



बिपिन त्रिपाठी कुमायूं प्रौद्योगिकी संस्थान
Bipin Tripathi Kumaon Institute of Technology
(An Autonomous Institute of Government of Uttarakhand)
द्वाराहाट- 263653, जनपद- अल्मोड़ा (उत्तराखंड)
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NOTICE

I am delighted to inform you that the Institute has been declared/ designated as the Nodal Center of Virtual Labs by IIT Delhi/ Roorkee. Virtual Labs is an initiative of Ministry of Human Resource Development under the National Mission on Education through ICT. For more details, please visit <https://www.vlab.co.in/>

A usage report of Virtual Labs, duly signed by the Head (Director/Principal) of the institute must be submitted at the end of each semester to IIT Delhi/ Roorkee. As per direction of the Director Sir, all the HoDs and faculty members are requested that at least 2 experiments for all students in each lab and semester **must be performed through Virtual Labs** along with the traditional method. A separate usage register for each lab/ semester is to be made for this purpose. This register should be signed by the respective faculty members. The photocopies of the same verified by respective HoDs should then be submitted to the Coordinator, Virtual Labs by the end of class work day of each semester so that usage report may be sent on time to IIT Delhi/ Roorkee.

The objectives, broad areas and salient features of Virtual Labs are hereby attached as Annx. 'A' for your kind reference and information please.

CC:

1. Director, for information please
2. Dean (Academics)
3. All Head of the Departments
4. All faculty members through HoDs
5. Registrar
6. O/c Website, with a request to upload it on institute website

(Varun Kumar Kakar)

Nodal Center Coordinator, Virtual Labs
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OBJECTIVES OF VIRTUAL LABS

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.

BROAD AREAS OF VIRTUAL LABS

1. Electronics & Communications
2. Computer Science & Engineering
3. Electrical Engineering
4. Mechanical Engineering
5. Chemical Engineering
6. Civil Engineering
7. Physical Sciences, Chemical Sciences,
8. Biotechnology and Biomedical Engineering

SALIENT FEATURES OF VIRTUAL LABS

1. Virtual Labs will provide to the students the result of an experiment by one of the following methods (or possibly a combination)
 - Modelling 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.