

# Sree Narayana Mangalam College, Maliankara

(Affiliated to Mahatma Gandhi University, Kottayam)

## **COLLABORATION WITH**

### **Amrita Virtual Labs**



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#### ONLINE FACULTY DEVELOPMENT PROGRAMME ON VIRTUAL LABS

Introduction: Virtual laboratory is an initiative of Ministry of Human Resource and Development, Government of India under National Mission on Education through Information and Communications Technology (NME–ICT). This initiative provides an opportunity for all students and teachers to use virtual labs free of cost. Virtual Labs are located on an open webpage that can be accessed by anyone through a web browser at any time. It is an elearning tool for distance learning and/or experimentation that allows people to share knowledge, data, voice, video, tools, and many other resources. Using virtual labs, a variety of laboratory experiments can be conducted virtually using animation, simulation or remotely triggered hardware. Laboratory experiments are modelled very close to real-life experiments.

Amrita Virtual Labs: Virtual Lab at Amrita Intelligent Development of Virtual Laboratories provide state-of-the-art computer simulation technology to create real world environments and problem handling capabilities that are required to bridge the gap between institutions that retain the physical laboratory and distantly placed economically challenged educational institutions. Amrita virtual lab courses richly rely upon new up-to-date content and various techniques that require a new synergy of knowledge and experimental implementation. They provide knowledge of basic & advanced topics through remote experimentation and give a framework of a complete Learning Management System which will equip both students and teachers with the various tools necessary for a complete learning process like different web-resources, video lectures, animated demonstrations and self-evaluation. They provide high quality remote laboratory for students at undergraduate and post-graduate levels and also for teachers of the country on various subjects like Physical Science, Chemical Science, Biological Science, Mechanical Engineering, Computer Science etc and thus contributing to an increase in effectiveness of scientific research and widening of the use of scarce or costly equipments.



**Description of the programme:** S.N.M College, Maliankara being the nodal centre of Amrita Vishwa Vidyapeetham's Virtual Amrita Laboratories Universalizing Education (VALUE), the IQAC of the college organised a five day online Faculty Development Programme on Virtual Labs in collaboration with Amrita Virtual Labs from 25<sup>th</sup> to 29<sup>th</sup> of May 2023. The workshop was conducted online through the virtual platform GOOGLE MEET from 7 pm to 8 pm. Resource persons were Mr. Saneesh P F, Project Manager in VALUE Virtual Labs, Amrita Vishwa VIdyapeetham, Amritapuri, Kollam and Prof. Krishnashree Achuthan, Principal Investigator in VALUE Virtual Labs, Amrita Vishwa VIdyapeetham, Amritapuri, Kollam. The methodology used was live demonstration of virtual lab experiments from university website vlab.amrita.edu followed by hands-on practice sessions for the participants.

**Aim:** To provide a complete Learning Management System for laboratory education where the teaching and learning experience is enriched through simulations, additional web resources, video lectures, animated demonstrations etc.

#### **Objectives:**

- To create awareness on virtual labs.
- To integrate virtual labs into teaching and learning practices.
- To use virtual labs for performing laboratory experiments and thereby making the practical experiments easier.

On day 1, Dr. Baiju E C, IQAC Coordinator & Assistant Professor, Department of Botany, SNMC welcomed all the participants and gave an overview of the programme. The resource person Mr. Saneesh P F, shared the concept of virtual lab with the participants. He discussed on how to transform the teaching using virtual labs and how virtual labs help to effectively engage students in laboratory experimentation.



On day 2, Mr. Saneesh demonstrated various experiments from Physical science, Chemical science, Biological Science, Computer Science and so on using the Virtual Labs website and cleared doubts of the participants regarding demonstration of experiments in virtual labs.

On day 3, Prof. Krishnashree Achuthan presented a talk on innovative teaching using virtual labs. She shared various methods to practice virtual labs as part of curriculum and how to engage students in the laboratory learning exercises.

On day 4, Mr. Saneesh introduced learning techniques (e.g. active and cooperative learning, real-world learning etc.) that can be incorporated with virtual labs for enhancing interactivity of students with the platform. His presentation covered topics like scientific simulations, interactive animations. remotely triggerable experiments, guided videos of experimental procedures etc.

On day 5, Nitha A U, NAAC Coordinator & Assistant Professor, Department of Economics, SNMC welcomed all the dignitaries of the programme for the hands-on training session. The practise session covered all topics starting from how to open the corresponding website to access a particular experiment, describing in detail each and every step. Dr. Lakshmi S Bose, Assistant Professor, Department of Physics, SNMC chaired the sessions. The programme ended with a vote of thanks by Dr. Neena P, Assistant Professor, Department of Physics, SNMC. At the end of the programme participants were requested to fill up the feedback form shared via whatsapp group.



**Programme Outcome:** The five day online Faculty Development Programme on Virtual Labs offered a great opportunity for all faculty members of S.N.M College involved in the Department of Physics, Chemistry, Botany and Zoology to learn more about Virtual Labs. Around 37 participants including students and faculties from various instituitions attended the workshop. The programme opened up a common platform for participants were from multidisciplinary areas to explore the various concepts of virtual labs. Both students and faculties started using the website vlab.amrita.edu effectively to perform experiments in virtual lab. The positive feedback response received from the participants indicated a promising future for virtual Labs in mainstream education.

#### **Brochure**

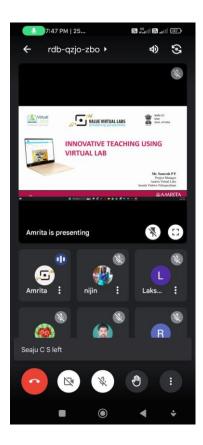


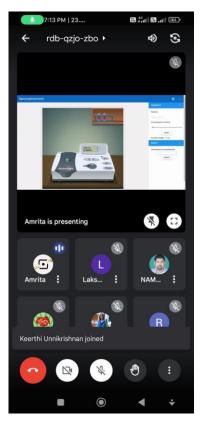


#### Certificate

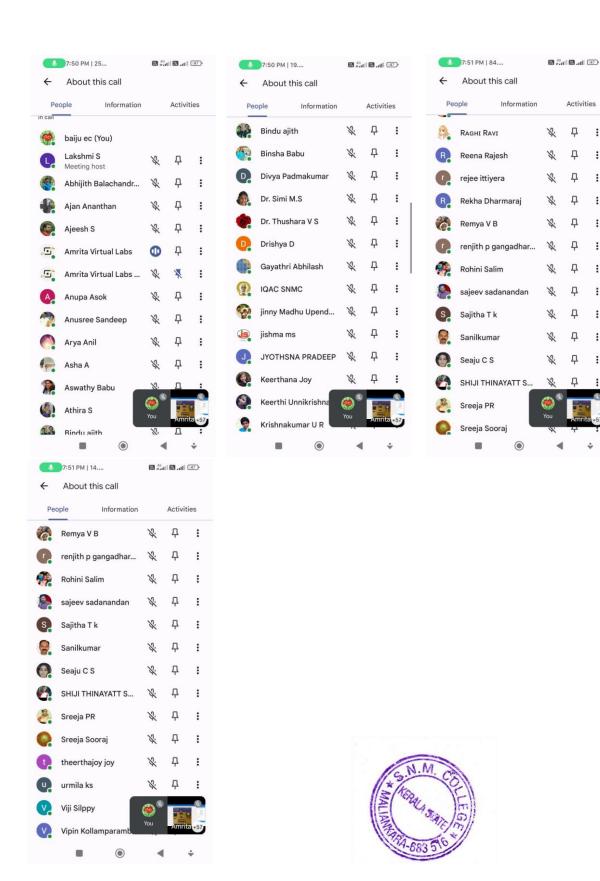


#### **Photos**









Activities

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### List of Participants

SL NO	Name of the teacher	Title of the programme	Duration
1	Dr Jitha T H	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
2	Sreeja P R	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
3	Ragi Shekharan K	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
4	Viji M P	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
5	Shiji T S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
6	Sonu V Sagar	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
7	Sajeev Sadanandan	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
8	Dr Renjith P G	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
9	Binsha B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
10	Dr Ajeesh S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
11	Drishya Dileep	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
12	Anupa Asok K	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
13	Arya A	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
14	Vismaya K B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
15	Dr Babitha K	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
16	Dr Bindu T R	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
17	Nikhil M B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
18	Nitha A U	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023

19	Sreeja V S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
20	Saipriya Sudarsan	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
21	Vipin K D	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
22	Dr Jyothsana	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
23	Ajan K A	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
24	Dr Sreejamol P R	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
25	Dr Neelima C A	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
26	Ninu S Lal	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
27	Rejee Ittiyera	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
28	Linu M N	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
29	Manju N	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
30	Dr Reena T S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
31	Dr Krishnakumar U R	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
32	Theertha Joy	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
33	Dr Neena P	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
34	Priya S Nair	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
35	Sunilkumar C P	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
36	Dr Lakshmi S Bose	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
37	Namith Navakrishnan	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
38	Dr Urmila K S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
39	Dr Sanilkumar M G	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023

40	Dr E C Baiju	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
41	Asha A	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
42	Dr Simi M S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
43	Dr Thushara V S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
44	Minu M	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
45	Dr Rekha Parthasarathy	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
46	Archana K S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
47	Anusree K U	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
48	Preena N	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
49	Dr Resmi V C	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
50	Dr Gayathri T H	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
51	Lt Akhil J	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
52	C.S. Seaju	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
53	VD Resmi	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
54	T.K. Sajitha	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
55	Liji CB	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
56	Sibi.M.B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
57	Aparna C.S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
58	Raghi Ravi	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
59	Sujapriya S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
60	Jinny PJ	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023

61	Remya V B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
62	Divya K Mani	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
63	Shary K G	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
64	Athira S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
65	Nikhil A B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
66	Raghi K K	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
67	Athira N S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
68	Ajeesh Bose	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
69	Komal K.R	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
70	Soumya C B	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
71	Sruthy T P	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
72	Neethu Murali	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
73	Nisha T X	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
74	Deepa D S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
75	Sreedevi K S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
76	Jishma M S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
77	Rohini V Salim	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
78	Keerthi Unnikrishnan	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
79	Aswathy Babu P	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
80	Dhanitha M S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
81	Keerthana Joy	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023

82	Krishnapriya M L	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
83	Pramitha Lekshmnan	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
84	Geethu C S	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023
85	Priya M R	FDP organized by Amrita Virtual Labs	25/05/2023-29/05/2023

