

AICTE IDEALAB **NEWS LETTER**

(July - Oct 2024)

2024 - 2025



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

Message of
Honorable Director Ma'am



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

The focus will be on imparting hands-on training among students so that they become imaginative and creative and work confidently as professionals 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, 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 ensure that students obtain best possible exposure to multiple learning experiences. I strongly believe that AICTE IDEA LAB will act as the main driver for continuous improvement in quality technical education and serve as the benchmark for future engineering endeavour. Best Wishes to all members of Idea lab for doing excellent work in development of innovative mindset and entrepreneurship environment among students and faculties.



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

Message of Chief Mentor



As the Chief Mentor of IDEA Lab, I am thrilled to see our students transform into innovative thinkers and problem-solvers. Our lab is dedicated to foster a culture of innovation, entrepreneurship, and research excellence.

Our mission is to equip our students with the skills, knowledge, and mindset required to tackle real-world challenges. We encourage experimentation, creativity, and collaboration, providing a platform for our students to showcase their talents.

I urge our students to leverage this lab's resources, expertise, and network to develop innovative solutions, publish research papers, and participate in competitions. Together, let's create a vibrant ecosystem that drives innovation, entrepreneurship, and societal impact.

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.

Best regards,



Dr. Anuprita Mishra
Principal
IES College of Technology, Bhopal

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 Nema	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. Mr. Amit Kumar Kushwaha, 6th Sem EC
3. Mr. Neeraj Kumar 4th Sem ME

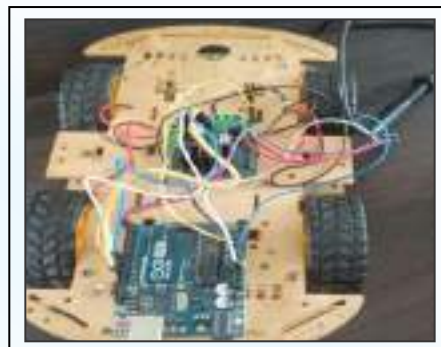
PROJECTS COMPLETED IN AICTE-IDEA LAB

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)
Prototype making	Host institute Faculty member	IDEAL0493FAB10709	IDEAL0493FAB10710	Dr. Rajesh Nema	Deepmala Singh	solar tracking system	EC
Prototype making	Host institute Faculty member	IDEAL0493FAB10709	IDEAL0493FAA8538	Dr. Rajesh Nema	Pramod Kumar Patel	Motion Detection System	EC
Prototype making	Host institute Faculty member	IDEAL0493FAB10709	IDEAL0493FAB11681	Dr. Rajan Kumar	Kavita Barahar	Fire extinguisher Robo Car	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB10711	Dr. Rajan Kumar	Preeti Verma	Rain detector alarm at home	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAA8539	Dr. Rajan Kumar	Dr. Shweta Singh	Line following robot	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11682	Dr. Rajan Kumar	Amarjeet kumar ghosh	LP gas leakage detector	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11682	Dr. Rajan Kumar	Amarjeet kumar ghosh	LDR Darkness sensor	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB10709	Dr. Rajan Kumar	Dr. Rajesh Nema	Smart glasses for blind proje	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11682	Dr. Rajan Kumar	Amarjeet kumar ghosh	Lassr light security system	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB10710	Dr. Rajan Kumar	Deepmala Singh	Automatic Street Light	EC
Prototype making	Host institute Faculty member	IDEAL0493FAA8541	IDEAL0493FAB11793	Dr. Rajan Kumar	Jamwant Omkar	Smart blind stick	EC

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)
Prototype making	Other Institutes faculty	IDEAL0493FA B10709	IDEAL0493 OFAA3850	Dr. Rajesh Nema	Dr. S. S. Khedkar	Problem statement of SIH (Smart irrigation system for precision farming)	CSE
Prototype making	Other Institutes faculty	IDEAL0493FA A8541	IDEAL0493 OFAA3848	Dr.Rajan Kumar	R. Bharathiraja	Problem Statement in SIH	EC
Prototype making	Other Institutes faculty	IDEAL0493FA A8541	IDEAL0493 OFAA3847	Dr.Rajan Kumar	Ms. R. Muthuminal	Next Gen Semen Storage	Agriculture Engineering
Prototype making	Other Institutes faculty	IDEAL0493FA B10709	IDEAL0493 OFAA3846	Dr. Rajesh Nema	Dr. S. A. Arunmoz	SIH Problem Statement-	EC
Prototype making	Other Institutes faculty	IDEAL0493FA B10709	IDEAL0493 OFAA3841	Dr.Rajesh Nema	Dr. Shipra Arora	SIH Problem Statement-Smart irrigation system for precision farming	CSE
Prototype making	Other Institutes faculty	IDEAL0493FA B10709	IDEAL0493 OFAA3849	Dr.Rajesh Nema	Aadhavan R	SIH Problem Statement "Smart irrigation system for precision farming"	EC
Prototype making	Other Institutes faculty	IDEAL0493FA B10709	IDEAL0493 OFAA384	Dr.Rajesh Nema	Dr. R. M. Potdar	SIH Problem Statement-	CSE
Prototype making	Other Institutes faculty	IDEAL0493FA B10709	IDEAL0493 OFAA3843	Dr.Rajesh Nema	Mr. SK Mahaboob Suban	Rapid color metric and artificial intelligence	EC



Smart Dustbin



Line following robot



Warehouse Security System

PATENT DETAILS

S.No.	Patent Status	Patent Application IDEALAB ID	Patent application no.	Receipt of Application (CBR)	Date of application Filing	Patent No.
1	Granted	IDEAL0493FAB10709	6327546	6327546	11/27/2023	6327546
2	Registered	IDEAL0493FAB11796	202321074360	202321074360	10/31/2023	202321074360
3	Registered	IDEAL0493FAB11794	202321068006	202321068006	10/10/2023	NA
4	Registered	IDEAL0493FAB11792	202321068007	202321068007	10/10/2023	NA
5	Registered	IDEAL0493FAB11793	202321068009	202321068009	10/10/2023	NA
6	Registered	IDEAL0493FAB11795	202321068004	202321068004	10/10/2023	NA

ACTIVITIES ORGANIZED UNDER AICTE IDEA LAB

IES College of Technology, Bhopal					
AICTE IDEA LAB Events Details July- Oct 2024					
S.No.	Event Title	Event Duration	No. of Days	Event Type	No. of Participants
1	Designing of Prototype using Internet of Things for real time applications	08th July 2024 to 16th July 2024	9 Days	Skilling Programme	36
2	Two Week Training Program on Prototype Circuit Design and Development	09th Sep 2024 to 23rd July 2024	15 Days	Skilling Programme	50
3	Ideation Workshop	02nd Sep 2024 to 12th Sep 2024	11 Days	Ideation Workshop	36
4	67th Annual IETE Convention	14th Sep 2024 to 15th Sep 2024	2 Days	Annual Conference	33
5	Expert Meet in Idea Lab	15th Sep 2024	1 Day	Others	15
6	Expert lecture on the promotion of manufacturing of electronics hardware and semiconductors	3th Oct 2024	1 Day	Others	35
7	Open day visit for school students	15th Oct 2024	1 Day	Skilling Programme	13
8	Workshop on Mechanical Measurements	15th Oct 2023 to 21st Oct 2023	7 Days	Ideation Workshop	61
9	Project Innovation Expo	18th Oct 2024 to 18th Oct 2024	1 Day	Skilling Programme	126
10	Open day visit for school students	19th Oct 2024	1 Day	Skilling Programme	22
11	Expert Lecture on Intellectual Property Rights (IPR)	22 OCct 2024	1 Day	Others	40
12	Open day visit for school students	25th Oct 2024	1 Day	Open day for school students	14
13	Open day visit for school students	26th Oct 2024	1 Day	Open day for school students	26

EVENTS DETAILS

- Designing of Prototype using Internet of Things for real time applications, on 8-16 July 2024. (In association with Industry institute interaction (IndEyes InfoTech pvt.ltd), Electronics student club and Institute Incubation)

Department of Electronics and Communication Engineering organized an Internship on In Internet of Things, by Mr. Abhigyanam Giri, Head Trainer IndEyes Pvt. Ltd. It was an informative and interactive session in which student had a practical session on programming and hardware implementation. This event highlighted the collaborative efforts between educational institutions, industry partners, and student organizations to foster innovation and practical skills in emerging technologies.

IES COLLEGE OF TECHNOLOGY
BHO PAL

Department of Electronics and Communication Engineering
In Association with

Institute Incubation Cell

Organizes

**Skiing Programme on
Designing of Prototype
using Internet of
Things for Real Time
Applications**

8th - 16th July 2024
9.00 AM Onwards



Hand's on training under IOT and AICTE Idea Lab

Such programs were bridging the gap between theoretical knowledge and real-world application, preparing participants for future technological challenges. Hardware implementation under AICTE Idea Lab Recently, industries have used machine-to-machine communication (M2M) to achieve wireless automation and control. But with the emergence of cloud and allied technologies (such as analytics and machine learning), industries can achieve a new automation layer and with it create new revenue and business models. In Internet of Things is sometimes called the fourth wave of the industrial revolution, or Industry 4.0.



Hardware implementation under AICTE Idea Lab



IOT Training Glimpses under AICTE Idea Lab

Organized two week training program on proto type and development from 9th Sept to 23th Sept 2024.



SESSION ON PROTOTYPE DEVELOPMENT

IES College of Technology, Bhopal organized a two-week training program on prototype development held from September 9 to 23, 2024.

Program Structure:

Week 1: Focused on foundational knowledge, including design thinking, prototyping methodologies, and tool familiarization.

Week 2: Hands-on sessions are conducted where participants develop their prototypes, receive feedback, and iterate on their designs.

Resources: Product Prototyping: For insights into rapid prototyping, consider reading articles like "From Concept to Reality: How to Make Real Product Prototypes In Two Weeks," which offers practical steps and proven methods.

Project Planning: Developed a clear roadmap and project plan to guide participants through the prototyping process. An example can be found in the article "Prototype Roadmap, Project Plan and Iterations."

Networking and Collaboration: Engage with industry professionals and academic institutions to provide mentorship and real-world insights during the program.



Training Session on Prototype Designing

One Week training program in PCB Design and Fabrication

We hosted a one-week program called "PCB Design and Fabrication" (DATE) in partnership with the IIC on behalf of the Department of ECE at IES College of Technology, Bhopal, in cooperation with the IETE Students Chapter and ECE Department partnership. In order to prepare students for the demands of the industry, the workshop sought to improve their technical and practical skills. Through the use of simulation tools to test electrical and electronic circuits in a software environment and the acquisition of fabrication processes to produce their own designs, participants obtained practical expertise in PCB design. The workshop provided training on the following subjects and was attended by 55 students from the fourth semester of the ECE program. PCB Design & Routing PCB Etching PCB Soldering Components onto PCB Schematic Design Component Footprint Design Integrated Library Design In addition to enhancing the students' technical understanding, this hands-on experience encouraged their creativity and independence in their project work



Ø Organized Ideation Workshop from 2nd to 12th September 2024

The ideation workshop was a structured session designed to generate a wide range of creative ideas and solutions. The primary objectives of such a workshop included

1. **Idea Generation**
2. **Collaboration**
3. **Problem-Solving**
4. **Alignment and Focus**
5. **Prioritization**
6. **Ownership and Engagement**
7. **Exploration of Opportunities**

Gathering feedback on ideas and solutions, then refining and improving them through iterative discussion, evaluation, and implementing in real-time applications.

IES COLLEGE OF TECHNOLOGY[®]
BHOPAL

Accredited by **nirf** NATIONAL INSTITUTIONAL ACADEMIC ACHIEVEMENTS BOARD, **NBA** NATIONAL BOARD OF ACCREDITATION, **ARIIA** STATE BOARDING ON INSTITUTIONS AND DEMONSTRATION ACHIEVEMENTS

Department of Computer Science and Engineering

In Association with

DEALab **INSTITUTION'S INNOVATION COUNCIL**
(Ministry of HRD Initiative)

Organizes

**IDEATION
WORKSHOP**

 2nd to 12th September 2024

Venue : IES Campus, Ratibad Main Road, Bhopal

- **Emerging Technologies and Applications using AI” 66th ANNUAL IETE CONVENTION (AIC)
14th-15th September 2024,**

This Convention provided platform for discussion on challenges issues and application of artificial intelligent in future and presents aspects. The 67th Annual IETE Convention (AIC) was held on September 14-15, 2024, at IES University in Bhopal, focusing on the theme "Emerging Technologies and Applications Using AI."

Highlights of the Convention:

- Inaugural Ceremony: The event commenced with a traditional lamp-lighting ceremony, followed by a welcome address from Dr. Jyoti Singhai, the Organizing Chair and a member of the IETE Governing Council.
- Keynote Addresses: Prominent figures, including Dr. N.N. Kasat, West Zone Mentor of IETE, and Dr. A.P. Thakare, Chairman of the Technical Programmes and Publicity Committee, shared insights into IETE's initiatives and the convention's theme.
- Awards and Recognitions: The convention honored distinguished professionals with Lifetime Achievement Awards, including Prof. V.M. Pandharipande and Prof. Raj Senani, for their significant contributions to the field. Additionally, the best-performing IETE Centres and Sub-Centres were recognized.
- Leadership Transition: Shri Sunil was ceremoniously installed as the President of IETE for the 2024-2025 term by the Chief Guest, Shri Aidal Singh Kasana, Minister of Agriculture, Government of Madhya Pradesh.
- The convention served as a platform for professionals, researchers, and academicians to discuss advancements in AI and its applications across various sectors.



Glimpses of Ingruation session ANNUAL IETE CONVENTION (AIC)



Glimpses of IETE Award Ceremony

Expert Meet in Idea Lab: Eminent Guest from IETE Society visited AICTE IDEA LAB on 15 Sept 2024. Discussion on facilities under idea lab and incorporated valuable suggestions for value addition in idea lab. These events typically include workshops, panel discussions, and collaborative projects. They aim to enhance participants' skills in areas such as critical thinking, problem-solving, and design thinking, aligning with the broader objectives of the IDEA Lab initiative.



Expert Meet in Idea Lab



Expert lecture on the promotion of manufacturing of electronics hardware and semiconductors

IES College of technology, Department of Electronics and communication conducted the online on expert lecture on the promotion of manufacturing of electronics hardware and semiconductors in India in association with IETE student's chapter Bhopal on 03 Oct 2024. The event started with a welcome address by Dr. Anuprita Mishra, Principal of IES College of Technology, Bhopal. These events explored ideas relevant to semiconductor manufacturing in India, highlighting the importance of this sector for economic growth, innovation, and job creation.

Discussion on Current Challenges

- Supply chain issues and dependency on imports.
- Lack of skilled workforce in advanced manufacturing techniques.
- Infrastructure gaps and regulatory hurdles.

Discussion on Government Initiatives

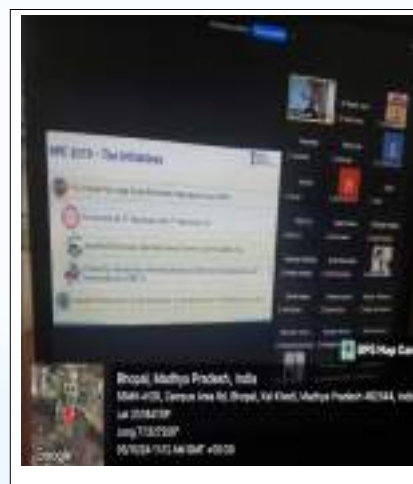
- Overview of policies like the Production Linked Incentive (PLI) scheme.
- Investments in research and development (R&D) and innovation hubs.
- Collaboration with global manufacturers and technology partners.

Discussion on Industry Opportunities

- Rise of digital technologies and the demand for electronics.
- Potential for export and global market integration.
- Development of a local ecosystem for startups and SMEs in electronics.

Discussion on Skill Development and Education

- Importance of training programs and partnerships with educational institutions.



A workshop on Mechanical Measurements is focused on various techniques, tools, and technologies used to accurately measure physical quantities related to mechanical systems. It highlights the latest technologies and methods used in measuring mechanical properties like force, torque, pressure, displacement, and temperature in these systems. The importance of accurate measurements for design, manufacturing, and quality control is emphasized, along with discussions on tools and instruments that provide high precision. The role of mechanical measurements in various industries-such as automotive, aerospace, manufacturing, and energy-and how these measurements impact product performance and quality is explored. It focuses on how measurement is integrated into modern manufacturing, emphasizing process control, automation, and ensuring product consistency



Glimpses Workshop on Mechanical Measurements 15th Oct 2023 to 21st Oct 2023

Open Day for school students at October 15, 2025

Govt. Girls Hr. Sec School, Jahangirabad Bhopal students visited an AICTE IDEA Lab on Open Day for school students on October 15, 2025. This visit provided exposure to tools and technology, including how prototypes are designed and processes are discussed. The discussion included 3D printing, mechanical measuring instruments and laser cutting.



Project Innovation Expo

The Project Innovation Expo, organized on October 18, 2024, showcased innovative ideas, technologies, and solutions across multiple fields of innovation.

One hundred twenty-six students from various colleges participated, highlighting innovative projects that address real-world problems or present new ways of thinking. Professionals, creators, entrepreneurs, and stakeholders discussed ideas, collaborated, and potentially formed partnerships. The event encouraged attendees to think outside the box, inspiring them to develop their own ideas and contribute to the advancement of technology, business, or society. Awards were given for the most promising and impactful projects or products in different categories, allowing inventors to receive feedback from industry professionals and the general public, helping them refine and improve their ideas



Glimpses of Project Innovation Expo

Open Day for school students on October 19, 2025

CM Rise. Govt. H.S. School Barkhedi Jahangirabad Bhopal students visited an AICTE IDEA Lab on Open Day for school students on October 15, 2025. This visit provided exposure to tools and technology, including how prototypes are designed and processes are discussed. The discussion included 3D printing, mechanical measuring instruments and laser cutting.



Maharishi Vidya Mandir Bhopal students visited an AICTE IDEA Lab

Expert Lecture on Intellectual Property Rights (IPR)

Organized expert session on Intellectual Property Rights (IPR) by Dr. Sandeep Singhai, Scientist CSIR-AMRI Bhopal on 22 Oct 2024. In this session share the idea about to fill the IPR, Types of IPR and its utility. Focuses on educating participants about the legal aspects and protections related to intellectual property. The session usually covers various types of intellectual property, including patents, trademarks, copyrights, and trade secrets, explaining their significance in protecting creativity, innovation, and business assets.



Glimpses of Expert Lecture on Intellectual Property Rights (IPR)

Open Day for school students at October 24, 2025



Sewa Vidya Mandir Campus Govindpura Bhopal students visited an AICTE IDEA Lab on Open Day for school students on October 24, 2024. This visit provided exposure to tools and technology, including how prototypes are designed and processes are discussed. The discussion included 3D printing, mechanical measuring instruments and laser cutting.

Open Day for school students at October 25, 2025

Maharana Pratap Higher Secondary School Bhopal students visited an AICTE IDEA Lab on Open Day for school students on October 25, 2024. This visit provided exposure to tools and technology, including how prototypes are designed and processes are discussed. The discussion included 3D printing, mechanical measuring instruments and laser cutting.



Maharana Pratap Higher Secondary School Bhopal students visited an AICTE IDEA Lab

Open Day for school students at October 26, 2025



Maharishi Vidya Mandir Bhopal students visited an AICTE IDEA Lab on Open Day for school students on October 26, 2025. This visit provided exposure to tools and technology, including how prototypes are designed and processes are discussed. The discussion included 3D printing, mechanical measuring instruments and laser cutting.

Maharishi Vidya Mandir Bhopal students visited an AICTE IDEA Lab

Students of IES College of Technology, Bhopal awarded first prize in Smart India Hackathon 2023 organized by Ministry of Education



Divya Kumari, Shruti, Sanya Chare and Chandra dev Kumar students of IES College of Technology, Bhopal awarded first prize in Smart India Hackathon 2023 in presence of Nodal Head Shrikant Sangolkar Infosys

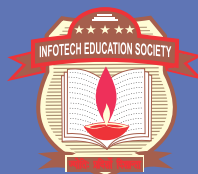
Activity Planner for Nov-Dec 2024

IES College of Technology, Bhopal				
AICTE IDEA LAB				
Activity Planner for Nov-Dec 2024				
S.No.	Event Title	Event Duration	No. of Days	Event Type
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
2	Project and Prototype Making For School Students	22 Nov to 23 Nov	2 Days	For School Students
3	National seminar on:Recent Trends in VLSI and Semiconductor Design	29 th November to 1 st December 2024	2 Days	Awareness of industry person
4	SIH 2024	11 th Dec to 15 th Dec	5days	Ideation Workshop



"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[®]
B H O P A L

Kalkheda, Ratibad Main Road, Bhopal-462044, Madhya Pradesh, India.
Email : idealabicot@iesbpl.ac.in