

VIRTUAL LABS – Khalsa College, Amritsar

An Initiative of **Ministry of Human Resource Development (Govt. of India)**
under the National Mission on Education through ICT

Khalsa College, Amritsar is going to organize National Workshop on Virtual Labs in association with Amrita Vishwa Vidyapeetham, Coimbatore, and Tamil Nadu in the month of September 2023.

Virtual Labs project is an initiative of Ministry of Human Resource Development (MHRD), Government of India under the aegis of National Mission on Education through Information and Communication Technology (NMEICT). This project is a consortium activity of twelve participating institutes called coordinating institute, which establish Nodal Centres in the campus of participating institute. This initiative by Indian Government is a paradigm shift in ICT-based education in remote-experimentation. The Virtual Labs project under 12 participating institutes, till date have established 1398 nodal centres in the country till date, consisting of large number of web-enabled experiments designed for remote-operation and viewing. Khalsa College, Amritsar has opted to establish nodal centre and set virtual labs in the Departments of Chemistry, Physics, Botany, Zoology and Computer. The main beneficiaries of the projects will be:

1. Participating students and Faculty Members of Sciences and and Computer department of our Colleges who do not have access to lengthy, inaccessible, hazardous experimentation or unavailable instrumentation.
2. It will also motivate the High School students to take up higher-studies in the field of science and research.

Virtual Labs will use the existing infrastructure available in form of ICT and moreover college has sanctioned additional funds to add more ICT facilities in concerned departments for the smooth functioning of Virtual Labs

OBJECTIVES

The main objective of the setting up of VLab Nodal centre at Khalsa College is

1. To provide remote-access to Labs in various disciplines of Science and Computer. These Virtual Labs would cater to students at the UG, PG as well as to research scholars.
2. To help students to conduct experiments by generating curiosity in them. It will also help them in learning basic as well as advanced concepts through VLabs.
3. To provide a complete Learning Management System (LMS) through the Virtual Labs where the students can use tools for learning, accessing additional web-resources, video-lectures, animated demonstrations etc.
4. To familiarize some of the advanced equipment and resources, which are otherwise accessible to limited number of users due to a number of constraints.

SALIENT FEATURES

Virtual Labs will provide facilitate the students by following method/methods

- Use the modeling and simulations to yield the result of the particular experiments. This will provide an approximate version of the 'real-world' experiment.
- Use measured data for virtual lab experiments corresponding to the data previously obtained by measurements on an actual system.
- Providing the student the result of the experiment through the computer interface. This will results in carrying out the actual lab experiment remotely.
- 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.

Currently VLab in the College campus is active and will starts functioning shortly and accessible to students and faculty members. To know the status of VLab follows the link by pressing putting the cursor on below link then pressing Ctrl followed by left click of mouse

<https://vlab.amrita.edu/?pg=topMenu&id=46>

	Puducherry 605107		
2	Sri Manakula Vinayagar Engineering College Mannadipet Commune, Madagadipet, Puducherry 605107	Dr. V. Bharathi	
3	Women's Engineering College Airport road, Lawspet, Puducherry, PIN: 605 008	Dr. J. Gandhimohan	Active
West Bengal			
1	All India Institute of Medical Sciences, Kalyani NH-34 Connector Basantapur Saguna, Kalyani, 741245	Dr. Kalyan Goswami Dr. Atanu Kumar Dutta	
2	Ramsaday College College Road, Amta, Howrah, West Bengal 711401	Dr. Nababrata Ghoshal Dr. Sudipa Upadhaya	Active
Punjab			
1	Guru Nanak College Near Tibbi Sahib Road, Sri Muktsar Sahib, PIN: 152026, Punjab	Dr. Anita Rani Ms. Rajveer Kaur	Active
2	Khalsa College Amritsar G.T Road, Amritsar- 143002	Dr. Iqbal Singh Dr. Kultar Singh	Active
Bihar			
1	Km. Mayawati Government Girls P. G. College Badalpur, Dadri, Gr. Noida, G. B. Nagar PIN- 203207	Dr. Dinesh C. Sharma Prof. Divya Nath	Active
2	University Department of Chemistry Kameshwar Nagar, Darbhanga, Bihar- 846008	Dr. Abhishek Rai Dr. Akanksha Upadhyay	Active
Assam			
1	Jorhat Kendriya Mahavidyalaya Jorhat Kendriya Mahavidyalaya, Kenduguri, Jorhat, Assam 785010	Mr. Binod Kumar Hazarika Mrs. Pinaki Hazarika	Active
Madhya Pradesh			
1	Acropolis Institute of Technology & Research By Pass Road, Manglia Sqaure, Manglia, Indore,453771	Dr. Kamal Kumar Sethi	Active
2	Shri Krishna University	Ms. Meghana Mishra	Active

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