



NEW HORIZON COLLEGE OF ENGINEERING

Autonomous College, Permanently Affiliated to Visvesvaraya Technological University, Belagavi
Approved by AICTE & UGC, Accredited by NAAC with 'A' Grade, Accredited by NBA



A Report

AICTE IDEA Lab – Open Day for School Students Program

Open day for school student program was successfully organized at New Horizon College of Engineering under the initiative of the AICTE IDEA LAB and the Department of Research and Development.

Chief Mentor	: Dr. Manjunatha, Principal
Faculty Coordinator	: Dr. Revathi V, Dean R&D
Faculty Co Coordinator	: Dr. A. Sujin Jose, Associate Professor- R&D/Mech
Date	: 13 october 2025
Participants	: School Students of New Horizon Public School
Trainers	: Dr. A. Sujin Jose, Mr. Thanuj Kumar, Mrs. Shweta, Mr. Amrit

Objectives

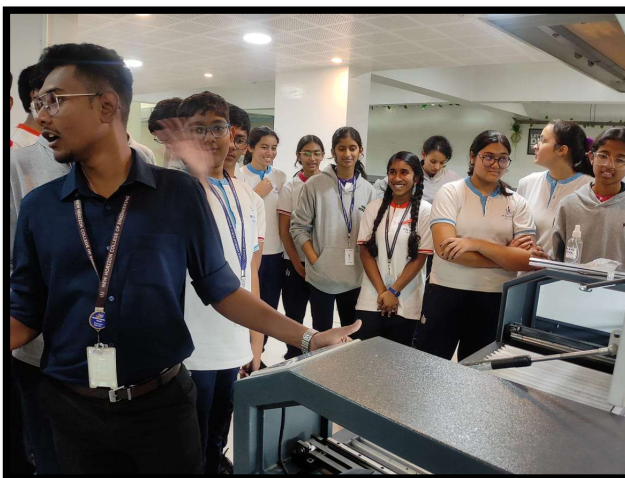
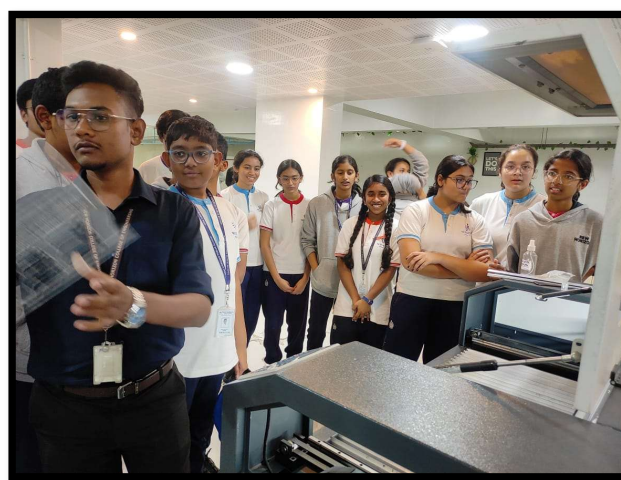
- The program aimed to create awareness among school students about the importance of innovation, creativity, and hands-on learning in modern education. During the visit, students were briefed about the purpose and functioning of the IDEA Lab, including its role in promoting interdisciplinary learning and practical implementation of ideas.
- They were also introduced to the advanced equipment and tools available in the lab, such as 3D printers, laser cutting machines, PCB Machine which help in transforming innovative concepts into real-world prototypes.
- The session encouraged students to explore their creative potential, understand the design thinking process, and gain inspiration to develop innovative solutions for everyday challenges.

Overview

- The program aimed to encourage students to explore their creative potential, understand the design thinking process, and gain inspiration to develop innovative solutions for everyday challenges.
- They actively interacted with the mentors and lab coordinators, who guided them on how creative ideas can be transformed into practical solutions using modern tools and technologies.
- During the session, students were introduced to the operations of 3D printers, laser cutting machines, and PCB (Printed Circuit Board) machines. The demonstration helped them understand how these modern tools are used in designing and developing innovative prototypes. The instructors explained the working principles, applications, and safety measures of each machine in detail.

The session began with a detailed introduction to the AICTE IDEA Lab, where trainers explained the importance and objectives of the lab in promoting creativity, innovation, and practical learning among students. They highlighted how the lab serves as a platform for students to transform their ideas into reality by using modern technologies and equipment. The trainers also gave an overview of the various **machines** and tools available, such as 3D printers, laser cutting machines and PCB fabrication machines, emphasizing their role in product design and development. Students were briefed about how these facilities support interdisciplinary learning by combining principles of science, engineering, and design. The introductory session inspired students to think innovatively and make effective use of such facilities to develop new solutions and projects.

The trainers provided a step-by-step explanation of how each machine operates and its role in modern engineering and product development. During the 3D printing demonstration, students observed how digital 3D models are converted into physical prototypes using additive manufacturing technology. The Heavy Duty Laser Cutting Machine demonstration showcased how precise shapes and components can be created efficiently from materials like acrylic through software. In the PCB machine session, participants learned about designing and fabricating electronic circuit boards used in various electronic devices through software like eagle software, copper cam processor and Mach 3 mill software.



Outcomes

- Students learned how creative ideas are transformed into real products using the facilities available in the AICTE IDEA Lab.
- They were also introduced to the importance of design thinking and how it helps in developing user-centered solutions.
- The session motivated them to apply these concepts in their future projects and explore new ways to solve real-world challenges.
- Participants gained information about advanced prototyping machines such as the PCB Mat Machine, Heavy Duty Laser Cutting Machine.

Conclusion

The Open Day program for school students was a great success, providing them with valuable exposure to innovation, creativity, and hands-on learning. The visit to the AICTE IDEA Lab helped students understand the role of technology in transforming ideas into real-world solutions. Through live demonstrations and interactive sessions, they gained knowledge about modern tools, design thinking, and the product development process. The event inspired students to think innovatively, explore new technologies, and develop a scientific mindset.