



A D Patel Institute of Technology AICTE IDEA Lab

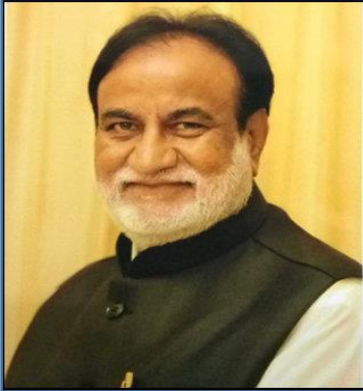
Bi-Monthly

**Activity Newsletter:
Dec-Jan Issue 04**

Outline

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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

Dr. Vishal Singh
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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

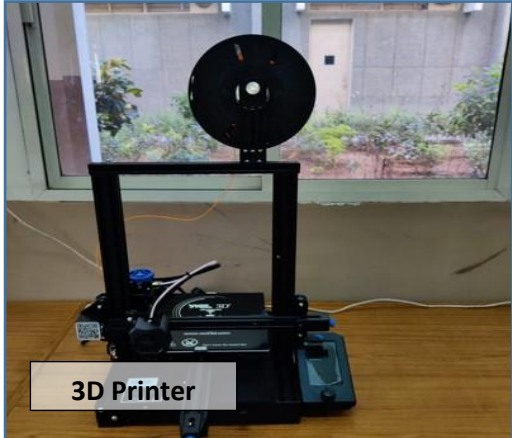
engineering and technology like "Robotics, Autonomous and Intelligent Systems", "Electric Mobility", "Food product Development and Modelling" etc.

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.

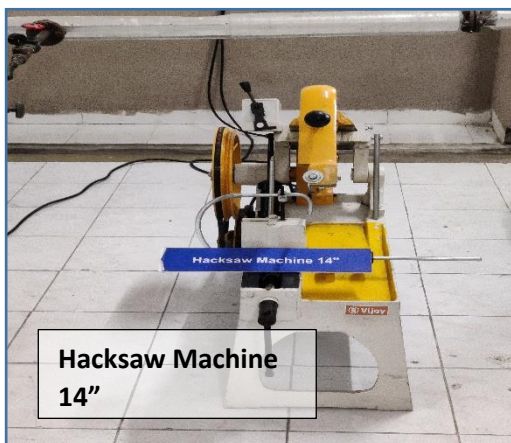
Committee Members

| 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

| Sr. | Event Name | Date | Event Coordinators |
|-----|---|--------------------------|--|
| 1 | Technical Workshop on 3D printer and Laser Cutting Machine | 2022-12-03 | Prof. Mitul Malli & Prof. Tejas Prajapati |
| 2 | FACULTY DEVELOPMENT PROGRAM on AI Applications and Deep learning | 2022-12-12 to 2022-12-15 | Dr. D J Prajapati |
| 3 | Awareness program for School Students | 2022-12-17 | Dr. Abhay Dasadia & Dr. N B Desai |
| 4 | Faculty Development Program on Green Technology Innovations & Challenges | 2022-12-12 to 2022-12-23 | Dr. Rajiv Bhatt |
| 5 | Overview of Mind Creative Elegance to School Students | 2022-12-20 | Dr. Ankita Singh & Prof. Jitiksha Patel |
| 6 | Workshop on CAD Tools for Green Initiatives | 2022-12-21 | Prof. Krunal Shah |
| 7 | Workshop on RP Technology for Evaluation of Green Technology | 2022-12-22 | Prof. Tejas Prajapati |
| 8 | Familiarization Program for School Students | 2022-12-22 | Dr. Ankita Singh & Prof. Jitiksha Patel |
| 9 | Innovative Project Display Under Research Week Celebration | 2022-12-27 | Prof. Hardik Shah |
| 10 | Awareness Program for School Students | 2022-12-31 | Dr. Abhay Dasadia & Prof Tushar J Trivedi |
| 11 | Workshop on Mechanism Analysis and Career Opportunities using CAE Tools | 2023-01-06 | Dr. Y D Patel & Prof. K J Shah |
| 12 | Project Fair : "Innovation in You" | 2023-01-17 to 2023-01-19 | Dr. Y D Patel & Prof. Disha Panchal & Prof. Jinal Bhagat & Prof. Sherin Jijo |
| 13 | Skill Development Program on renewable Energy and Environmental Engineering | 2023-01-24 | Prof. Bhaumik Sheth & Prof. Maharshi Thakkar |
| 14 | Hands On Introductory Workshop to get Started in IOT | 2023-01-27 | Prof. Anand Pandya & Prof. Jinal Bhagat |
| 15 | Skill Development Program for School Students | 2023-01-28 | Prof. Sherin Jijo & Prof. Jinal Bhagat |

Technical Workshop on 3D printer and Laser Cutting Machine

Date:
Targeted Audience:
Event Coordinators:

2022-12-03
Institute Students
Prof. Mitul Malli & Prof. Tejas Prajapati



FACULTY DEVELOPMENT PROGRAM on AI Applications and Deep learning

Date:
Targeted Audience:
Event Coordinators:

2022-12-12 to 2022-12-15
Faculties
Dr. D J Prajapati



Awareness program for School Students

Date:
Targeted Audience:
Event Coordinators:

2022-12-17
School Students
Dr. Abhay Dasadia & Dr. N B Desai



Faculty Development Program on Green Technology Innovations & Challenges

Date:
Targeted Audience:
Event Coordinators:

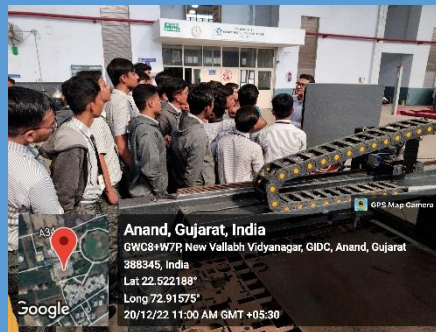
2022-12-12 to 2022-12-23
Faculties
Dr. Rajiv Bhatt



Overview of Mind Creative Elegance to School Students

Date:
Targeted Audience:
Event Coordinators:

2022-12-20
School Students
Dr. Ankita Singh & Prof. Jitiksha Patel



Workshop on CAD Tools for Green Initiatives

Date:
Targeted Audience:
Event Coordinators:

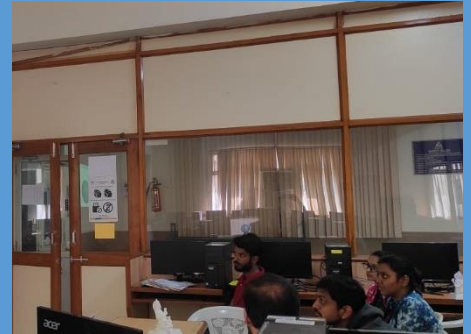
2022-12-21
Institute Students
Prof. Krunal Shah



Workshop on RP Technology for Evaluation of Green Technology

Date:
Targeted Audience:
Event Coordinators:

2022-12-22
Faculties
Prof. Tejas Prajapati



Familiarization Program for School Students

Date:
Targeted Audience:
Event Coordinators:

2022-12-22
Faculties
Dr. Ankita Singh & Prof. Jitiksha Patel



Awareness Program for School Students

Date:
Targeted Audience:
Event Coordinators:

2022-12-31
School Students
Dr. Abhay Dasadia & Prof Tushar J Trivedi



Workshop on Mechanism Analysis and Career Opportunities using CAE Tools

Date:
Targeted Audience:
Event Coordinators:

2023-01-06
ADIT Students
Dr. Y D Patel & Prof. K J Shah



Project Fair : "Innovation in You"

Date:
Targeted Audience:
Event Coordinators:

2023-01-17 to 2023-01-19
School Students
Dr. Y D Patel & Prof. Disha Panchal & Prof. Jinal Bhagat & Prof. Sherin Jijo



Hands On Introductory Workshop to get Started in IOT

Date:
Targeted Audience:
Event Coordinators:

2023-01-27
Institute Students
Prof. Anand Pandya & Prof. Jinal Bhagat



CVMU Hackathon

CVMUISC has planned various activities to enable the young generation to achieve their creative potential through start-up and innovation in order to enable them to contribute to sustainable development and equitable growth towards the attainment of Aatm nirbhar Bharat. CVMU Hackathon was the event where youth participated actively, design, develop and demonstrated their innovative skills. All of the students who took part in the hackathon used all of the AICTE ADIT Idea lab's resources to the fullest extent. The CVMU Hackathon helped to address some of the most pressing problems we confront on a daily basis while fostering in students a culture of product creation and a problem-solving methodology.



Lamp Lighting during SSIP Hackathon – 2022



MoU Between M G Motors and ADIT



MoU for imparting Technical Education among students and conducting various programs at AICTE IDEA LABs Including Computer, Mechanical, Automobile, Electrical and Electronics & Communication Engineering.



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

-Nelson Mandela



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