



# Government Polytechnic, Mumbai (GPM)

## Department of Electrical Engineering

In Association with

# College of Engineering, Pune (CoEP)

Organizes

a

## Webinar

On

## Virtual Laboratories

For faculties of Diploma streams in Maharashtra

### Profile of Institute (GPM)

Government Polytechnic, Mumbai is a premiere autonomous institute of Government of Maharashtra. This institute is committed to be vibrant, keeping pace with technological development and expecting to achieve excellence in imparting Technical Education. Government Polytechnic is also a Nodal Centre for the College of Engineering, Pune (CoEP) for Virtual Labs. (NC-39)

### Vision

Transform knowledge into work

### Mission

We are committed for

- Quality education for lifelong learning.
- Need based educational programmes through different modes.
- Outcome based curriculum implementation.
- Development and upgradation of standard laboratory practices.
- Promoting entrepreneurial programmes.

We believe in ethical, safety, environment friendly practices and teaching learning innovations.

### About COEP

College of Engineering, Pune (CoEP), chartered in 1854 is a nationally respected leader in technical education. The institute is distinguished by its commitment to finding solutions to the great predicaments of the day through advanced technology. The institute has a rich history and dedication to the pursuit of excellence. CoEP offers a unique learning experience across a spectrum of academic and social experiences. With a firm footing in truth and humanity, the institute gives you an understanding of both technical developments and the ethics that go with it.

### The Philosophy of VLAB

Physical distances and the lack of resources make us unable to perform experiments, especially when they involve sophisticated instruments. Also, good teachers are always a scarce resource. Web-based and video-based courses address the issue of teaching to some extent. Conducting joint experiments by two participating institutions and also sharing costly resources has always been a challenge. With the present-day internet and computer technologies the above limitations can no more hamper students and researchers in enhancing their skills and knowledge. Also, in a country such as ours, costly instruments and equipment need to be shared with fellow researchers to the extent possible. Web enabled experiments can be designed for remote operation and viewing so as to enthuse the curiosity and innovation into students. This would help in learning basic and advanced concepts through remote experimentation.

Today most equipment has a computer interface for control and data storage. It is possible to design good experiments around some of this equipment which would enhance the learning of a student. Internet-based experimentation further permits use of resources, knowledge, software, and data available on the web, apart from encouraging skillful experiments being simultaneously performed at points separated in space (and possibly, time).

COVID-19 Pandemic demands Teachers to learn how to use online platforms, adapt new teaching methods, maintain student engagement and find new ways to evaluate. So at the juncture of this time it is highly beneficial to use the concept of virtual Labs in blended learning.

### Broad areas of Virtual Labs

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

### V.T.U.Program

Under NMEICT project of MHRD New Delhi COEP has developed three Remote Triggered Laboratories in the area of Sensors Modeling, Programmable Logic Controllers, and Integrated Automation. Through this portal a student can book a slot after satisfying certain academic conditions. She/he then will be allowed to use this virtual terminal to perform various experiments in the area of Sensors and Process Control. An IP based camera attached to the plant will give student better look and feel of the plant. The detailed laboratory manual is available to a registered student to perform the experiments using the standard control philosophies

## Objectives of the 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.

## Presenters



**Prof. Dr. Sudhir D. Agashe**  
Professor , Department of  
Instrumentation and  
Control Engineering  
Principal Investigator  
Virtual Laboratory Project  
(NMEICT)  
College of Engineering,  
Pune.



**Amod Avinash Harankhedkar**  
Outreach Coordinator,  
Virtual Labs Project,  
College of Engineering, Pune

## Procedure to Apply

Participants limited to **100**.  
Registration on first come first served basis.  
Use following link for Registration.  
<https://forms.gle/FJEk88kbRogvEzMG6>

Registration will close on August 5, 2020 at 17.00 PM  
**Meeting details will be mailed on registered email ID on August 5, 2020.**  
E-Certificate will be issued to all active participants who submit the feedback.

## Webinar Date

6<sup>th</sup> August, 2020

## Webinar Time

12 noon to 2 PM

## Social Media



[https://www.facebook.com/Webinar-on-Virtual-Labs-109224750890603/?view\\_public\\_for=109224750890603](https://www.facebook.com/Webinar-on-Virtual-Labs-109224750890603/?view_public_for=109224750890603)



<https://eedgpmumbai.wordpress.com/>

## Chief Patron

**Dr. A.E. Wagh**  
*Director, DTE, M.S.*

## Patron

**Mr. P.A. Naik**  
*Joint Director, DTE, RO, Mumbai*  
**Dr. S.P. Yawalkar**  
*I/C Joint Director, DTE, M.S.*  
**Mr. J.R. Nikhade**  
*Asst. Director, DTE, RO, Mumbai*

**Dr. Vinod Mohitkar**  
*Director, MSBTE*  
**Mr. V.R. Jadhav**  
*I/C Secretary, MSBTE*  
**Mr. Umesh Nagdeve**  
*Dy. Secretary, MSBTE*  
**Dr. C.D. Kapse**  
*Dy. Secretary, RBTE*

## Convenor

**Mrs. Swati D Deshpande**  
*Principal*

## Co-Convenor

**Mr. S.B. Vishwarupe**  
*HOD (Electrical)*

## Coordinator

**Dr. Mahesh S. Narkhede**  
*LEE*