

## Course Contents

- Introducing the concept of remote experiential learning and the NMEICT Virtual Labs initiative
- Navigation of the Virtual Labs portal - identification of virtual experiments in engineering and science courses - brief background of the project's development and implementation
- Demonstration of Virtual Labs from different streams of study
- Novel initiatives by NITK Surathkal - Remote Triggered Labs, Virtual Tour Labs, Lagu Pata Video Tutorials - overview of other transdisciplinary activities and projects of Centre for System Design

## Resource Persons

The Programme will be delivered by a Resource team led by **Prof. K. V. Gangadharan**, *Participating Institute Coordinator Virtual Labs, NITK Surathkal*", and will be supported by team of research fellows associated with the Virtual Labs Project at the transdisciplinary centre

## Organizing Team from NITK

**Prof. K. V. Gangadharan**,  
Participating Institute Coordinator  
**Dr. Pruthviraj Umesh**  
Institute Development Coordinator  
**Dr. Mohit P. Tahlilani**  
Institute Integration Coordinator  
**Dr. Sheena**  
Institute Outreach Coordinator

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**Dr. Satish Pujari**  
Professor & Head of the Department

## Co-Convenors

**Prof. K. Sridhar**  
**Prof. K. Ch. Sekhar**

## Virtual Labs Nodal Center Coordinator

**Mr. M. Daniel Silas Kumar**  
Assistant Professor

## Department Coordinator

**Mr. M. Pradeep Kumar**  
Assistant Professor

## Organizing Committee

**Mr. R. Jagadeesh**, Assistant Professor  
**Mr. M. Gangadhar Rao**, Assistant Professor  
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**Mr. K. Srinivas**, Assistant Professor  
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An MoE Govt of India Initiative

## A ONE WEEK ONLINE FDP ON Learning through Virtual Labs for Technical Institutions 18th-22nd October, 2021

*in association with*



**National Institute of Technology  
Karnataka, Surathkal**



Organised by

**Department of Mechanical Engineering  
Lendi Institute of Engineering & Technology**

An Autonomous Institution

Approved by AICTE & Permanently affiliated to JNTUK  
Accredited by NAAC with 'A' Grade & NBA  
Jonnada (Village), Denkada (Mandal)  
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## About the Institute

Lendi Institute of Engineering & Technology is a premiere institute, established in 2008 by a divine body of committed intelligentsia under the aegis of Sai Dhamam Educational Trust of Visakhapatnam to cater to the needs of young graduates of technology. It is on the national highway near both Vizag and Vizianagaram having a lush green campus with an eco-friendly environment. Its vision is to produce globally competent and quality technocrats with human values for the holistic needs of industry and society.

Ours is an Autonomous College which is spread to all directions with a strength of over 2600 students and above 200 faculty. College is accredited by NAAC with "A" Grade, NBA with four branches and permanently affiliated by JNTU Kakinada.

Lendi offers ECE, EEE, CSE, MECH, CSSE & CSIT courses. Efficient and experienced faculty members dedicated to teaching, encouraging students to have practical exposure, individual attention, etc have made Lendi famous for its teaching traits. Offering counseling to the identified slow learners, student-teacher adoption program, allocation of choice-based internships to the students during vacation for the practical exposure, supplying Manuals for lucidity in the practical work are the extensive practices that made LENDI a hallmark for quality engineering education.

## About the Department

The Department of Mechanical Engineering has started its journey in the year 2012 and within a short period of 6 years, the department is accredited by NBA, which itself is a feather in the department's cap. The Department has well equipped laboratories and infrastructural facilities. The Department boasts of a high end Simulation laboratory, CNC Laboratory and R&D laboratory.

The Department works for the overall development of the students by inculcating the spirit of self-learning. Students are provided with a variety of opportunities and platforms for them to technically grow and by giving them a chance to investigate a broad range of areas; which propels them to learn with zeal and grow.

The faculty are trained to make the students reach their goals. They incline themselves to constantly upgrade their know-how in the field of engineering. The faculty and students have the habit of regularly publishing papers in reputed journals and present them at conferences. They are members of various international organizations which is one platform for them to enhance their latest know-how in the field of engineering.

## About the FDP

Virtual Labs, an initiative by the Ministry of Education, Government of India, under the National Mission on Education through Information and Communication Technology (NMEICT), is an e-learning platform for practical laboratory experiments on the same lines of NPTEL for classroom courses, aims at facilitating learning of engineering and sciences through experimentation in a virtual environment at the preferred pace, place and period (time) of the learner. Under the Virtual Labs project, over 125 practical lab courses consisting of approximately 1000+ web-enabled experiments from engineering and basic science streams have been designed and deployed on [www.vlab.co.in](http://www.vlab.co.in) for the use of students and faculty members. The facility would cater the students of undergraduate, post graduate, doctoral levels as well as to the faculty by providing remote-access to labs broadly in 9 disciplines and provide a complete Learning Management System where the students can avail the various tools for learning, including additional web-resources, video-lectures, animated demonstrations and self-evaluation.

### Objectives of the FDP

The Program aims to give a comprehensive understanding about the Virtual Labs initiating and enable them to explore the resources on the platform

### Expected Outcomes of the FDP

Understand the aspects of remote experiential Learning and the various efforts under NMEICT to enhance the digital learning by doing the engineering and science courses.

Understand the catalogue of learning materials and resources offered on the Virtual labs platform so that the faculty & Staff can identify content relevant to the student or course.

Broad understanding of how the initiative is being implemented at a pan india scale community driven project involving students and teachers of Nodal Centers.

Enable faculty to think & research about the scope and limitations of the project as well as opportunities for future initiatives in remote experiential learning

## About Virtual Labs NITK - Suratkal

NITK Suratkal, ranked 10th among engineering institutes in the country (NIRF) is associated with the mission of ICT aided experiential learning as one among the eleven distinguished Participating Institutes (PI) across the country. NITK is engaged in the development, maintenance and outreach of the online resources under the Virtual Labs project on behalf of Ministry of Education, and it is the only NIT to be a part of this consortium. NITK Suratkal's Centre for System Design (CSD), a transdisciplinary research and consultancy centre, which undertakes several projects of government, PSUs and other industrial establishments delivering solutions to engineering as well as managerial challenges coordinates the activities pertaining to Virtual Labs and has so far developed over 125 experiments in 15+ lab courses on the platform being used as a learning tool by students from far and wide and conducted 250+ workshops and 250+ online workshops on Virtual Labs at various institutes across the country. NITK Suratkal also mentors over 300 institutions which are serving as the Nodal Centers of Virtual Labs in application of in the teaching learning process.

### Who Can Apply

Faculty members & Staff members of AICTE approved institutions, System Analyst/Computer Programmer and Technical Staff from Govt./Govt. Aided/ Self Financing Engg. Colleges, Science & Polytechnic Colleges

### How to Register

There is **NO REGISTRATION FEE** for the program. Registrations will be limited and on a first come - first serve basis.

**Please click the link to register**

<https://tinyurl.com/VLABS2021>

**Last Date for Registration - 15th October 2021**

### Mode of Delivery & Certificate

The FDP is conducted via online mode. Participants are advised to have a Laptop or Desktop with proper internet connectivity for interactive and immersive session for Hands on Virtual Laboratory experiences. The E- Certificate will be sent through an email to all the registered participants who have attended atleast 80% attendance & have scored at least 60% marks in the Test.



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