



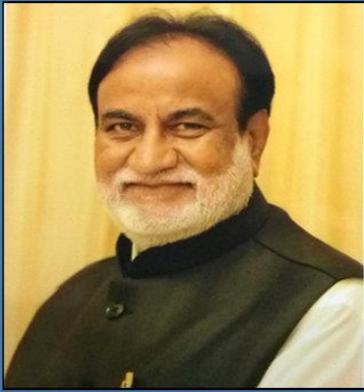
A D Patel Institute of Technology AICTE IDEA Lab

**Bi-Monthly
Activity Newsletter:
April-May Issue 06**

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Message from President



AICTE-IDEA (Idea Development, Evaluation & Application) Labs are being established across the country for encouraging students for application of Science, Technology, Engineering and Mathematics (STEM) fundamentals towards enhanced hands-on experience, learning by doing and even product visualization.

Activities will be conducted to align with many of the national initiatives to develop “Aatma Nirbhar Bharat”.

The Institute has already started courses under “National Skill Qualifications Framework” scheme, for skill development of youth, and the IDEA lab infrastructure will be shared for such courses also.

IDEA Lab provides all facilities under one roof, for conversion of an idea into a prototype. The ultimate objective is to transform engineering and science knowledge using such a Lab for nearby technical institutions and school students and for this they must proactively expose all students. The IDEA LAB should frequently organize training sessions for interested students as well as support projects to improve employability or entrepreneurship skills of students through experiential learning.

Head of the institute as chief mentor, faculty coordinators and student ambassadors will be responsible for overall implementation of AICTE initiative. Trainings, boot camps, internships and professional training programs will be organized throughout the year for faculty and students.

Faculty would be encouraged to get trained in these Labs and strive for creating problems/ projects/ internships in their own subjects/ disciplines and mentor the students. The industry, academia, technical institutions and school learners must take advantages of established resources under AICTE IDEA LAB.

Best wishes

**Er. Bhikhubhai B. Patel
President, CVM University
Chairman, CVM**

Message from Chief Mentor



AICTE IDEA LAB at ADIT aims to develop as a physical and virtual environment for generating, developing, and commercializing innovative students' ideas through relevant trainings, mentoring and technology put at their disposal. Members of idea lab team were actively involved in providing guidance, mentoring and support to realize complexity, nature of problem and effective utilization of resources of IDEA LAB.

IDEA LAB would serve as “Clinic” for engineers in line with Hospitals for Medical students. The focus will be on imparting hands-on training among students so that they become imaginative and creative and stay confidently on workplace or as an independent entrepreneur. Interdisciplinary Design with Experimental orientation in the laboratory promotes new-innovation through material experimentation and performance-based design strategies. It also leverages students to participate at national and international level competitions such as Smart India Hackathon (SIH), ROBOCON, SAE- Baja (India), e-Yantra etc.

Integrated platform for students, faculty and Industry is beneficial mutually at every forefront of design in advancing knowledge and learning from each other. Industry-Academia interaction with help of IDEA LAB and MoUs with corporate sectors and research institutions have ensured that students obtain best possible exposure to multiple learning experiences.

I strongly believe that AICTE IDEA LABs will act as the main driver for continuous improvement in quality technical education and serve as the benchmark for future engineering endeavours.

Best Wishes

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Message from Coordinator



The primary goal of the Idea-Lab is to serve as a 'Technology Incubator' that aims to impart skill development among young minds and support potential ideas with good technological merit. Students should engage in activities, events and projects according to their interests. Prime minister's vision of new age learning- by 5E's such as Engage, Explore, Experience, Express, and Excel can be accomplished through it.

IDEA Lab would serve as an infrastructure for faculty to take up and promote multidisciplinary education and research emphasized in the National Education Policy 2020.

Basically, IDEA LAB word is coined from Innovation Design & Empowerment Applications Lab. It will make engineering graduates more imaginative and creative, besides getting basic hands-on training skills like-critical thinking, problem-solving, research, collaboration, communication, lifelong learning etc. essential for modern industry environment.

The main objectives of AICTE IDEA LAB are skill development, trainings in critical thinking, problem solving, design thinking, boot camps, internships and professional training programs, collaborations with industry and research organizations will be throughout the year for faculty, students, and institute growth. We always believe in collaboration and excellence.

We are glad for your footsteps at ADIT-AICTE IDEA LAB for new collaborative efforts towards solutions. Whatever may be the reason, please check out our IDEA LAB team and projects. Again, welcome to IDEA Labs, where people, knowledge, and technologies converge! We look forward to hearing from you.

Best Wishes

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Message from Co - Coordinator



AICTE IDEA Lab shall transform technical education by empowering young minds with cutting-edge tools, processes, and skills. It acts as a focal forum to inculcate scientific temper for attaining new heights in research and development for welfare of masses and to improve the quality of their life as well as to solve important issues by acting as organic link between science, technology and economy.

The focus will be on training students so that they become imaginative and creative and stay so at the workplaces they join. The ultimate objective is to transform engineering education with such a Lab and for this the institute must proactively expose all students to the IDEA Lab, organize training sessions for interested students as well as support projects and by providing online learning materials. The idea lab aims at developing critical thinking & complex problem-solving abilities among the students at the institute. The lab will also provide support to schools, polytechnic colleges, and engineering colleges in the vicinity. IDEA Lab would also serve as an empowering infrastructure for faculty to delve into multidisciplinary education and research, emphasized in the National Education Policy 2022.

Best Wishes

Mr. Dhaval N Tailor

Co-Coordinator, AICTE IDEA LAB, ADIT

Assistant Professor, Department of Electrical Engineering

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Message from Editors



It makes us proud to present this edition of AICTE IDEA Lab newsletter and share the past and upcoming events happening at IDEA Lab of ADIT.

We strongly believe that skill development among youth can be achieved by practical exposure through various planned activities. IDEA lab is a constant endeavour to aid in the growth of our students in more scientific way and provide industry ready environment. The lab has various sections that deals with different skill sets to render an all-round development of the students. Common observations are among students regarding excellence in theoretical concepts but scope of improvement for their practical knowledge. We are sure that this gap can be bridged at IDEA LAB through various programs such as Skill development workshops, Awareness programmes, etc. Moreover established facilities will also benefits faculty members of all nearby institutions to become proactive for meeting 21st century challenges and diversity. The Industry personals may also utilize these facilities for their new product development and testing.

Best wishes and Happy Learning to all...

Prof. Jinal Bhagat & Prof. Sherin Mariam Jijo
Editors, AICTE IDEA LAB, ADIT
Department of Information Technology

About AICTE IDEALab

ADIT has been selected among 49 colleges across India by AICTE to establish IDEA LAB co-funded by CVM University.

Vision for the IDEA Lab:

- To create start-ups and Innovation community within the town and proximity rural areas to foster the "Make in India" movement of the country.
- To develop the ecosystem of individuals who exchange knowledge, ideas, and technology to empower people of all ages.
- To be a reference centre focused on the development and rapid prototyping of design projects for technological transformation and innovation in "Charotar region" of Gujarat.
- To support the learning process based on the latest trends required by the industry and the market.

Integration of IDEA Lab with existing facilities:

The institute has eight Centre of Excellence (CoE) in emerging areas of engineering and technology. Many UG/PG students are working under these CoEs for project and dissertation work; the IDEA lab may help them to carry their work to the next level. The faculty members of the institute are actively involved in R&D activities and have received many research grants from ISRO RESPOND, AICTE, DST etc.; the IDEA lab may empower faculty members to raise the research work in the institute. The institute is associated with various professional bodies like IEEE, ISTE, IE, SAE, SME, ISHRAE, AFST and IGBC; various activities under these professional bodies can also utilize the facilities available with IDEA Lab. The IDEA lab may support the SSIP cell, E&D cell and Innovation Council of the institute to promote the start-ups, entrepreneurship and Innovation related activities.

Benefits to students:

A.D. Patel Institute of technology is one of the leading engineering institutes in state of Gujarat with NBA accreditation (4-Branches for 2nd Term) and ISO 9001-2015 certification. Since inception, the institute provides quality education and promoting research, start-ups and innovation related activities. The institute runs 8-UG programs, 6-PG programs with 1800 students and 100 faculty members. The institute has centre of excellence in emerging areas of

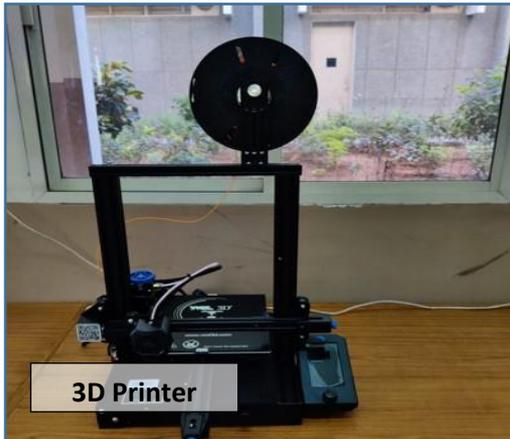
engineering and technology like "Robotics, Autonomous and Intelligent Systems", "Electric Mobility", "Food product Development and Modelling" etc.

As a part of that, students of the institute brought many laurels to the institute with the active participation in many state and national level competitions. The IDEA lab will provide the promising platform for students to enhance the required skills for converting the innovative ideas into reality. The lab empowers the faculty members to accelerate the R&D activities and project-based learning in the institute. The IDEA lab will also attract and inspire the school students to think out of the box at the beginner's level.

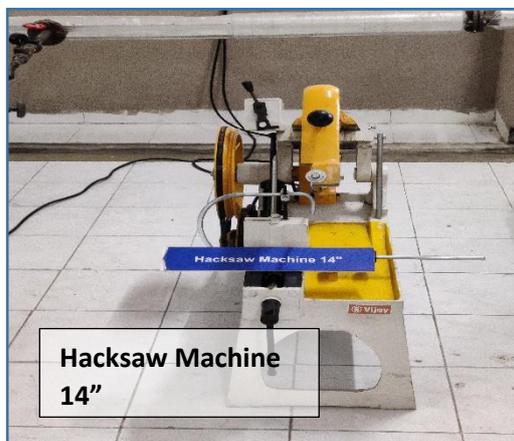
Committee Members

Name	Designated Role
Dr. Vishal Singh	Chief Mentor, Principal, ADIT
Dr. Yashavant Patel	Coordinator, Associate Prof. and Head, Mechanical Engineering
Prof. Dhaval Tailor	Co-Coordinator, Assistant Prof., Electrical Engineering
Prof. Sankalp Bhatiya	IDEA LAB GURU, Assistant Prof., Mechanical Engineering
Prof. Mitul Malli	Member, Assistant Prof., Mechanical Engineering
Dr. Viranchi Pandya	Member, Associate Prof., Electronics and Communication
Dr. Kalpesh M Shah	IDEA LAB GURU, Assistant Prof., Electronics and Communication
Prof. Vishal sheth	Member, Assistant Prof., Electrical Engineering
Dr. Nimit Patel Member	Assistant Prof., Automobile Engineering
Prof. Kuldeep Patel	IDEA LAB GURU Assistant Prof., Automobile Engineering
Prof. Bhavin Patel	Member, Assistant Prof., Civil engineering
Prof. Shah Axay	Member, Assistant Prof., Civil engineering
Prof. Priyanka Puvar	Member, Assistant Prof., Computer Engineering
Prof. Aniruddha Kurtkoti	IDEA LAB GURU, Assistant Prof., Computer Engineering
Prof. Jitiksha Patel	Member, Assistant Prof., Information Technology
Prof. Keyur Patel	Member, Assistant Prof., Information Technology
Prof. Sherin Mariam Jijo	Member, Assistant Prof., Information technology
Prof. Jinal Bhagat	Member, Assistant Prof., Information technology
Dr. P M Ganorkar	Member, Assistant Prof., Food Processing Technology
Dr. Ankita singh	Member, Assistant Prof., Food Processing Technology
Dr. Abhay Dashdiya	Member, Assistant Prof., Soft skill and Science Cell
Prof. Devang Shah	Member, Assistant Prof., Soft skill and Science Cell

Equipment Gallery



Equipment Gallery(cont.)

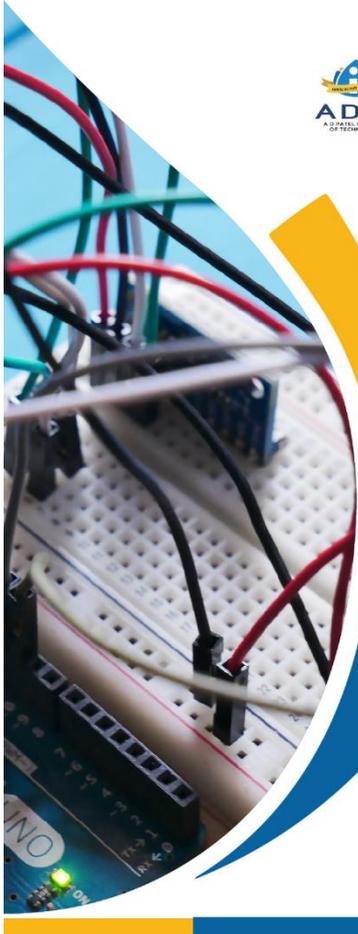


Equipment List

Sr.	Equipment	Sr.	Equipment
1	3D Printer	20	Portable Grinding machine
2	3D Scanner	21	Refrigerator
3	Drilling Machine 1 HP Motor	22	Normal Microwave Oven
4	Digital storage Oscilloscope	23	Magnifying Glass with stand
5	Signal Generator	24	Digital Microscope
6	PCB prototype Machine	25	Mixed Signal Oscilloscope
7	Bench top grinder Machine	26	Variable Power Supply
8	Wood Lathe	27	Bench top Multimeter
9	Laser Cutter	28	Projector
10	Vinyl Cutter	29	Heavy Duty Laser Printer
11	3D Printer	30	PCB Milling Machine
12	3D Scanner	31	Computer workstations in networking
13	CNC Router	32	Quadcopter Assembly kit
14	Mini desktop Lathe cum Milling	33	Smart board
15	Handheld High Speed drilling machine 15000 rpm with accessories		
16	Solder stations		
17	Desoldering machine		
18	Advanced motorized sewing machine		
19	Power tools		

Event Summary

Hands-on Experience with Micro-controllers and 3d printer





A D PATEL INSTITUTE OF TECHNOLOGY
(A CONSTITUENT COLLEGE OF CVM UNIVERSITY)

POWER ELECTRONICS SOCIETY
IEEE, ADIT ORGANIZES

**HANDS ON EXPERIENCE
WITH MICROCONTROLLERS
AND 3-D PRINTING**

Date : 05/04/2023 & 06/04/2023
Time : 09:30 to 01:00 and 02:00 to 04:00
Event Venue : ADIT IDEA Lab
Registration fees : 20/- for IEEE Members
50/- for Non IEEE Members
Interested students Can Participate

REGISTER NOW! 

<https://forms.gle/NRjUn5kSMX5KYn8Z6>

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From May 4th to June 4th, 2023, an exciting event took place at Idealab, organized by the Power Electronic Society, ADIT, IEEE, hosted at A.D. Patel Institute of Technology. The event focused on providing hands-on experience with microcontrollers and 3D printers, catering to enthusiasts, students, and professionals alike.

The event offered a unique opportunity for attendees to dive deep into the world of microcontrollers and 3D printing through practical workshops and demonstrations. Participants had the chance to learn about the fundamentals of microcontrollers, explore their applications, and gain insights into the workings of 3D printers.

One of the highlights of the event was the hands-on sessions, where attendees could interact directly with microcontrollers and 3D printers under the guidance of experienced mentors. These sessions allowed participants to gain practical skills and insights that are invaluable in today's rapidly evolving technological landscape.

Moreover, the event provided a platform for networking and collaboration among attendees, fostering a community of like-minded individuals passionate about electronics, technology, and innovation. The presence of IEEE members further enriched the experience, offering valuable insights and perspectives from seasoned professionals in the field.

Registration for the event was open to both IEEE members and non-members, with discounted rates available for IEEE student members. This inclusive approach aimed to make the event accessible to a wide range of individuals, regardless of their background or affiliation.

Overall, the event was a resounding success, offering participants a rich learning experience, hands-on practical skills, and valuable networking opportunities. By bringing together enthusiasts, students, and professionals, the event contributed to the advancement of knowledge and skills in the exciting fields of microcontrollers and 3D printing.



Faculty Development Program by Edunet Foundation

On May 12th and 13th, 2023, the Edunet Foundation organized a Faculty Development Program (FDP) focused on cutting-edge technologies, including the Internet of Things (IoT), Raspberry Pi with Grove Pi, Neural Stick, and SAP Business Technology Platform (BTP) tools. The event aimed to equip educators with the knowledge and skills necessary to integrate these technologies into their teaching and research endeavors effectively.

The FDP began with an exploration of IoT, providing participants with insights into its principles, applications, and real-world implementations. Attendees had the opportunity to delve into hands-on sessions with Raspberry Pi, a versatile microcomputer, combined with Grove Pi, an extension board for adding various sensors and actuators. This practical experience empowered educators to incorporate IoT concepts into their curriculum and research projects.

Furthermore, the FDP delved into the realm of artificial intelligence with discussions on the Neural Stick, a device designed to accelerate machine learning inference tasks on edge devices. Participants learned about neural networks, machine learning models, and how to leverage the Neural Stick for enhancing educational content and research initiatives.

In addition to IoT and AI, the FDP also provided insights into the SAP Business Technology Platform (BTP) and its tools. Educators gained knowledge about the functionalities of SAP BTP and explored its applications across various domains, including enterprise resource planning, data analytics, and cloud computing. Practical sessions allowed participants to familiarize themselves with SAP tools, enabling them to integrate these technologies into their teaching and research practices effectively.

Overall, the FDP by the Edunet Foundation offered a comprehensive learning experience, covering a wide range of topics relevant to contemporary technological trends. By equipping educators with practical skills and knowledge, the event aimed to enhance the quality of education and research in the field of technology, paving the way for innovation and advancement in academia and industry alike.



Education is the most powerful weapon, which you can use to change the world.

-Nelson Mandela



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