

# **AICTE IDEALAB** **NEWS LETTER** (Nov - Dec 2024)



**IES Campus, Ratibad Main Road, Bhopal - 462044, Madhya Pradesh, India.**  
**Phone : +91-9229251477, 9522255391 | Email : [campus@iesbpl.ac.in](mailto:campus@iesbpl.ac.in)**

## VISION

The institute in association with AICTE-IDEA lab aspires to serve the society and nation in developing an ecosystem to execute innovative ideas of young minds with holistic knowledge, catering socio economic needs thus nurturing and encouraging entrepreneurship in student community.

## MISSION

- Providing all facilities under one roof for the transformation of an idea into a prototype
- Training in skills, critical thinking, problem solving, interdisciplinary collaboration etc.
- Making engineering students more curious, imaginative and creative IDEA lab will be centered around activities and events to promote multidisciplinary education and research

## AICTE STEERING COMMITTEE

S.No	Internal / External	Name of Expert	Designation & Institute
1	Management Chair	Mr. Devansh Singh	Treasurer, Infotech Education Society, Bhopal
2	External Academic Member	Dr. N P Patidar	Prof., MANIT, Bhopal
3	External Academic Member	Dr. Thirth Prasad	Prof., VTU, Bangalore
4	External Academic Member	Dr. Krishnakant Dhakad	Idea Lab, Prof., SGSITS, Indore
5	External Industry Member	Dr. Prashant Mishra	Founder TechXR Ltd.
6	External Industry Member	Dr. Manoj Modi	CEO, Nexcity Solution
7	External Industry Member	Dr. Ashok Patel	Founder CEO, Maa Sharda Electrostamping Pvt. Ltd. & Patel Fab Machine & Manufacturer
8	External Industry Member	Mr. Shyam Zambre	HR & CI Expert EICHER VOLVO
9	Chief Mentor	Dr. Anuprita Mishra	Principal, IES College of Technology, Bhopal
10	Faculty Coordinator CSE	Dr. Nikhat Raza	Prof., IES College of Technology
11	Faculty Coordinator ME	Dr. Amit Kumar	Assistant Prof., IES College of Technology, Bhopal
12	Faculty Coordinator ECE	Dr. Rajesh Nerra	Prof., IES College of Technology
13	Alumni, Dept. of Computer Science	Mr. Ojas Sisodiya	Founder CEO, Lyzum Associates

## STUDENT AMBASSADOR

1. Mr. Mohit Kumar, 6TH Sem EC
2. Amit Kumar Kushwaha , 6TH Sem EC
3. Neeraj Kumar, 4TH Sem EX

Message of  
**Honorable Director Ma'am**



Dear Students, Faculty, and Innovators,

The establishment of the IDEA Lab is a significant milestone in our commitment to fostering innovation, creativity, and research in the fields of engineering and technology. In today's rapidly evolving world, artificial intelligence (AI) and other emerging technologies are transforming industries and redefining the boundaries of possibility. The AICTE IDEA Lab has offered a unique platform for students, faculty, and researchers to explore, experiment, and innovate. This lab has support the development of new ideas but also encourage collaboration and interdisciplinary approaches to solve real-world problems.

AICTE IDEA Lab has empowered our students to become leaders in the technology-driven world, helping them to cultivate critical thinking, hands-on skills, and entrepreneurial spirit. It is an ideal space for students to turn their creative ideas into tangible prototypes, research projects, and potential startups. As we move forward, I encourage each one of you to make the most of the resources and opportunities available here. Let's work together to advance knowledge, push the boundaries of innovation, and contribute meaningfully to society. The future is full of possibilities, and through the AICTE IDEA Lab, we are shaping you leaders of tomorrow.

We have proven our excellence a recent NIRF rankings and ICOT has proudly achieved the NBA accreditation for B.Tech all programs. We continuously aspire to maintain the excellent standards for unfolding the talents of our students for being the efficient technocrats. Participated in ideation workshops and Smart India Hacakthon and the institute established very strong industry relations by having eminent industry members in its advisory board.

Wishing you all the very best in your innovative endeavors!

Warm regards,



**Dr. Sunita Singh**  
Group Director,  
IES Group of Institutions, Bhopal

# Message of Chief Mentor



AICTE IDEA Lab at The IES College of Technology, Bhopal provides a platform for students to convert their innovative ideas into tangible products, services, or start-ups. It encourages students to think creatively, develop problem-solving skills, and gain practical experiences in various domains.

Our mission is to equip our students with the skills, knowledge, and experimentation, creativity, and collaboration by providing a platform for our students to showcase their talents.

It is my pleasure to convey that the IES College of Technology, Bhopal is providing a state of the art infrastructure for the students to equip them in an excellent stress free learning environment. This will groom them for their professional career.

I am committed to mentor and guide our students, faculty, and staff to achieve our lab's vision. Let us work together to make our institution a hub for innovation and research excellence



**Dr. Anuprita Mishra**  
Chief Mentor,  
IES College of Technology, Bhopal

## PROJECTS COMPLETED IN AICTE-IDEA LAB

S.No	Nature of Project	Project coordinator Type	Student IDEALAB ID	Project Guide IDEALAB ID	Name of the coordinator	Name of the Project Guide	Title of the Project	Stream of the project (Programme)
1	Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB10711	Dr.Rajan Kumar	Preeti Verma	Rain detector alarm at home	EC
2	Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAA8539	Dr.Rajan Kumar	Dr. Shweta Singh	Line following robot	EC
3	Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11682	Dr.Rajan Kumar	Amarjeet kumar ghosh	LP gas leakage detector	EC
4	Prototype making	Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11682	Dr.Rajan Kumar	Amarjeet kumar ghosh	LDR Darkness sensor	EC
5	Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11793	Dr.Rajan Kumar	Jamwant Omkar	Smart blind stick	EC
6	Prototype making	Other Institutes faculty	IDEAL0493FAB10709	IDEAL04930FAA3850	Dr. Rajesh Nema	Dr. S. S Khedkar.	Problem statement of SIH (Smart irrigation system for precision farming)	CSE
7	Prototype making	Other Institutes	IDEAL0493FAA8541	IDEAL04930FAA3848	Dr.Rajan Kumar	R.Bharathiraja	Problem Statement in SIH (Smart irrigation system for precision farming)	EC
8	Prototype making	Other Institutes faculty	IDEAL0493FAA8541	IDEAL04930FAA3847	Dr.Rajan Kumar	Ms. R.Muthumina l	Next Gen Semen Storage Tank With Five Tire Bullwark	Agriculture Engineering
9	Prototype making	Other Institutes faculty	IDEAL0493FAB10709	IDEAL04930FAA3846	Dr. Rajesh Nema	Dr. S. A.Arunmoz	SIH Problem Statement- Affordable, Sustainable, and User friendly solutions for semen dose storage and distribution	EC
10	Prototype making	Other Institutes faculty	IDEAL0493FAB10709	IDEAL04930FAA3841	Dr.Rajesh Nema	Dr. Shipra Arora	SIH Problem Statement- Smart irrigation system for precision farming	CSE
11	Prototype making	Other Institutes faculty	IDEAL0493FAB10709	IDEAL04930FAA3849	Dr.Rajesh Nema	Aadhavan R	SIH Problem Statement "Smart irrigation system for precision farming"	EC
12	Prototype making	Other Institutes faculty	IDEAL0493FAB10709	IDEAL04930FAA384	Dr.Rajesh Nema	Dr. R. M.Potdar	SIH Problem Statement- Affordable, Sustainable, and User friendly solutions for semen dose storage and distribution	CSE
12	Prototype making	Other Institutes faculty	IDEAL0493FAB10709	IDEAL04930FAA3843	Dr.Rajesh Nema	Mr. SKMahaboob Suban	Rapid colorimetric and artificial intelligence based methods for determining the microbial quality of raw milk, processed milk and milk products	EC



**Automated Public Lighting System  
Using IoT and LoRaWAN**



**Drone for Transportation and  
Logistic application**



**IOT Based Sign Language Converter**

## Research Publications through Idea Lab

S. No	Paper Details
1	Akhilesh Dwivedi "A -13 Level Inverter with Level shifted variable Frequency Switching for THD reduction" 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
2	Archita Rai " A -23 Level Asymmetric Inverter with fewer switches to lower" 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
3	Ashish Raghuwanshi OCT Image Classification Using Cnn With Hybrid Feature Extraction Method” 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
4	Sonulal Revolutionizing Robotics: Exploring the Transformative Potential of Graphene - A Comprehensive Review” 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
5	Dr. Anuprita Mishra Electric spring & smart energy meter for power factor correction of industrial load” 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
6	Sonali Paunikar, STATCOM Performance Analysis with a Fuzzy -PI Controller “2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
7	Sonali Paunikar Synchronous Compensator Using Fuzzy-PI Controller “2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
8	Dr. Pramod Patel High density SRAM for drone technology” 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
9	Dr. Anuprita Mishra A study of signal Processing Techniques in power quality disturbance detection” 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)
10	Dr. Sonali Paunikar A 19-level Asymmetric Inverter with fewer switches to lower Distortion” 2024 IEEE 2nd International Conference on Innovations in High Speed Communication and Signal Processing (IHCSP)

## Events Details Nov -Dec 2024

<b>IES College of Technology, Bhopal</b>					
<b>AICTE IDEA LAB Events Details of Nov -Dec 2024</b>					
S.No.	Event Title	Event Duration	No. of Days	Event Type	No. of Participants
1	Professional Skilling Programs For Class 10/12 passed students On Prototype Designing and Measuring Instruments	11 Nov 2024 to 17 Nov 2024	12 days	School student Internship	18
2	Project and Prototype Making For School Students	22 Nov to 23 Nov 2024	2 Days	For School Students	19
3	National seminar on: Recent Trends in VLSI and Semiconductor Design	29th November to 1st December 2024	2 Days	Awareness of industry person	20
4	Smart India Hackathon Hardware 2024	11 <sup>th</sup> Dec to 15 <sup>th</sup> Dec	5days	Ideation Workshop	30

### Student Internship Professional Skilling Programs for Class 10/12 passed students on Prototype Designing and Measuring Instruments from 11 Nov 2024 to 17 Nov 2024.

The 18 school students were participants in this internship. Internship Structure included Introduction to Prototyping, Hands-On Design Session, Discussion on Measurement Techniques, Integration of Design and Measurement, Collaborative Problem-Solving, and Potential Challenges and Solutions. Internship on Prototype Designing and Measuring Instruments offers an excellent opportunity to delve into the intricacies of product development, from initial design concepts to precise measurement techniques. Here's a structured approach to planning such an internship

Internship Objectives:

- Skill Development: Equip participants with practical skills in prototype design and measurement.
- Tool Familiarization: Introduce and provide hands-on experience with essential design and measurement tools.
- Problem-Solving: Encourage collaborative problem-solving through real-world scenarios.



**Glimpses of Sewa Vidya Mandir Campus Govindpura Bhopal**

## School Students Internship Program



## Glimpses of CM Rise. Govt. H.S. School Barkhedhi Jahangirabad Bhopal School Students Internship Program



## Glimpses of CM Rise. Govt. H.S. School Students Internship Program



Organized Project and Prototype Making For School Students 22 Nov to 23 Nov

Under this workshop, school students prepared their project and prototype. Guided students in several domains. Students prepared a PCB of the project and learned about layout designing, etching, drilling, soldering, and **troubleshooting**.



### **Glimpses of Project and Prototype Making workshop for Students of Maharishi Vidya Mandir & IES Public School Bhopal**

National Seminar on Sustainable Development in Semiconductors and Renewable Energy on 29th & 30th Nov '24 under the aegis IETE Student Chapter, IEEE and Institution of Engineers

National Seminar IES College of Technology, Bhopal, Department of ECE and EX, organized a National Seminar on Sustainable Development in Semiconductors and Renewable Energy on 29th & 30th Nov '24 under the aegis of IETE Student Chapter, IEEE, and Institution of Engineers with motivation and support from Er B S Yadav, Founder Chancellor, IES University Bhopal, and Chief guest Dr. J P Shukla, Retd. Chief Scientist CSIR-AMPRI Bhopal. Key speakers at the event were Dr. Savita Nema, Professor, MANIT Bhopal; Mr. Shishupal Jatav, Senior Manager of Traction Machine Design, BHEL Bhopal; Dr. K. Manickavasagam, Professor, NITTR Bhopal; Dr. Vinita Agarwal, Professor and In-Charge of C2S Program at COEP, Maharashtra; Dr. Vibha Vyas, Professor and Co-In-Charge of C2S Program at COEP, Maharashtra; and Mr. Piyush Jain, Senior Instructor, CRISP Bhopal. They provided inputs for reducing environmental impact, promoting economic growth, generating employment, and improving public health for a cleaner, sustainable future. The program provided exposure to devices and technologies through VLSI designing tools CADENCE. On behalf of the Department of ECE, IES College of Technology, Bhopal, in association with the IETE student's chapter and ECE Department Association, we have organized a two-day seminar on “Emerging Technologies in Sustainable Development in Semiconductor and Renewable Energy” on 29th-30th November 2024 in collaboration with IIC. The 2-day seminar on Emerging Technologies in Sustainable Development in Semiconductor and Renewable Energy in collaboration with IETE was inaugurated by Mr. Shishupal Jatav, Sr. Manager/Traction Machine Design, BHEL Bhopal. Their profound addresses acknowledged all valuable contributions to the field of engineering research, which inspired IES. The day 1 session witnessed expert talks by several distinguished scientists. Students learned about emerging technologies in sustainable development in Semiconductors and Renewable Energy, including projects like CPLD/FPGA and semicustom design, and were also motivated to take up internships at Renewable Energy.



Glimpses of National Seminar on Sustainable Development in Semiconductors and Renewable Energy Chief Guest Prof. Dr. Sunit Singh Group Director IES College Technology Bhopal and Dr. J P Shukla, Retd. Chief Scientist CSIR-AMPRI Bhopal. Key speakers at the event were Dr. Savita Nema, Professor, MANIT Bhopal; Mr. Shishupal Jatav, Senior Manager of Traction Machine Design, BHEL Bhopal; Dr. K. Manickavasagam, Professor, NITTR Bhopal; Dr. Vinita Agarwal, Professor and In-Charge of C2S Program at COEP, Maharashtra; Dr. Vibha Vyas, Professor and Co-In-Charge of C2S Program at COEP, Maharashtra; and Mr. Piyush Jain, Senior Instructor, CRISP Bhopal

### Smart India Hackathon 2024 - Hardware Edition 2024 on 11th Dec to 15th Dec

IES University in a support of AICTE IDEA LAB IES College of Technology, Bhopal. The National Grand finale of Smart India Hackathon 2024 culminated successfully at IES University, Bhopal Nodal Center. 17 teams with 108 participants from over 5 states, worked tirelessly on 3 critical problem statements by ministries. They were guided by jury members and design mentors to give the best outcomes. The event was graced by Shri Lakhan Patel Ji, Hon'ble Minister of Fisheries Animal Husbandry and Dairy and witnessed the inspiring presence of Er B S Yadav sir, Hon'ble Founder Chancellor, IES University, alongside MIC Nodal Officers and esteemed dignitaries. The winning teams received Prize Money of Rs 1 Lakhs each.





**Vishwakarma Institute of Technology Pune**



**Saranathan College of Engineering SIH Winner 2024 organized in IES Bhopal**



**Glimpses of Smart India Hackathon 2024 Chief Guest Shri Lakhnan Patel Ji, Hon'ble Minister of Fisheries Animal Husbandry and Dairy and witnessed the inspiring presence of Er B S Yadav sir, Hon'ble Founder Chancellor, IES University**

**Students of IES College of Technology, Bhopal awarded first prize in Smart India Hackathon 2024 organized by Ministry of Education**



**Ayush Raj, Nitish Kumar ,Bhawana gupta, Abhinav kumar, Hirdesh mewada Atharv Singh, Students and Mentor Nisha Nigam Assistant Professor of IES College of Technology, Bhopal awarded first prize in Smart India Hackathon 2024 in Bangalore in the presence of Er Prof Dr JV PhD \*Former Scientist Engineer ISRO**

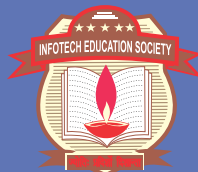


**IES College of Technology, Bhopal awarded first prize in Smart India Hackathon 2024 in Bangalore in the presence of Er Prof Dr JV PhD \*Former Scientist Engineer ISRO**



"All of us do not have equal talent.  
But, all of us have an equal  
opportunity to develop our talents."

Dr. APJ Abdul Kalam



**IES COLLEGE OF TECHNOLOGY<sup>®</sup>**  
**B H O P A L**

Kalkheda, Ratibad Main Road, Bhopal-462044, Madhya Pradesh, India.  
Email : [idealabicot@iesbpl.ac.in](mailto:idealabicot@iesbpl.ac.in)