

Santosh Noronha
Chemical Engineering :
Healthcare, Educational Tech :
Indian Institute of Technology Bombay, Powai, Mumbai, 400 076, India.

noronha@iitb.ac.in
(22)25767238 / 25764246
(22)25764227

NCID - 90

VL/MP4/NC90/22

28th January 2022

To,

Dr. Rupesh V. Bhortake
Marathwada Mitra Mandals Institute of Technology
Sr.No. 35, Plot No. 5/6, Lohgaon, Pune - 411047, Maharashtra
Pune - 411047, Maharashtra

Dear Sir/Madam,

With reference to your Expression of Interest for Virtual Labs Nodal Centre (VLNC), it gives me immense pleasure to designate your college as a Nodal Centre for Virtual labs. As recommended by you, **Prof. Devyani J. Bonde** has been nominated as the Nodal Coordinator and **Prof. Abhay Jadhav** has been nominated as the Nodal Technical Coordinator from your college. This approval is valid up to 31st Dec 2022 and is subject to the Terms and Conditions attached and any subsequent directives as issued by MoE.

Kindly acknowledge receipt of this letter and acceptance of the Terms and Conditions.

We thank you again for your interest in the Virtual Labs project and appreciate your endeavour in the service of the student community. Wishing you all the best!

Sincerely,



Prof. Santosh Noronha

Expression of Interest for setting up Virtual Labs Nodal Centre 2022

Eligibility

1. The Virtual Labs Nodal center (VLNC) should be a Central/State University or Institute/college approved by **AICTE/UGC**.
 2. The Institute has to provide a designated/common lab space having **45 PCs or more**, with a minimum **2 Mbps internet broadband connection**, A.V facility and a multimedia projector.
 3. In the event that the internet network operates behind a firewall, the VLNC undertakes to open specific communication ports to facilitate VLab network traffic. Specifically ports 3306, 5900, 5902, and 8700 will need to be opened.
 4. <http://www.java.com/en/download/index.jsp> must be downloadable through the internet and **Gmail / Facebook** should be accessible. (a feature of single sign-on using these apps to access certain labs).
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Terms & Conditions

1. There is **no financial liability** of any party for using Virtual Labs. It is free to use.
 2. The VLNC cannot charge students for the use of Virtual Labs.
 3. One Nodal Coordinator & Nodal Technical Coordinator, for Virtual Labs should be nominated by the Head of the Institute (Director / Principal) at the respective Nodal Centre.
 4. Renewal of EOI form is subjected to fair usage of the Virtual Labs.
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Nominations and Responsibilities of the Nodal Centre

1. Nodal Coordinator and Nodal Technical Coordinator will be appointed at each Nodal Centre by the Head of the Institution.
 2. He/she should continue with his/her responsibilities for at least one semester.
 3. Requests for change of Nodal Coordinator and Nodal Technical Coordinator will not be accepted in the middle of the semester, except in extreme circumstances, for example where the Coordinator proceeds on leave or quits the Institute. Nomination of a new Nodal Coordinator and Nodal Technical Coordinator will be accepted upon receiving confirmation from the previous Nodal Coordinator and Nodal Technical Coordinator.
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Roles & Responsibilities of the Nodal Coordinator /VLNCC

1. The Nodal Coordinator (NC) will be the main interface between the Outreach Team of Virtual Labs, IIT Bombay and the Nodal Centre.
 2. He/She will **conduct training** sessions for students and faculty members on in his/her Institute.
 3. NC may take help from other faculty members and support staff to coordinate training programmes in their respective institutes.
 4. He/She is required to work towards **making Virtual Labs popular** among the students.
 5. He/She is required to help in **Field Testing** the labs and in collation of end-user **Feedback** for the experiments of different Labs.
 6. He/She is required to help in testing and debugging Virtual Labs while using them.
 7. **A monthly progress report regarding Virtual Labs usage by the students must be submitted by the Nodal Coordinator to the IIT Bombay, duly signed by the Director/Principal of the Institute.**
 8. Should conduct outreach workshops. The targeted attendees should be approximately 100. The list of participants should be shared with IIT Bombay.
 9. RNCs will coordinate workshops. If required, the Outreach team from IIT Bombay may be invited, expenses of which to be incurred by the Nodal center.
 10. The number of lab usages is expected to be greater than **8000** per year.
 11. The Outreach Team, IIT Bombay should be informed about workshop dates and other training sessions organized by the Nodal Centre.
 12. The Nodal Coordinator should **submit a report** of each workshop conducted, with relevant photographs. A template for the report will be shared by IIT Bombay.
 13. The NCCs will be responsible for engaging with the nearby Polytechnic Colleges. This will be followed by extensive on-site workshops and training.
 14. The exchange of ideas and discussions take place during the NCCs meetings, which will be held regularly. Regular workshops and teacher-training would also form a part of this activity.
 15. Maintain a regular communication with IITB, Regional Coordinator and the Regional Technical Coordinator.
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Roles & Responsibilities of the Nodal Technical Coordinator (VLNCTC)

1. Should be a faculty with technical experience in Networking, Troubleshooting & Web Programming Skills.
 2. Must assist the Nodal Center`s technical set-up (computer lab/center) during the workshops.
 3. Mentor students & faculties towards, new virtual labs development (developing web based animations, using HTML, Javascript & other FOSS technologies).
 4. Should help the other Nodal Center, as well as the departments (in-house) in smooth conduction of the Virtual Labs activities.
 5. Should demonstrate team building, problem solving skills and provide technical assistance during the new virtual labs development, at the Nodal Center.
 6. Should be ready to travel to the other Nodal centers as required, or or as per the directives from IIT Bombay, for the meetings & workshops.
 7. Maintain regular communication with the technical & development team of IIT Bombay.
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Responsibility of the Outreach Team

1. To provide training and hands on practice on Virtual Labs to Nodal Coordinators and supporting staff.
2. Training / Meeting session will be conducted at any Nodal Centre or at IIT Bombay, as per the advertised date and time.
3. Maximum two members with Nodal Coordinator from each Nodal centers may attend the training session.
4. No TA/DA will be given to Nodal Coordinators and supporting staff for attending training session.
5. Onsite support may be given upon request by Regional Nodal centers.
6. The Outreach team will keep the Nodal centers informed about the Labs under development and newly developed Labs in Virtual Labs.
7. The Outreach team may visit Nodal centers on workshop day to ensure smooth conduct of the workshop.

Disclaimer: The terms for the next phase are reviewed by MHRD. These terms are therefore potentially subject to change. Currently being reviewed by MHRD.

Field Trial Methodology

1. Virtual Labs Team organises Workshop as well as hands on practice session on Virtual Labs for various Science & Engineering Institutions, at a Nodal center / Regional Centre.

2. Department wise demonstrations are given to the students by Nodal/Regional coordinators.

3. Labs are demonstrated according to the syllabus of the ongoing semester.

4. Faculty members of the concerned department should be present during the demonstration.

5. After the demo of the Virtual Labs, hands on sessions are conducted.

6. On completion of the demo and hands on, the faculty members and the students have to submit the feedback forms to the Virtual Labs team.

7. Faculty members participate in the workshop and are encouraged to express their interest for, nominating their institutes as Nodal center for Virtual Labs.

(By sending the Head of the institutes Email, Phone, Full Name and Name of the Institute, to IITB Team/Nodal Coordinator).

IIT Bombay holds the final decision for the approval of the institute as a Nodal center/Regional.

8. There is a provision of EOI (Expression of Interest) form to become a Nodal center of Virtual Labs.

9. The EOI form contains all the details, eligibility criteria, role of Nodal center as well as the Nodal coordinator. The Credentials to fill the same shall be sent to the Head of the Institute.

Methodology for conducting workshop/lab session at Nodal Centre

Before workshop/Lab Session

While planning the activity, we follow the procedure given below:

1. Upload the **Semester Planner** well in Advance before conducting the workshop.

2. **Identify Labs** for students related to their syllabus.

3. In case a complete Lab is not available, a mixed combination of experiments to match their studies is listed by respective department coordinators.

4. **Sort out 10-15 such experiments and test it** on random machines in the computer lab.

5. Nodal Coordinator to login to their account and must **Add Workshop** for more details visit the outreach portal and look for Tutorials.

6. Conduction of workshop.

*** For more details refer the tutorial on the outreachportal
On the day of workshop/Lab**

Being Nodal/Departmental Coordinator, you can address the students on following points (With approximate timeline):

1. Addressing Students (Welcome to (your college name and about your college) .(1 minute)
2. Introduction to Virtual Labs (2 minutes)
3. Introduction to Website vlab.co.in (1 minute).
4. Students to Subscribe the Facebook Page <https://www.facebook.com/VlabsIITB/> (1 minute)
5. Instruction for Feedback Form. (2 minutes), Students must be shown the Feedback form link : <http://vlabs.iitb.ac.in/feedback/>
6. Respective subject department Coordinator/faculty then briefs them about experiments assigned. List out all experiments to them, to be filled in the Feedback form. (1 min).
7. Hands on Session (1 hrs, 30 minutes) under the guidance of the Team.
8. Submission of the online Feedback Form by the Users.
9. Nodal coordinators/faculty. Make sure the forms are duly filled (form the online dashboard).

After the workshop/Lab Session:

1. Nodal Coordinators must validate the feedback forms, check if the number of Feedbacks are equivalent to the users in the attendance sheet.
 2. Prepare the Usage reports. Get it signed by the Head of the Institute. (a copy to be kept with Nodal Coordinator) For instructions see the tutorial on the Outreach Portal website.
 3. Upload the softcopy on the outreach portal & post the duly signed hard copies to IITB address.
 4. Upload One picture of the event (group photos of workshop) during uploading the Reports on the outreach portal.
 5. Report if any issues occurred for conducting experiments to IITB Vlabs team.
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Additional Policies

1. The Nodal Centre cannot use IIT Bombay's brand name in any form (text, logo , photo) for the promotion of Virtual Labs without seeking official permission for, workshops, events or any kind of promotions.
 2. The Nodal Centre cannot use Virtual Labs Logo for workshops, events or any kind of promotions without seeking official permission from IIT Bombay.
 3. Any event Rollout/Outreach to be conducted needs to be logged on the outreach portal well in advance.
 4. The Nodal/Regional centre has to inform and seek permission well in advance before publishing the Press Release, Event Brochures/Flyers, Research Papers, Any kind of advertisement on Print and Online media (Social Media)
 5. The Nodal / Regional Centre has to share the details of the participants and the organizer of any event related to Virtual Labs, with the IIT Bombay.
 6. Nodal/Regional Centres cannot promote contents from VLabs with an intention to monetize/commercialize.
 7. IIT Bombay may disapprove the Nodal/Regional Centre, if found violating the above mentioned policies and the T&C.
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Expression of Interest for setting up Virtual Labs Nodal Centre - 2022

Full name of Institute: Marathwada Mitra Mandals Institute of Technology

Institute Acronym: MMIT **Latitude:** 18.61240020942445 **Longitude:** 73.94042375447053

Address: Sr.No. 35, Plot No. 5/6, Lohgaon, Pune - 411047, Maharashtra, Pune - 411047, Maharashtra

Affiliated to: Savitribai Phule Pune University

Approved By: AICTE **Approval Number:** 1-9847593

Branch of Engineering/Science and Number of Students / Faculties:

Basic and Applied Sciences - 226 / 5

Civil Engineering - 138 / 7

Computer Engineering - 392 / 16

Mechanical Engineering - 280 / 12

Mechatronics Engineering - 37 / 3

Total: 1073 / 43

Total number of computers in lab (one or more labs) within the institute: 487

Total number of computers available for Virtual Labs use: 200

Internet Bandwidth (in mbps): 50

Head of Institute/Principal: Dr. Rupesh V. Bhortake

Email: principal@mmit.edu.in **Mobile:** 9049008003

Nodal Coordinator: Prof. Devyani J. Bonde

Email: devyani.bonde@mmit.edu.in **Mobile:** 9011076515

Department: Computer Engineering

Nodal Technical Coordinator: Prof. Abhay Jadhav

Email: abhay.jadhav@mmit.edu.in **Mobile:** 8605653347

Department: Computer Engineering

Certified that

- The institute is recognized by AICTE/UGC.
- The institute has necessary and adequate infrastructure to host Virtual Labs.
- Strict adherence to standard lab procedures and cyber security laws will be followed.
- Virtual Labs, IIT Bombay may withdraw/stop connectivity without giving any prior notice or reasons.
- This EOI for Virtual Labs usage is valid upto 31st December 2021 and requires renewal by IIT Bombay for continued support.

Head of Institute / Principal

Signature & Stamp

Principal
Marathwada Mitra Mandal's
Institute of Technology
Lohaon, Pune-47



Date: Jan 06, 2022

**Scan and upload the duly signed ORIGINAL SOFT COPY of this EOI.
Keep the HARD COPY with you in a Virtual Labs file for the record.**



IIT Bombay



Nodal Center- Marathwada Mitra Mandals Institute of Technology

Region- Pune

Date- 27-02-2021

NCID- 90

SNo.	Roll No.	Name	Department
1	70	Ammar Sakriwala	Computer Engineering
2	SEB62	Anagha Ingale	Computer Engineering
3	ITT001	devyani Bonde	Computer Engineering
4	CET011	Dinesh Satre	Computer Engineering
5	SEB75	Jivan Lulle	Computer Engineering
6	SEB60	komal kharsade	Computer Engineering
7	CET039	komal Surawase	Computer_Engineering
8	CET048	Mrunal Jagtap	Computer Engineering
9	SEB79	Neha Londhe	Computer Engineering
10	SEB72	Prachi Shinde	Computer Engineering
11	CET025	Pranjali Deshmukh	Computer Engineering
12	SEB82	Pooja Gund	Computer Engineering
13	SEB58	RAKHI MANAWARE	Computer Engineering
14	69	Renuka Chalvadi	Computer Engineering
15	91	Ruchika Bhoite	Computer Engineering
16	1	SANJAY AGRAWAL	Computer Engineering
17	SEB71	Shivam Rahinj	Computer Engineering
18	SEB89	Shubham Reddy	Computer Engineering
19	CET013	Sneha Shinde	Computer Engineering
20	SEB78	Snehal Barawkar	Computer Engineering
21	SEB84	Snehal Shinde	Computer Engineering
22	CETO47	SONALI BORAWAKE	Computer Engineering
23	CET007	SONALI MULEY	Computer Engineering
24	CET010	SUBHASH RATHOD	Computer_Engineering
25	86	Swati Khod	Computer Engineering
26	CET035	Tejaswini Bhoje	Computer Engineering
27	CET034	Umakant Tupe	Computer Engineering
28	SEB76	VAISHNAVAI MAHAJAN	Computer Engineering

Nodal Coordinator Signature

- 1. SCAN and Upload the duly signed original SOFT COPY of this Monthly Report.**
- 2. Keep the HARD COPY with you in a Virtual Labs file for the record.**

Virtual Labs– IIT Bombay: Feedback Form

(Total No. of Expt Performed)

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Name:	Date:
Institute:	Faculty: Student:
Email:	Class:
Phone:	Subject:

Details of Experiments Performed

Sr.No	Name of the Lab	Name of the Experiment
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Questionnaire: Please indicate your agreement with the following statements	Excellent	V.Good	Good	Fair	Poor
The degree to which the actual lab environment is simulated					
The manuals were found to be helpful					
The results of experiment were easily interpretable					

Questionnaire: Please tell your agreement with the following statements	Yes	No
Did you get the feeling of actual lab while performing the experiments?		
Do you think performing experiments through Virtual Labs is more challenging than the real lab experiments?		
Do you think performing experiments through Virtual Labs gives scope for more innovative and creative research work?		
Did you go through the Manual / Step by step method before performing the live experiments?		
Do you find the theory part useful?		

How helpful is the system?

Specify the problems/difficulties you faced while performing the experiments

Indicate aspects you found interesting about the experiments

Signature: _____

Virtual Labs Usage Planner

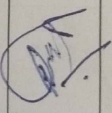
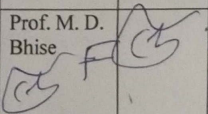




Semester: Even Sem Year: 2020- 2021


Name of the Institute: Marathwada Mitra Mandal's Institute of Technology

VLNC ID: 90

Sr No	Name of Dept./ Dept. Coordinator	Subject/ Subject Teacher	VLab Available with website link (Y/N)	No. of VLab Practical planned as per syllabus (A)	No. of VLab Practical planned for content beyond syllabus (B)	No. of students in class (C)	Tentative Usage of Individual subject (A+B)*C	Tentative Dept . No. User /No.Usage	Name of VLabs Dept. Coordinator	HOD
1	MECH (Mechanical Engineering) Prof R. G. Mahajan	ETD (NBD)	Y	1	0	46	46	981/1912	Prof. R. G. Mahajan	
		KoM (DMB)	Y	1	0	25	25			
		ATD (NBD)	Y	2	0	72	72			
		FM (RPP)	Y	1	1	25	50			
		SM (GLA)	Y	1	0	90	90			
		EEE (MRY)	Y	1	1	30	60			
		NMO (SPY)	Y	1	0	108	108			
		RAC (SGN)	Y	1	0	10	10			
		MTRX (RGM)	Y	2	1	90	270			

		MP -II (SSM)	Y	2	2	108	432			
		MSD (DPY)	N	1	1	110	220			
		Robotics (GGJ)	N	1	1	24	48			
		IE (GLA)	N	1	0	86	86			
		M-III (SRS)	N	0	1	45	45			
2	CSE (Computer Science & Engineering) (Prof. K. S. Surawase)	Information and Cyber Security(STS)	Y	3	1	116	464	985/3216	Prof. K. S. Surawase	
		ERTOS(KSS)	Y	1	0	116	116			
		SPOS(DJB)	N	1	1	71	142			
		WT(SSM)	Y	3	1	71	284			
		SMD(SAA)	N	1	1	71	142			
		Microprocessor(PVD)	Y	7	1	125	1000			
		Microprocessor(PVD)	Y	4	1	125	625			
		Software Engineering(TSB)	Y	6	1	125	875			
		M-III(AP)	Y	4	1	125	625			
6	CIVIL (Prof. M. D. Bhise)	CT(Poonam Kokate)	Y	5	0	15	75	207/621	Prof. M. D. Bhise	
		GT(Prajakta Shinde)	Y	2	0	15	30			

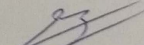
		SURVEY	Y	1	0	15	15			
9	First Year	Engg. Mechanics	Y	1	0	63	63	243/603	Prof. S. R. Shaikh	  For HOD
	(Prof. S. R. Shaikh) DY.	Engg. Physics	Y	3	0	90	270			
		Engg. Chemistry	Y	3	0	90	270			
10	Outreach Workshop 1: D. Y. Patil Institute of Technology Lohgaon							Tentative Workshop Usage:	50	
11	Outreach Workshop 2: Wadia Polytechnic							Tentative Workshop Usage:	50	
Targeted Total Usage In-house							No of Users / No of Usage ex: (500/7000)	2416/6 352		
Targeted Total Usage Outreach							No of Users / No of Usage	60/100		
Targeted Total Institute Usage (In-house + Outreach):							No of Users / No of Usage	2476/ 7352		


Nodal Coordinator

Instructions & Guidelines:

- 1) Nodal Coordinator will conduct meeting of all the VLAB Department Coordinators &
 - a) Brief the importance and benefits of Virtual Labs &
 - b) Explain how online feedback is to be submitted by the students.




PRINCIPAL
 (Sign & Stamp)
 Marathwada Mitra Mandal's
 INSTITUTE OF TECHNOLOGY,
 Lohgaon, Pune-47

- 2) VLAB department coordinators should brief the staff members of their respective department about points explained in step 1.
- 3) Subject teacher has to find out the VLABs available for his/her subject for the ongoing semester course.
- 4) Nodal Coordinator should collect the VLAB plan from various department coordinators at the beginning of the semester in above format.
- 5) Time Table of the VLAB In-House activity should be communicated to the Nodal Coordinator who in turn will upload it on IITB outreach portal.
- 6) During Virtual Lab activity, the subject teacher should explain to the students the method of online submission of feedback and ensure the submission of feedback by every student.
- 7) The institute should take the responsibility to take due care to achieve the final proposed usage by the end of the semester.
- 8) The respective Regional Coordinator has to be updated by the Nodal Coordinator for all outreach activities via email.

Benefits of Virtual Lab Platform:

- ❖ It provides students with additional learning resources using ICT tools.
- ❖ Teachers can integrate classroom teaching with virtual experimentation.
- ❖ Teachers can provide contents beyond syllabus through virtual experimentation.
- ❖ Once explained, students can learn at their own pace (available 24x7).
- ❖ Virtual Lab development can be offered to students as an additional course (full time /audit).
- ❖ Provides new virtual lab development opportunities for students and faculty.