 2617 Phone: (91) 2711163 Fax: (91) 2711255

VIRTUAL LABS REPORT

(Aug'18 - Nov'2018)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill. Khiala, P.O. Patiala

Dist. Jalandhar Punjab, INDIA

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 1st

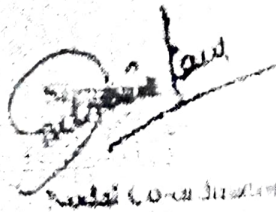
Number of Virtual labs experiments performed = 1202


Semester: 3rd

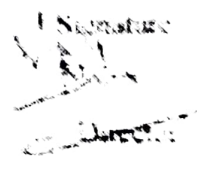
Number of Virtual labs experiments performed = 1102

Semester: 5th

Number of Virtual labs experiments performed = 1499


Nodal Co-ordinator


Registrar
Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030

Signature

Director



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under the National Mission on Education through ICT

Wireless Research Lab, Bharti School of Telecom
Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016. Tel : 011-26597244, 011-64674687

www.vlab.co.in

Ref. No. : *ITR/MS/2019/111*

Date : *11/06/2019*

To,
The Director,
Sant Baba Bhag Singh University,
Jalandhar, Punjab

Sub: Virtual Labs Nodal Center

With reference to your Expression of Interest for Virtual Labs, it gives me immense pleasure to designate your Institute as a Nodal Center for Virtual Labs. As nominated by you, Dr. Gurmanik Kaur has been accepted to act as the Nodal Coordinator from your Institute. This approval is valid up to 30th June 2019. Subject to the following Terms and Conditions and any subsequent directives as issued by MHRD from time to time

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Thank You,

Sincerely,

Suresh Bhatta
Prof. Suresh Bhatta
Project Virtual Labs
IIT Delhi
sbhatta@civil.iitd.ac.in

VM
Registrar
Sant Baba Bhag Singh University
Vidhikhola, Jalandhar-141000



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala, PO: Padhana, Distt: Jalandhar 144030
Website: www.sbsuuniversity.ac.in Phone: 0181 2711163 Fax: 0181 2711555

VIRTUAL LABS USAGE REPORT

(January 2019 – June 2019)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill. Khiala, P.O. Padhana,
Distt.: Jalandhar, Punjab, INDIA
Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 2nd


Number of Virtual labs experiments performed = 3565


Semester: 4th


Number of Virtual labs experiments performed = 3951

Semester: 6th

Number of Virtual labs experiments performed = 1497


Registrar


Registrar
Sant Baba Bhag Singh University
Village: Khiala, P.O. Padhana, Distt. Jalandhar-144030


Signature
Head of the Institution

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Indian Institute of Technology Delhi, Hauz Khas, New Delhi-110016. Tel : 011-26597244, 011-64674687
www.vlab.co.in

Ref. No. : 1/2019/M

Date : 24/07/2019

To,
The Director,
Sant Baba Bhag Singh University,
Jalandhar, Punjab

Sub: Virtual Labs Nodal Center

With reference to your Expression of Interest for Virtual Labs, it gives me immense pleasure to designate your Institute as a Nodal Center for Virtual Labs. As nominated by you, Dr. Gurmanik Kaur has been accepted to act as the Nodal Coordinator from your Institute. This approval is valid up to 31st December 2019. Subject to the following Terms and Conditions and any subsequent directives as issued by MHRD from time to time:

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Thank You,
Sincerely,

Prof. Suresh Bhalla
Project Virtual Labs
IIT Delhi


Registrar

Sant Baba Bhag Singh University
Jli Khanda, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala, P.O.: Padhiana, Distt: Jalandhar-144030

Website: www.sbsbuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555

Ref. No.: SBBSU/VLabs usage/Aug-Nov'19

Date: 16/12/2019

VIRTUAL LABS REPORT

(Aug'19 – Nov'19)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill: Khiala, P.O.: Padhiana,
Distt.: Jalandhar, Punjab, INDIA

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 1st

Number of Virtual labs experiments performed = 3396

Semester: 3rd

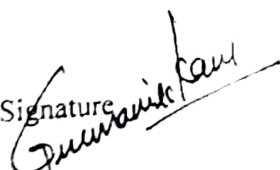
Number of Virtual labs experiments performed = 2289

Semester: 5th

Number of Virtual labs experiments performed = 2705

Semester: 7th

Number of Virtual labs experiments performed = 1152

Signature

Nodal Co-ordinator


Signature

Director


Registrar
Sant Baba Bhag Singh University
Vill: Khiala, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala; P.O.: Padhiana, Distt: Jalandhar-144030

Website: www.sbbsuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555

Ref. No.: SBBSU/Vlabs usage/July-2020

Date: 16/07/2020

VIRTUAL LABS USAGE REPORT

(Jan'20 – July'20)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill: Khiala, P.O.: Padhiana,
Distt: Jalandhar, Punjab, INDIA

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 2nd

Number of Virtual labs experiments performed = 176

Semester: 4th

Number of Virtual labs experiments performed = 247

Semester: 6th

Number of Virtual labs experiments performed = 368

Signature

Nodal Co-ordinator



Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030

Signature

Director (R&D)



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala: PO: Padhiana, Distt: Jalandhar 144030
Website: www.sbbsuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555

Ref. No.: SBBSU/21/62

Date: 11/01/2021

VIRTUAL LABS USAGE REPORT

(August 2020 – January 2021)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill.: Khiala, P.O.: Padhiana, Distt.:
Jalandhar, Punjab, INDIA

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 1st

Number of Virtual Labs Experiments Performed: 2222

Semester: 3rd

Number of Virtual Labs Experiments Performed: 3908

Semester: 5th

Number of Virtual Labs Experiments Performed: 151

Semester: 7th

Number of Virtual Labs Experiments Performed: 1424

Signature

(Nodal Coordinator)

Signature
PROF. (S) VILAY CHIR
DIRECTOR (R&D)
SBBS UNIVERSITY
Director (R & D)

Registrar
Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030



Virtual Labs

An initiative of Ministry of Education
under the National Mission on Education through ICT



An MoE Govt of India Initiative

Wireless Research Lab, Bharti School of Telecom
Indian Institute of Technology Delhi, Hauz Khas, New Delhi-11 0016. Tel: 011-26582050

www.vlab.co.in

Ref. No.: **VLABS/IITD/NCS**

Date: **04-02-2021**

To,
The Vice-Chancellor,
Sant Baba Bhag Singh University,
Jalandhar, Punjab

Sub: Virtual Labs Nodal Center

With reference to your Expression of Interest for Virtual Labs, it gives me immense pleasure to designate your Institute as a Nodal Center for Virtual Labs. As nominated by you, **Dr. Gurmanik Kaur** has been accepted to act as the Nodal Coordinator from your Institute. This approval is valid up to 31st December 2021. Subject to the following Terms and Conditions and any subsequent directives as issued by MoE from time to time:

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Wish you all the best!

Thank You,

Sincerely,

Prof. Suresh Bhalla
Project Virtual Labs
IIT Delhi
sbhalla@civil.iitd.ac.in

2/7
Registrar
Sant Baba Bhag Singh University
Jalandhar, Punjab - 141010



Sant Baba Bhag Singh UNIVERSITY

Website: www.sbsuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711164

Village: Khuala P.O. Padhana, Distt. Jalandhar-144030

Ref. No.: SBRSUA/Labs usage/July-2021

Date: 09/07/2021

VIRTUAL LABS USAGE REPORT

(Feb'21 – July'21)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill: Khiala, P.O.: Padhana
Distt.: Jalandhar, Punjab, INDIA

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 2nd

Number of Virtual labs experiments performed = 7857

Semester: 4th

Number of Virtual labs experiments performed = 1690

Semester: 6th

Number of Virtual labs experiments performed = 811

Signature

Nodal Co-ordinator

PROF. (DR.) VIJAY DHIR
DIRECTOR (R&D)
SBS UNIVERSITY

Director

Registrar

Sant Baba Bhag Singh University
Vill Khiala, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala: PO: Padhiana, Distt: Jalandhar 144030
Website: www.sbbsuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555

Ref. No.: SBBSU/VLabs usage/January-2022

Date: 06/01/2022

VIRTUAL LABS USAGE REPORT

(Aug'21-Dec'21)

Name of Nodal Center: Sant Baba Bhag Singh University, Village: Khiala: PO.: Padhiana,

Distt: Jalandhar, Punjab, INDIA

Affiliated to:

UGC, New Delhi

Semester wise Virtual Labs usages

Semester: 1st

Number of Virtual labs experiments performed= 465

Semester: 3rd

Number of Virtual labs experiments performed=1470

Semester: 5th

Number of Virtual labs experiments performed=629

Signature

Nodal Co-ordinator

(DR. GURMANTE KAUR)
Nodal Officer
Virtual Labs
CO-ORD.

MY
Registrar

Sant Baba Bhag Singh University
Village: Khiala, Padhiana-144030



(Prof. (DR) VIJAY DHIR
Director R & D,
SBBSU.



Virtual Labs

An Initiative of Ministry of Education
under the National Mission on Education through ICT



Wireless Research Lab, Bharti School of Telecom
Indian Institute of Technology Delhi, Hauz Khas, New Delhi-11 0016. Tel: 011-26582050

www.vlab.co.in

Ref. No.: VLABS/IITD/NCS

Date: 21-01-2022

To,
The Vice-Chancellor,
Sant Baba Bhag Singh University,
Jalandhar, Punjab

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6. Strict adherence to the standard lab procedures and cyber security laws needs to be followed.
7. Any violation or the above will result in automatic cancellation of Nodal Center status for your college without giving any notice.

Kindly acknowledge the receipt of this letter and the acceptance of the Terms & Conditions mentioned above. We thank you again for your interest in the Virtual Labs project and appreciate your endeavor in the service of the student community.

Wish you all the best!

Thank You,

Sincerely,

Prof. Suresh Bhalla
Project Virtual Labs
IIT Delhi
sbhalla@civil.iitd.ac.in

Registrar
Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Village: Khiala, PO: Padhiana, Distt: Jalandhar 144030
Website: www.sbbsuniversity.ac.in Phone: 0181-2711163 Fax: 0181-2711555
Ref. no. SBBSU/22/1461 Date 04/07/2022

VIRTUAL LABS REPORT

(January 2022 – June 2022)

Name of Nodal Center: Sant Baba Bhag Singh University, Vill.: Khiala, P.O.: Padhiana, Distt.
Jalandhar-144030, Punjab

Affiliated to: UGC, New Delhi

Semester wise Virtual Labs usages

Branch	Year	No. of Students	No. of Experiments	No. of Labs	Total Experiments
Life Science and Allied Health Science	I	42	2	2	168
	II	132	4	4	2112
Electrical Engineering	I	21	1	2	42
	II	34	3	8	816
	III	26	2	4	208
Management	I	33	1	2	66
Computer Application	I	20	1	2	40
CSE	I	40	1	1	40
Physical Sciences	I	43	6	7	1806
	II	39	2	2	156
	III	34	2	3	204
Number of Virtual Labs Experiments Performed:					5658

Signature
[Signature]
(Nodal Coordinator)

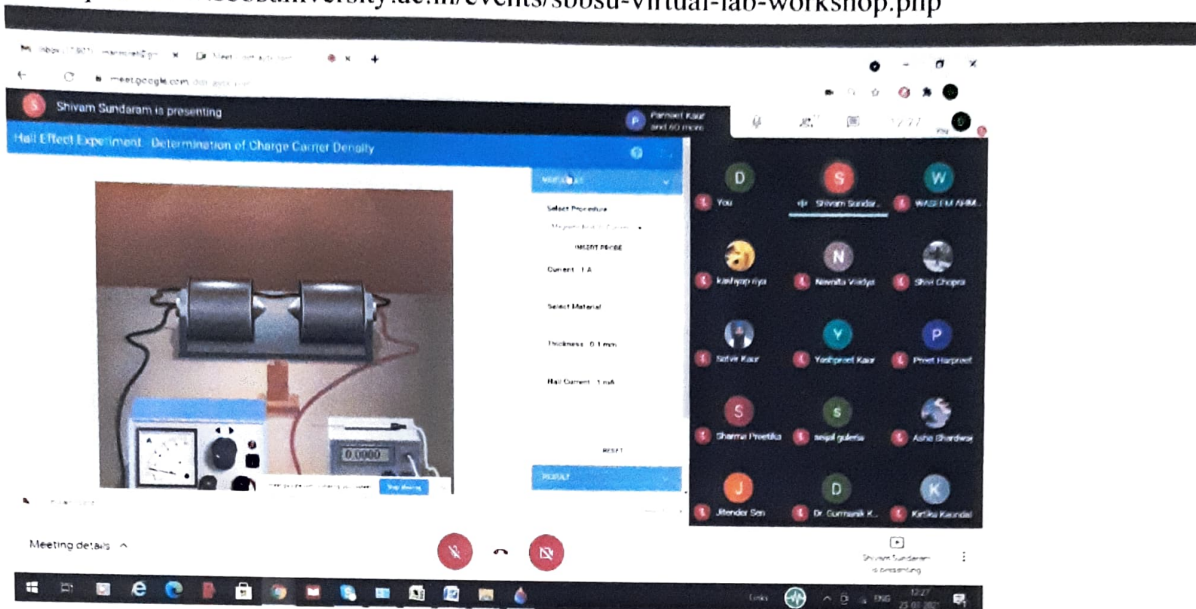
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Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030




1. One-day Workshop on Virtual Labs by IIT Delhi

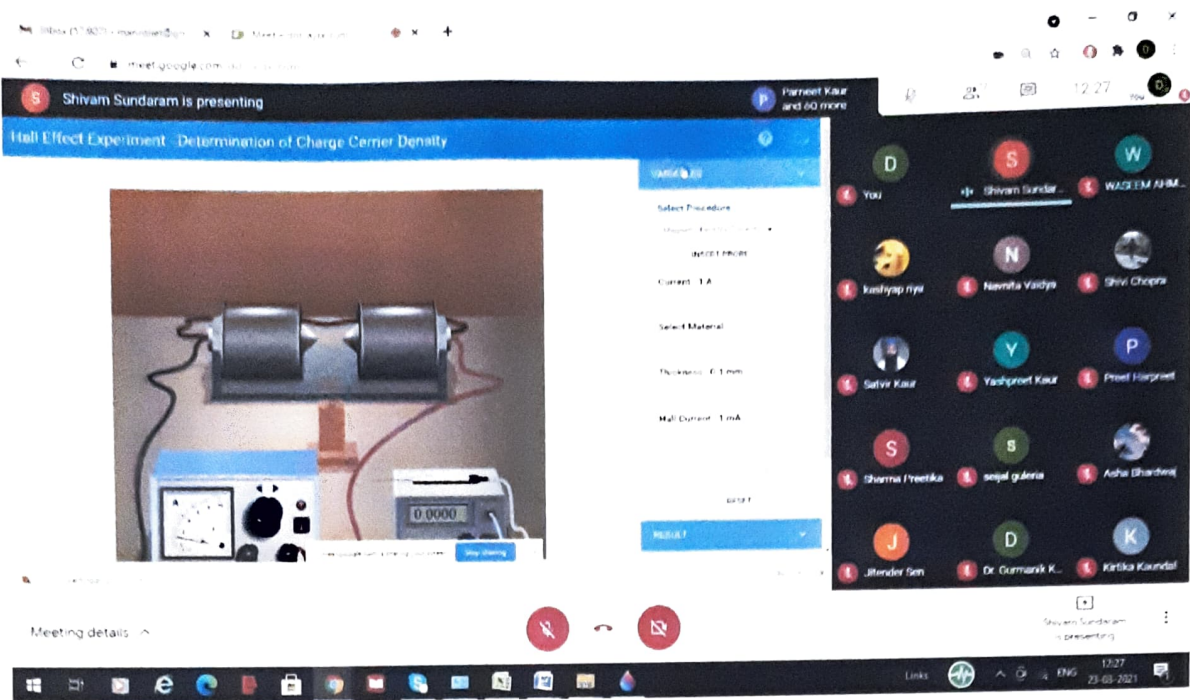
Date: 23 March 2021

<https://www.sbbsuniversity.ac.in/events/sbbsu-virtual-lab-workshop.php>



With the blessings of Sant Baba Dlawar Singh Ji (Brahm Ji) and under the able guidance of Hon'ble Vice-Chancellor, SBBSU, Prof. (Dr.) Dharmjit Singh Parmar, 8th Workshop (through on-line mode) on Virtual Labs, in collaboration with IIT-Delhi, was successfully organised for the faculty members and students from various programmes. The workshop included online hands-on sessions by the resource persons Mr. Tamay Tarun Das, Mr. Parteeek Sharma and Mr. Shivam Sundaram from IIT Delhi. The experiments of Electrical Engg, Electronics Engg., Computer Science and Engg, Chemistry and Physics Virtual Laboratories etc. were demonstrated during the workshop. Furthermore, the Virtual Lab team IIT Delhi appreciated the efforts of Sant Baba Bhag Singh University for successfully co-ordinating the outreach activities of Virtual Labs.


Registrar
Sant Baba Bhag Singh University
Bhagalpur, Jharkhand-144030



2. One-day Online workshop on VIRTUAL LABS by IIT-Delhi

Date: 13-10-2021

<https://www.sbbsuniversity.ac.in/events/76-vlab.php>

Department of Electrical Engineering of UIET (SBBSU) in collaboration with IIT Delhi Organized One-day Online workshop on VIRTUAL LABS by IIT-Delhi. Objectives of the webinar are:

- To provide remote access to labs in various disciplines of Science and Engineering.
- To enable the students to learn at their own pace, and to arouse their curiosity.
- To provide a complete learning management system that includes we resources, video lectures, animated demonstrations and self evaluation.

Wey
Registrar
Sant Baba Bhag Singh University
Vill-Khiala, Jalandhar-144030



Sant Baba Bhag Singh UNIVERSITY

Village: Khinda, PO: Padhiana, Distt: Jalandhar (144030)
Website: www.sbbuuniversity.ac.in, Phone: 0181-2711163
Fax: 0181-2711555

Chief Patron

Sant Baba Sarwan Singh Ji (Chancellor, SBBSU)

Patron

Prof. (Dr.) Dharmjit Singh Parmar (Vice-Chancellor, SBBSU)

Advisory Committee

Prof. (Dr.) Vijay Dhir (Director, R&D, SBBSU)
Dr. Indu Sharma (Dean Academics, SBBSU)
Dr. Vikas Sharma (Dy. Dean, UINB, SBBSU)
Dr. Seema Garg (Dy. Dean, UICM, UIL, UICATS, SBBSU)
Dr. Aneel Kumar (Dean, UFE)
Dr. Shweta (CoD, Life Science and Applied Health Science, SBBSU)
Dr. Nidra Sharma (CoD, Physical Science, SBBSU)
Dr. Umesh Sehgal (CoD, CSA, SBBSU)
Dr. Jagdeep Kaur (CoD, CSE, SBBSU)
Er. Amardeep Singh (CoD, ME, SBBSU)

Nodal Co-ordinator:

Dr. Gurmanik Kaur (Associate Professor, Deptt. of EE)



An MHRD Govt of India Initiative

A
One-day
ONLINE WORKSHOP
on
VIRTUAL LABS
by
IIT-DELHI



About Virtual Labs

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.

Objectives

• To provide remote-access to labs in various disciplines of Science and Engineering.

• To cater to students at the UG level, PG level as well as to research scholars.

• To enable the students to learn at their own pace, and to arouse their curiosity.

• To provide a complete Learning Management System that includes web-resources, video-lectures, animated demonstrations and self evaluation.

Programme

Welcome address: 9:30 a.m. -10:00 a.m.

Google meet link for the workshop is: <https://meet.google.com/vcf-olpw-rta>
You tube link for live streaming of the workshop will be provided on 13th October, 2021 (Wednesday)

Timings	Session
10:00 a.m. - 11:00 a.m.	<ul style="list-style-type: none"> • Session-I - B. Tech (ECE) 7th Sem - B. Tech. (EE) 3rd Sem, 5th Sem and 7th Sem
11:00 a.m. - 12:00 p.m.	<ul style="list-style-type: none"> • Session-II ○ Physics Group - B. Tech (CSE) 1st Sem ○ Chemistry Group - B. Tech. (ME) 1st Sem - B. Tech. (EE) 1st Sem - B. Tech. (CE) 1st Sem ○ Applied Sciences - B.Sc. (MLS) 1st Sem, 3rd Sem - B.Sc. (Non-Medical) 1st Sem, 3rd Sem, 5th Sem - B. Sc (CS) 3rd Sem - M.Sc. (Zoology) 1st Sem, 3rd Sem - M.Sc. (Medical) 1st Sem - M.Sc. (Microbiology) 1st Sem - M.Sc. (Chemistry/Physics) 1st Sem, 3rd Sem
12:00 p.m.-1:00 p.m.	<ul style="list-style-type: none"> • Session-III - B. Tech (CSE) 3rd Sem

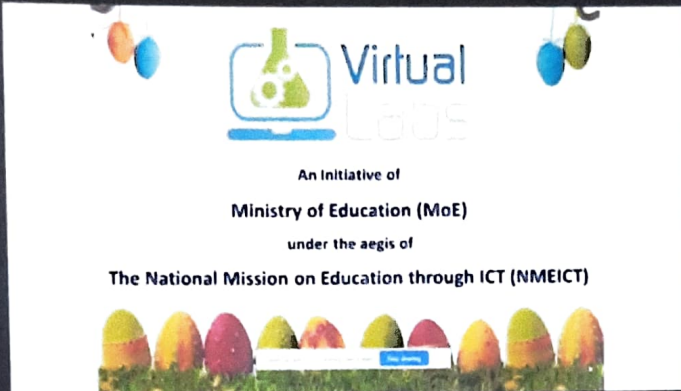
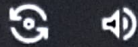


M.K.
Registrar
Sant Baba Bhag Singh University
Jalandhar-144030

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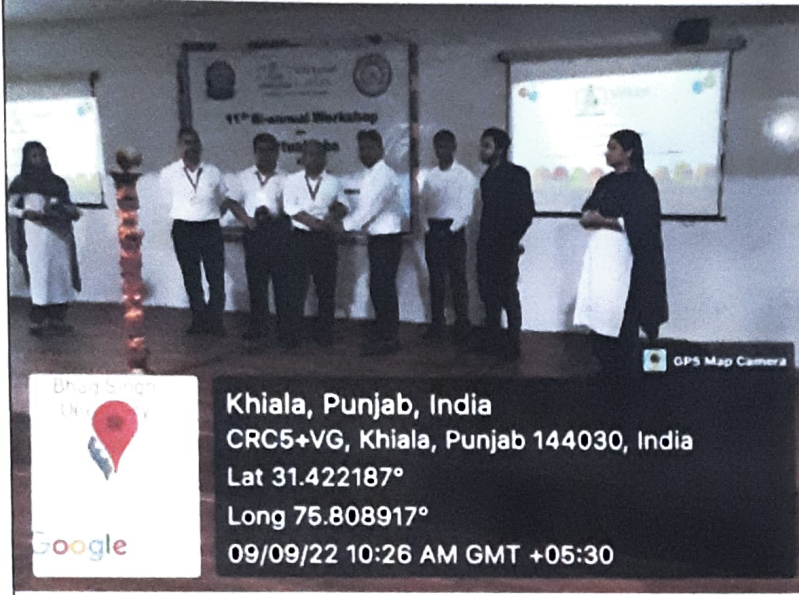



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Vill-Khiala, Jalandhar-144030

संत बाबा भाग सिंह विश्वविद्यालय में आईआईटी दिल्ली द्वारा "वर्चुअल लैब्स" पर 11वीं द्वि-वार्षिक कार्यशाला

Uday

1 day ago



संत बाबा भाग सिंह विश्वविद्यालय ने IIT दिल्ली के सहयोग से 9 सितंबर, 2022 को विश्वविद्यालय परिसर में "वर्चुअल लैब्स" पर 11वीं द्वि-वार्षिक कार्यशाला का आयोजन किया। IIT दिल्ली के तीन वर्चुअल लैब संरक्षक, चंदन कुमार, चिराग डे और । अवनीश दुबे ने तीन प्रशिक्षण सत्र आयोजित किए। प्रतिभागियों को विभिन्न धाराओं से कई प्रयोगों का प्रदर्शन दिया गया। प्रो. (डॉ.) धर्मजीत सिंह परमार, कुलपति, संत बाबा भाग सिंह विश्वविद्यालय ने विश्वविद्यालय परिसर में कार्यशाला आयोजित करने के लिए आईआईटी दिल्ली के प्रतिनिधियों के लिए आभार व्यक्त किया और एमएचआरडी द्वारा डिजाइन किए गए "वर्चुअल लैब्स" प्रदान करने के प्रयासों की भी सराहना की। प्रो. (डॉ.) विजय धीर, डीन यूआईआईटी, संत बाबा भाग सिंह विश्वविद्यालय, ने सुनिश्चित किया कि प्रौद्योगिकी साझा करने के ऐसे प्रयास भविष्य में भी जारी रहेंगे और साथ ही एसबीबीएसयू छात्रों को आईआईटी मानकों के अनुरूप बनाया जा सकेगा। इस मौके पर सभी डीन, फैकल्टी मेंबर, स्टाफ और स्टूडेंट्स मौजूद रहे।


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Vill-Khiala, Jalandhar-144030