



MAR THOMA COLLEGE FOR WOMEN

Perumbavoor, Ernakulam, Kerala.

Affiliated to MG University & Accredited "B+" by NAAC



An MHRD Govt of India Initiative

MAR THOMA COLLEGE FOR WOMEN, PERUMBAVOOR
VIRTUAL LAB NODAL CENTRE

in association with



AMRITA
VISHWA VIDYAPEETHAM

ABOUT VIRTUAL LAB

Virtual Lab is an initiative of Ministry of Human Resource Development (MHRD) initiative under the National Mission on Education through ICT.

It started with the vision of *“To enrich the learning experience through experiential learning of science, engineering and technology in a virtual learning environment at preferred pace, place and period (time).”*

Objectives:

- Set up state of art virtual experimentation facilities (through simulation) in possible areas of engineering & science.
- Set up state of art experimentation facility in selected areas of Engineering and Science education which can be used both through remote access and onsite experimental work.
- Make these facilities available to all the students and educational institutions 24 X 7.

Salient features

- Virtual Labs will provide the students facility to understand the Modelling process of a real- world system into an approximate version.
- Virtual labs will allow the students to remotely trigger an experiment in an actual lab and get the result of the experiment through the computer interface.
- Virtual Labs are a more realistic way of learning the subjects as it provides the technical input through audio and video streaming of an actual lab experiment and equipment.

Mar Thoma College for Women, Perumbavoor a Nodal Centre of Virtual Lab AmrithaViswa Vidyapeetham

Mar Thoma College for Women, Perumbavoor is recognized as a nodal center of Virtual Lab Amritha Viswa Vidyapeetham. Being a Nodal Centre under the guidance of Amritha Viswa Vidyapeetham, Mar Thoma College for Women, Perumbavoor can organize training sessions for students and faculty members on Virtual labs.

Also, by being a Nodal Center, Mar Thoma College for Women, Perumbavoor, can organize workshops as an outreach activity of Virtual Labs. Faculty members and students from nearby institutes may also be invited to attend the workshop or training programmes.

Documents regarding nodal center approval:

10:20 Request for nodal centre
External Inbox

Dr. Anupama P 05/08/2021
to virtual_labs, bcc: sijo...

Dear Sir,
This is Dr. Anupama P from Mar Thoma College for Women, Perumbavoor

As per our telephonic conversation I hereby request you to allow our college to be a nodal centre of **Virtual lab**. The following are our college details.
College Name: Mar Thoma College for Women, Perumbavoor
Affiliated University: Mahatma Gandhi University, Kottayam
Courses offering: 1 Integrated MSc Physics program, 2 PG programmes(1 aided and 1 SF),7 aided UG programs, 4 self financing UG programmes and other diploma certificate courses.

Kindly consider our request.

Thank you
Dr. Anupama P
Assistant Professor & HoD
Department of Physics
Mar Thoma College for Women

10:19 Virtual Lab nodal center program
External Inbox

Virtual Labs 16/12/2021
to mlevichandy@gmail.c...

From Virtual Labs • virtual_labs@am.amrita.edu
To mlevichandy@gmail.com
sijoagni@gmail.com
Cc Dr. Anupama P • anupama.a@marthomacollege.ac.in
physicsmarthoma@gmail.com
Date 16 Dec 2021, 4:29 pm
Standard encryption (TLS).
See security details

Dear Sir/Madam,

This is to inform you that we have received the hard copies of the Expression of Interest form as well as a Supporting document from Mar Thoma College for Women, Perumbavoor, for the **virtual lab** nodal center program

10:19 members in the prescribed format ([click here](#)) for getting unique login IDs for accessing **virtual labs**. The Institute name will update in the **virtual lab** website as well as the main website upon using **virtual labs**.

Workshop and hands-on training program: As part of **virtual lab** outreach activities, Amrita **virtual lab** team conducting hands-on training to new users at free of cost

Here are the procedures for conducting a workshop.

- A nodal centre has to organize the Workshop at their institute.
- The number of participants must be above 50 (including faculty members and students).

Click [here](#) to know about the **virtual lab** nodal center program.

Feel free to contact us for any queries.
Amrita University





Activities:

At the time of the outbreak of COVID-19 pandemic, the educational institutions are kept closed in order to avoid the spread of COVID-19. However, the online platforms are used to conduct theory subject. But the conduct of laboratory experiments are difficult as the setup is not available and students cannot do the experiments as in the case of regular laboratories at the college. In order to engage the students in the academics and make them learn to conduct online experiments Virtual Labs is an excellent platform.

Objectives:

- ✓ To engage the students in the academics and bring awareness about the Virtual labs.
- ✓ To educate the students about the virtual labs platform and guide them in conducting online experiments by using V-labs.

:



Screenshots of virtual lab activities done during lockdown:

The screenshot shows the VALUE @ Amrita website. On the left, there is a 'Nodal Centre List' section with a bar chart titled '# Nodal Centres vs. States in India'. The chart shows the number of nodal centres in various Indian states, with Karnataka having the highest number (around 75). On the right, there is a table listing nodal centres across different states, including Kerala, Tamil Nadu, and others, with columns for college name, address, and contact person.

This screenshot shows the Google Classroom interface for 'II DC MATHS'. The 'Classwork' tab is active, displaying a list of lab activities. The activities include 'III Sem. Physics Lab' and several experiments such as 'Demonstration of Experiment No. 4 - Zener...', 'Experiment No. 6 - Spectrometer Dispersive...', 'Experiment No. 5 - Tangent Galvanometer', 'Experiment No. 4 - Zener Diode Characteris...', and 'Experiment No. 2 - Torsion Pendulum'.

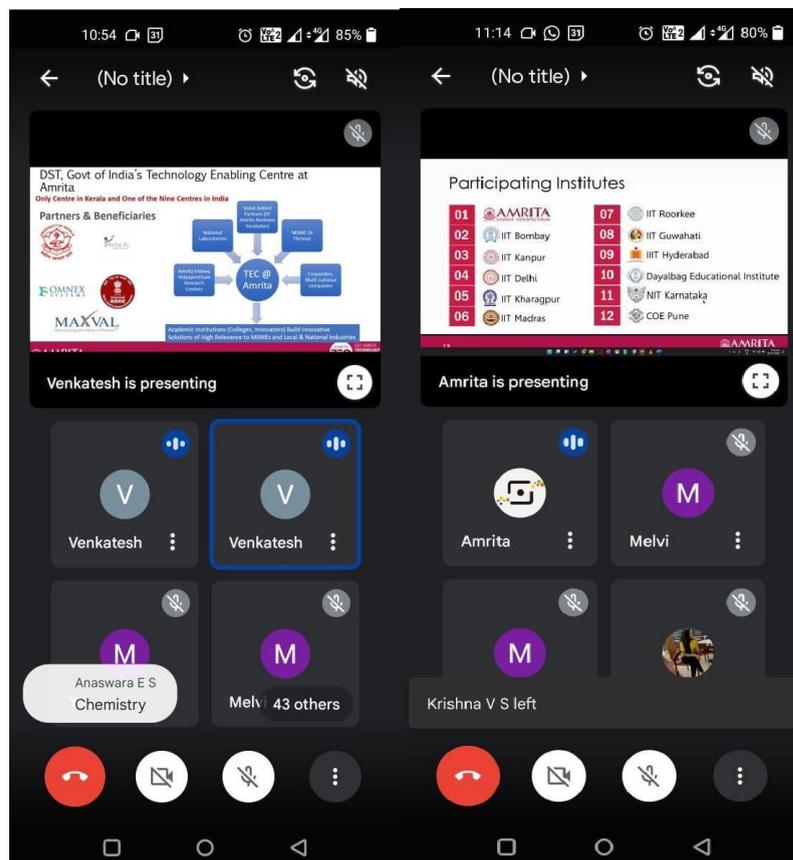
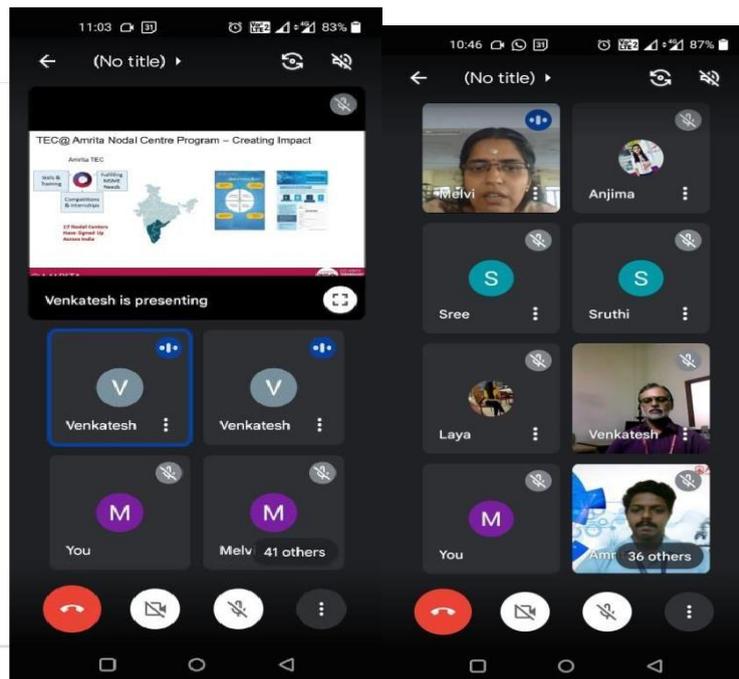
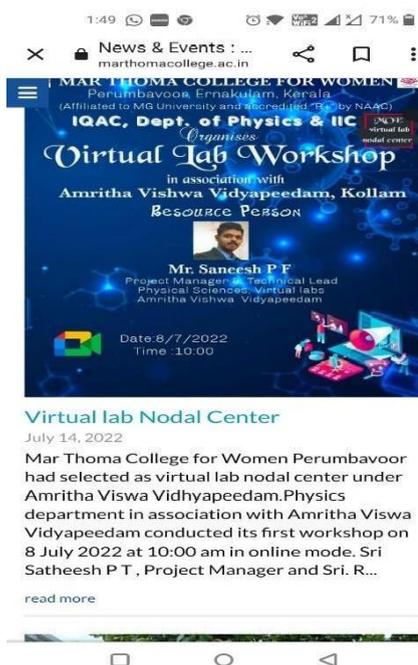
This screenshot shows a detailed view of a lab activity in Google Classroom. It features a video player for 'Torsion Pendulum - 1.mp4' and 'Torsion Pendulum - 2.mp4'. Below the video, there are links to additional resources and a section for class comments. The activity is titled 'Demonstration - Expt. No. 2 - Torsion Pen... - II 2' and was posted on Sep 25, 2020.

This screenshot shows a virtual lab interface for 'Torsion Pendulum'. The interface includes a dashboard with a 'Site home' button, a calendar, and a list of courses. The main content area displays 'Day 6' and 'Day 7' sections, with instructions for the experiment and assignment details. The interface is designed to guide students through the virtual lab activity.



Webinar

The first webinar of virtual lab was conducted on 7 August 2022. Mr. Saneesh P. F., Project Manager, Technical Lead Physical Sciences virtual lab, Amritha Viswa Vidyapeetham was the resource person. Students from B.Sc Physics, B.Sc Chemistry and B.Sc. Mathematics participated in the webinar.



Workshop

A workshop on virtual lab was conducted at Mar Thoma College for Women, Perumbavoor on 24 March 2023. Mr. Saneesh P. F., Project Manager and Technical Lead, Physical Sciences Virtual Lab, Amrita Viswa Vidyapeetham and Mrs. Nijin N., Research Associate, Amrita Brain Center, AmritaViswa Vidya Peetham gave hands- on training to students from B.Sc. Physics, B.Sc.Chemistry and B.Sc. Mathematics

