MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

L&T Technical Certification Program

Sr. No.	Organizing Body	Name of the Faculty	Name of Student/s(No. of Students	Programme/ Year / Div	Dates	Details of Events	National/ International/ Intra University
1	L&T Corporate Training Technical Academy, C-TEA Madh	Prof. A. C. Mehta and Prof. Vinod Jain	19	BTech 3rd Year and 4th Year (Mechatronics, Mechanical and EXTc)	8th Dec - 30th Dec 2016	SVKM's NMIMS MPSTME Mumbai and L&T Madh campus have jointly designed a value added training program of 4-weeks duration (Anubhav) for the B.Tech 3rd/4th Year students as an alternative to internship for B.Tech program, to be conducted at L&T Corporate Training Technical, Academy C-TEA Madh campus.	Intra University
2	L&T Corporate Training Technical Academy, C-TEA Madh	Prof. A. C. Mehta and Prof. Vinod Jain	27	BTI/ BTech 3rd Year (Mechatronics, Mechanical and EXTc)	4th - 27th June 2018	SVKM's NMIMS MPSTME Mumbai and L&T Madh campus have jointly designed a value added training program of 4-weeks duration (Anubhav) for the B.Tech 3rd Year and BTI students as an alternative to internship for B.Tech program, to be conducted at L&T Corporate Training Technical, Academy C-TEA Madh campus.	Intra University
3	L&T Corporate Training Technical Academy, C-TEA Madh	Prof. Vinod Jain	20	BTI/ BTech 3rd Year (Mechatronics, Mechanical and EXTc)	2nd - 25th May 2019	Same as above	Intra University

MUKESH PATEL SCHOOL OF TECHNOLOGY MANAGEMENT & ENGINEERING

Rexroth Bosch Group

Technology Development Program (TDP)

Sr. No.	Program's Name	Program's Date	No. of days	No. of Participants	Resource Persons
1	Larsen & Toubro Basic	7th-9th Jan,2014	3	21	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
2	Larsen & Toubro Basic	10th-12th March,2014	3	21	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
3	Larsen & Toubro Basic	14th-16th July,2014	3	20	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
4	Larsen & Toubro Advanced	28th-30th Oct,2014	3	6	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
5	Larsen & Toubro Basic	10th-12th Dec,2014	3	13	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
6	Larsen & Toubro Basic	23rd-25th March,2015	3	13	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
7	Larsen & Toubro Advanced	11th-13th May,2015	3	14	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
8	Larsen & Toubro Basic	10th-12th Aug,2015	3	8	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
9	Larsen & Toubro Motion Control Module (PRAYAG)	17th-21th & 24th-27th Aug,2015	9	187	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
10	Larsen & Toubro Motion Control Module (PRAYAG)	17th,18th,21st,22nd Sept,2015	4	83	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
11	Larsen & Toubro Motion Control Module (PRAYAG)	13th-14th Oct,2015	2	40	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
12	Larsen & Toubro Motion Control Module (PRAYAG)	3rd-4th Nov,2015	2	42	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
13	Larsen & Toubro Basic	19th-21st Jan,2016	3	11	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
14	Larsen & Toubro Motion Control Module (PRAYAG)	19th,20th,22nd &23rd Aug 2016	4	92	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
15	Larsen & Toubro Basic	1st, 2nd & 3rd Sept 2016	3	11	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)

16	Larsen & Toubro Motion Control Module (PRAYAG)	23rd, 24th & 26th Sept 2016	3	63	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
17	Larsen & Toubro Basic	11th-13th Jan,2017	3	6	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
18	Larsen & Toubro Motion Control Module (PRAYAG)	24th, 25th, 26th and 27th July 2017	4	92	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
19	Larsen & Toubro Motion Control Module (PRAYAG)	31st July, 1st, 2nd and 3rd Aug 2017	4	92	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
20	Larsen & Toubro Motion Control Module (PRAYAG)	7th, 8th, 11th and 12th Sept 2017	4	92	Prof. Vinod Jain(Mechatronics)
21	Larsen & Toubro Customized Basic	24th , 25th and 26th Sept 2017	3	19	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Ashish Deshmukh, Prof. Girish Bagale (Mechanical)
22	Larsen & Toubro Hydraulics and Pneumatics (PRAYAG Advanced)	28th and 29th Sept 2017	2	28	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
23	Larsen & Toubro Hydraulics and Pneumatics (PRAYAG Advanced)	3rd and 4th Oct 2017	2	29	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik, Prof. Girish Bagale (Mechanical)
24	Larsen & Toubro Motion Control Module (PRAYAG)	19th, 20th, 23rd July 2018	3	75	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik(Mechanical)
25	Larsen & Toubro Motion Control Module (PRAYAG)	9th, 10th, 13th and 14th Aug 2018	4	100	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik (Mechanical)
26	Larsen & Toubro Motion Control Module (PRAYAG)	20th, 21st, 27th, 29th Aug and 1st Sept 2018	5	105	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik (Mechanical)
27	Larsen & Toubro Advanced Robotics	5th Sept 2018	1	25	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik (Mechanical)
28	Larsen & Toubro Motion Control Module Advanced (PRAYAG)	8th and 9th October 2018	2	26	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik (Mechanical)
29	Larsen & Toubro Motion Control Module (PRAYAG)	22nd, 23rd, 24th, 25th and 26th July 2019	5	110	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik(Mechanical)
30	Larsen & Toubro Motion Control Module (PRAYAG)	6th, 9th, 10th, 13th, 14th and 16th Sept 2019	6	146	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik(Mechanical)
31	Larsen & Toubro Hydraulics and Pneumatics (PRAYAG Advanced)	5th Oct 2019	1	17	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik(Mechanical)
32	Larsen & Toubro Mechatronics for Industry 4.0	Online Webinar Series, May17th and 18th 2021	2	20	Prof. Vinod Jain(Mechatronics), Prof. Sawankumar Naik(Mechanical)
			103	1627	

Orig.

Memorandum of Understanding between

Larsen & Toubro (Corporate Technology & Engineering Academy - CTEA Madh)

and

Mukesh Patel School of Technology Management & Engineering, Mumbai

This Memorandum of Understanding (MoU) entered on this day 25th March, 2019 between Larsen & Toubro (Corporate Technology & Engineering Academy - CTEA Madh), Near Customs House, Versova Creek, Madh, Mumbai - 400 095.

&

The Mukesh Patel School of Technology Management & Engineering, Narsee Monjee Institute of Management & Studies Bhakti Vedant Swami Marg, JVPD, Vile Parle (West), Mumbai - 400 056.

With an intention to foster Industry-Institution partnership and to effectively complement each other's efforts in serving cause of industries and students, and to facilitate growth and development of industries, it is proposed to constitute a joint council with representatives from L&T - CTEA and MPSTME to oversee/co-ordinate in implementing the various activities as enumerated below:

- MPSTME & L&T - CTEA will jointly utilize their infrastructure for research / projects / surveys on live / contemporary issues for mutual benefits.
- MPSTME & L&T - CTEA will jointly organize seminars / conferences, Technology Development Programme (TDP), long-term / short-term programmes, Certification Programmes for enhancing skills / competency of employees.
- MPSTME & L&T - CTEA will jointly work for Govt / Non govt. Agencies for the project on skill building, talent development, etc.
- MPSTME & L&T - CTEA will identify and work towards enhancing Employability of Students, Campus to Corporate Transformation programmes.
- MPSTME & L&T - CTEA will publicize various programmes which are initiated mutually.

Areas identified for joint working

A. L&T - CTEA and MPSTME will jointly run programmes for industries and colleges.

MPSTME shall provide the subject matter experts, content and infrastructure as at Madh for the programmes proposed. L&T - CTEA shall talk to industries about the programmes being conducted under joint collaboration agreed on various dates and terms in the year.

B. **Programmes**

C. **/ Workshops / Projects.**

L&T - CTEA will recommend resource persons from the industries for the Programme. The faculty members may be utilized based on the need and honorarium will be paid as per norms, and as per discussion held considering the person involved. MPSTME will also provide similar faculty members as and when required, based on their availability. L&T - CTEA will make use of training facilities at the MPSTME and Centre for Training in Advanced Technologies (CTAT) since the main objectives are:

(i) To bridge the gap between industry and academia providing hands-on training.

(ii) To provide world-class training on cutting-edge technologies, at affordable costs to industries.

(iii) Expose the students to recent technologies and practices through internships, short term training programs and projects at UG and PG level.

(iv) Involve in the innovation center of MPSTME for mentoring students for entrepreneurship.

D. **Confidentiality:** Each party shall maintain complete confidentiality of any information of the other, disclosed during the term of this MoU ("Confidential Information"), either directly in any form whatsoever including, but not limited to, in writing, in machine readable or other tangible form, orally or visually (subsequently reduced to writing). Both parties undertake to (i) hold such Confidential Information in strict confidence, (ii) not to disclose such Confidential Information either in whole or in part to any person other than those of its officers, employees and agents who need to know the Confidential Information for the purpose authorized hereunder provided that each such officer, employee or agent has agreed in writing to maintain the confidentiality of the Confidential Information for any purpose whatsoever save as may be strictly necessary for the performance of this MoU. This clause pertaining to confidentiality shall survive the term of this MoU and remain in full force and effect no withstanding any termination of this MoU.A non-disclosure agreement may be signed where required.

E. **Intellectual property Rights:** Both organizations shall respect each other IPR rights. Any common IP developed shall be done under a separate agreement.

F. In no event shall either party be liable for any indirect, incidental, special, consequential damages, including, but not limited to, loss of profits, revenue, data or use, incurred by the other party in connection with, arising out of or under this MoU save for any such loss suffered resulting from any willful and grossly negligent act or omission of either of the parties.

G. Neither this MoU, nor any activities described herein, shall be construed as creating a partnership, joint venture, agency or other such relationship. Both parties agree that this MoU represents a nonexclusive relationship between the parties and nothing contained herein shall prelude either party from participating/initiating similar relationship with third parties.

H. Neither party shall issue any press release, public announcement or other such disclosure concerning this MoU with the other party's prior written consent as to such release or announcement. However the organization is may publish the activities undertaken without specific reference to the Mou.

I. This MoU shall not be amended without the prior written consent of both the parties.

J. This MoU will be effective for Two years from 1st April, 2019. This MoU can be renewed based on mutual convenience.

K. **Governing Law:** This MoU shall be governed by the laws of India and the Courts in Mumbai shall have exclusive jurisdiction.

L. **Termination:** Either party can cancel or terminate this MoU unilaterally (and without reason), by giving an advance written notice of one month to the other.

M. **Notices:** All notices, requests, demands and other communications under this MoU or in connection herewith shall be given to or made upon the respective parties as follow:

To L&T:

Head, CTEA
Larsen & Toubro
Madh Training Centre
Near Customs House
Versova Creek, Madh,
Mumbai - 400 095

To MPSTME:

The Dean, MPSTME, NMIMS
The Narsee Monjee Institute of Management & Studies.
Bhakti Vedant Swami Marg, JVPD, Vile Parle (West),
Mumbai - 400 056

Or to such other person or addresses as any of the Parties shall have notified to the others.

All notices, requests, demands and other communications given or made in accordance with the provisions of this MoU shall be in written by letter, fax or telegram.

N. **Force Majeure:**
If either of the two parties is prevented, restricted, delayed or interfered by reason of:

- Fire, Explosion, Cyclone, Floods, Droughts, Earthquakes, Epidemics:
- War, Revolution, acts of public enemies, blockage or embargo, riots and civil commotion;
- Any law, order proclamation, ordinance or requirements of any Government or authority or representative of any such Government, including restrictive trade practices or regulations;

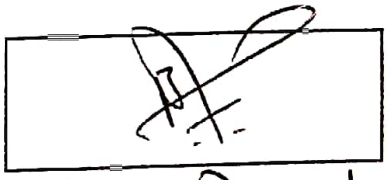
- Strikes, Shutdown or labor disputes which are not instigated for the purpose of avoiding obligation herein; Or
- Any other circumstances beyond the reasonable control of the party affected; then not withstanding anything here before contained, the party affected shall be excused from its performance to the extent such performance relates to prevention, restriction, delay or interference and provided the party so affected used its best efforts to remove such cause of non-performance, and when removed the party shall continue performance with the utmost dispatch.

O. Indemnity:Each of the parties shall defend, indemnify and hold the other party harmless from and against any claim, liability, loss, costs or expenses (including reasonable Attorney's fees) arising out of or resulting from the material breach of the provisions herein.

IN WITNESS WHEREOF THE parties have set their hands hereto on the day and year first herein above written under their respective seal of office.

Authorized Signatory:-

For L&T - CTEA



B. A. Damahe

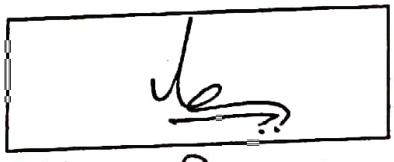
Witnesses:-

1. (FIRDOSH F. MISTRY)

2. (T.K. AYYAPPAN)

LARSEN & TOUBRO LIMITED
Madh Training Centre
Near Custom House, Versova Creek,
Madh, Mumbai - 400 061.

For MPSTME



N. T. Rao

Mukesh Patel School of Tech. Manget & Engg. SVKM'S NMIMS Mumbai 56

1. Vinod Jain

2. Dr. Ketan Shah

Annexure A

Schedule of Rates for Training provided by MPSTME for subject like Industrial Hydraulics, Motion Control, Automation & related subjects at MPSTME or L&T - CTEA Madh:

Sr No	Particulars	Nos	
1	Period	2 Years	
2	No. of Programmes in an Year	8	
3	Charges per day for a Programme at College Premises	Full Day	Half Day
	3a. Faculty & Lab for Basic programs	25000	NA
	3b. Only Faculty	12000	NA
4	Charges per day for a Programme at College Premises	Full Day	Half Day
	4a. Faculty & Lab for Advance programs	30000	NA
	4b. Only Faculty	15000	NA

Above Charges to include

1. Breakfast + Tea & Coffee on arrival.
2. Tea/Coffee at 11:15am
3. Lunch
4. Tea & Coffee with biscuits in the evening.
5. Hand Outs (Course Material)
5. Pre & Posts-test + Assessment of the same wherever applicable.
6. Taxes extra as applicable

Training done at L&T CTEA Madh Campus at Mumbai

L&T shall provide detailed requirements on topics and MPSTME shall provide the resource people required. Either side has the discretion to reject or accept an offering giving valid reasons. All the required training facilities shall be provided by L&T and content and equipment used for activity based learning will be provided by MPSTME. MPSTME will provide Pre-training material for the module so that basics can be read by the employee before coming for the session and Post-training study material in soft copy could be given to all the participants.

Safety gallery training & other industrial lab exposure will be provided for students of MPSTME at a nominal rate as per mutual agreement.

Training held at MPSTME

For all trainings held at MPSTME Mumbai, faculty Prof. Vinod Jain and other faculty will take up the entire day session. Accommodation of 3-4 additional participants in a classroom should be taken care of, when required maximum batch side would be up to 25. Session to start at 9.15 a.m. so that can be completed by 5.15 p.m. to avoid traffic issues in the evening.

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Technology Development Program (TDP) at NMIMS Bosch Rexroth Centre of Excellence in Industrial Automation Technologies, Mumbai

SVKM's NMIMS MPSTME is the only institute in India to offer Mechatronics program with four state-of-the-art laboratories in Hydraulics, Pneumatics, Mechatronics & Robotics and PLC & Sensorics. We are the most successfully running Centre of Excellence in Industrial Automation in the western region of our country.

Highlights of the L&T Industrial Training Program

- L&T Industrial Program to train its employees started in Jan 2014 here at NMIMS Bosch Rexroth Centre of Excellence in Industrial Automation Technologies
- 32 programs conducted for total of 103 days and training 1627 employees of L&T at this facility. **(See attached excel sheet)**
- MoU between L&T (CTEA Madh) and MPSTME, Mumbai

  With an intention to foster Industry-Institution partnership and to effectively complement each other's efforts in serving cause of industries and students, and to facilitate growth and development of industries, the MPSTME school has signed MoU with L&T(CTEA Madh). Also to keep its engineering students up to date with the current trends and demands of the industrial visits and competitions in association with these industry partners.
- Customized programs and training modules as per the batch requirements.
- L&T Employees drawn from various business units across India
- Expectation sheets from employees to customize programs.
- Distinguished International Industrial Automation Professors as resource persons

Following Programs conducted for L&T Employees

- Mechatronics for Industry 4.0
- PRAYAG - Motion Control Module
- Advanced Robotics Program.
- Industrial Hydraulics- Basic
- Advanced Industrial Hydraulics
- Advanced PRAYAG – Hydraulics and Pneumatics

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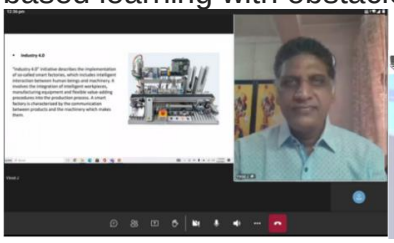
Mechatronics for Industry 4.0:

Subject: Mechatronics for Industry 4.0 2-day Online Webinar
Objective: To impart understanding of Industry 4.0 concept and role of Mechatronics in Industry 4.0
Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

In the wake of Covid-19 pandemic where industry has come to a standstill with Social distancing norms, engineers are required to equip themselves with technologies that can better enhance monitoring and control of systems. What emerged as a competitive strategy from Germany is making the world thrive today through the pandemic - INDUSTRY 4.0. NMIMS Bosch Rexroth Center of Excellence in Industrial Automation has the privilege of making the world class technology available close at home in India. Under the guidance and leadership of our Dean Dr. Alka Mahajan, the expert training session on Industry 4.0 Technologies were conducted for L&T employees drawn from various business units from across the country. The two day training conducted on 17th & 18th May, 2021 with its interactive discussions on live industry problems with participants from various Engineering Departments having experience of 5 to 15 years received an overwhelming response.

Following topics covered:
Industrial Revolution – 1.0 to 4.0 and Mechatronics, Digitization of Manufacturing Processes, Industry 4.0 concept, IoT, Industrial IoT (IIoT), Lean Manufacturing, CISS Industrial Sensor, Block-chain Technology, Mechatronics and its role in Industry 4.0 concept and Industrial Automation, Mechatronics and Robotics Simulations, Augmented and Virtual Reality (AR/VR technology apps)
Case study: Color sorting Robotic Vision system and Robot pick and place, AI based learning with obstacle avoidance




PRAYAG - Motion Control Module:

Subject: PRAYAG (Motion Control Module) 1-Day Program
Objective: To provide hands-on training on Motion Control in Automation.
Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

PRAYAG - Motion Control Module for the Engineers of Larsen & Toubro here at “NMIMS Bosch Rexroth Centre of Excellence in Industrial Automation Technologies". In the conducted program employees of L&T were given Hands-on training of Hydraulics and Pneumatics explaining its role in Automation along with the Mechatronics & Robotics, PLC and sensorics components.

The engineers were mainly drawn from various L & T business units across India.

Topics covered in PRAYAG - Motion Control Module

Working with Hydraulic components and electrical circuits, working with Pneumatics/PLC systems applications, working on sensors and Mechatronics assembly, working of 4-axis and 6-axis Robots, CNC Simulator and Linear Axis Motor for motion control, Demonstration of Automation Studio.

Advanced Robotics Program

Subject: Advanced Robotics 3-Day Program

Objective: To introduce to Robot technology and provide hands-on training on 6-Axis Motoman Industrial robot and 4-Axis Rexroth SCARA robot with emphasis on Industrial Automation.

Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

Advanced Robotics module customized for engineers mainly coming from L&T Defense Unit were trained on 6-Axis Yaskawa Motoman Industrial Robot and 4-Axis Rexroth SCARA Robot

Topics covered in Advanced Robotics Module:

Introduction to Robot Technology, programming and peripherals of robots, teach pendant, Direct and Inverse Kinematics, Analyzing a user program
Converting a task into a program and diagnostic functions, Integrating sensorics module Indra-Motion Logic Drive and Machine Tool Assembly kit demos.
Hands-on Co-ordinate Motion Systems (CMS)

4_Axis Rexroth SCARA Robot

6-Axis Motoman Industrial Robot

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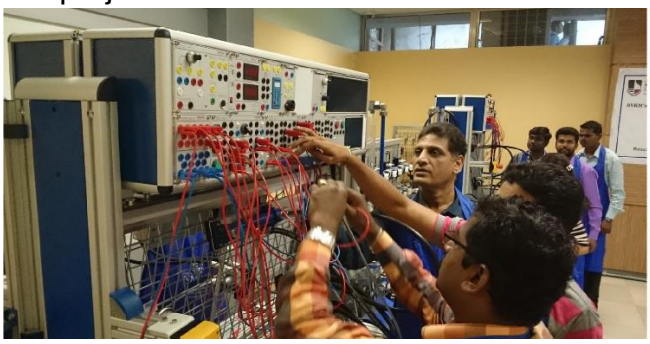
Industrial Hydraulics- Basic

Subject: Industrial Hydraulics Basic 3-day Program
Objective: To impart understanding of Basic Hydraulics, circuit components, electro-hydraulics and set hands-on skills for the same.
Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

Following topics covered:
Introduction to Industrial Hydraulics – Basics and components of a Hydraulic System, Speed control circuits, Safety, Construction of Hydraulic kit, CNC Simulator, Mechatronics Kit, Working of Hydraulic kit, Fluid Mechanics Experiments, Hydraulic Pumps/ Motor Power pack, Functionality and Design of a Hydraulic Circuit and Hydraulic Fluids, Graphical Symbols Identification, Electro Hydraulics and Pneumatics, Solenoid actuated valves, Timer based Logic circuits, Memory (Latching) circuits. Circuits with drive technology in Automation Studio

All L&T Industrial programs have pre and post tests to know effectiveness and learning outcomes. One Session on final day of this program is taken by L&T Experts to discuss live projects.

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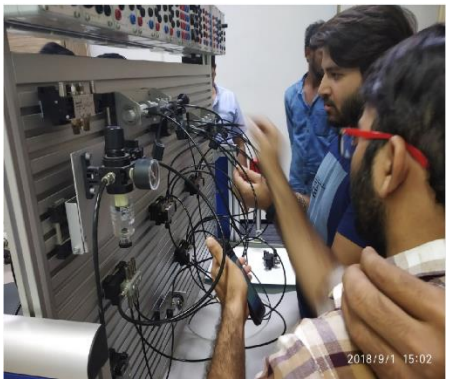

Advanced Hydraulics

Subject: Advanced Industrial Hydraulics 3-day Program
Objective: To impart understanding of Proportional Hydraulics and set hands-on skills for the same.
Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

Following topics covered:
Overview of topics covered in Industrial Hydraulics – Basic
Proportional Valve Technology, OBE, Amplifier Cards, Resolution, Sensitivity
Practical hands-on Proportional directional control valve - with Ramp generator (t,w), command value module SWMA1, external potentiometer command value, four quadrant operation(4Q) for sequence generation in hydraulic cylinder, Analogy of electro-Hydraulic and Electro-Pneumatic Circuits, Circuits with drive technology in Automation Studio
We conduct pre and post tests to know effectiveness and learning outcomes. One Session on final day of this program is taken by L&T Experts to discuss live projects

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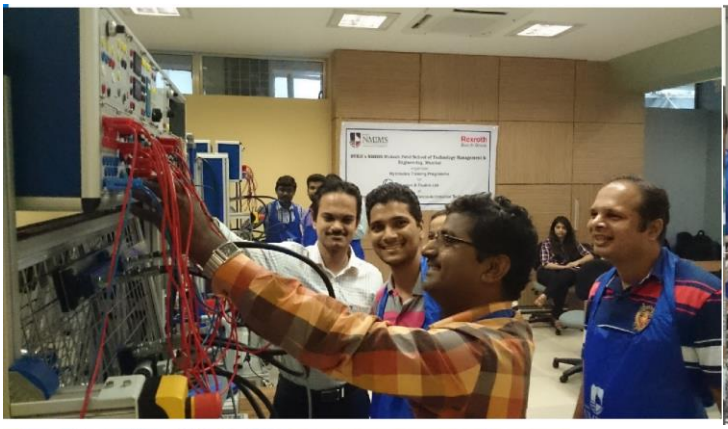

Advanced PRAYAG – Hydraulics and Pneumatics

Subject: Advanced PRAYAG with Advanced Hydraulic and Pneumatic 2-day Program
Objective: To impart understanding of Basic and Proportional Hydraulics and analogy of electro-hydraulic and electro-pneumatic circuits set hands-on skills for the same.
Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

Following topics covered:
Overview of topics covered in Industrial Hydraulics – Basic, Solenoid actuated valves, Timer based Logic circuits, Memory (Latching) circuits. Circuits with drive technology in Automation Studio, Proportional Valve Technology, OBE, Amplifier Cards, Practical hands-on Proportional directional control valve - with Ramp generator, Analogy of electro-Hydraulic and Electro-Pneumatic Circuits

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L&T Anubhav Internship Program for MPSTME Students

Subject: L&T Anubhav Internship program for MPSTME students (4-weeks)
Objective: To impart understanding of Campus to Corporate and receive other technical skills with hands-on.
Resource Persons: Prof Vinod Jain and Prof Sawankumar Naik

SVKM's NMIMS MPSTME Mumbai and L&T Madh campus have jointly designed a value added training program of 4-weeks duration (Anubhav) for the B. Tech/BTI 2nd 3rd and Final Year students (Mechatronics, Mechanical, EXTc) as an alternative to internship for B. Tech program, to be conducted at L&T Corporate Training Technical, Academy C-TEA Madh campus.

The detailed conduct of the program and the glimpses of the Anubhav program are shared below. **(See attached excel sheet)**

The students gave positive feedback and informed how it has benefited them with the gap in theory and practice. The program included Industrial visits and mini projects which has added value to enhance the career prospects of the participants and will help in their final year projects. The suggestions given by the students were well received by L&T experts and in the subsequent Anubhav program.

Following modules covered:

Campus to Corporate (Job Roles, Value Chain, Functioning of an Industry, etc.) Manufacturing Processes (M/c Shop) Innovation Tools (Ideation) Manufacturing Processes (Fabrication Training) Embedded System Design LTIT Mahape, Emerging Technologies – IOT & 3D Printing, Industry Visit HE Powai, Manufacturing Excellence – 5S/ 6 Sigma / Lean Automation- PLC, CAD-CAM LTIT Mahape, Life Skills, Industry Visit Mahape, Electrical and Drives, Group Project