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 – Skill Development Program

A Six days – Skill Development 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 : 04 February 2026
Participants : Students of Government Higher Primary School, Panathur
Trainers : Dr. A. Sujin Jose, Mr. Thanuj Kumar N, Mr. Amrit Das

Objectives

- The main aim of the program was to create awareness among the school students about the importance of innovation, creativity, and hands-on learning in modern education systems. During the visit, the students were briefed on the purpose and functioning of the IDEA Lab, including the significance of the lab in the promotion of interdisciplinary learning and the implementation of ideas.
- The students were also introduced to the advanced tools and machines that are available in the lab, such as 3D printers, laser cutting machines, PCB Machine that aid in the implementation of the innovative ideas that are generated by the students.
- The session also encouraged the students to explore their creative potential, understand the design thinking process, and gain inspiration to develop innovative solutions for everyday challenges.

Overview

- The main aim of the program was to encourage the students to explore their creative potential, understand the design thinking process, and gain inspiration to develop innovative solutions for everyday challenges.
- The students actively participated in the session and interacted with the mentors and lab coordinators who guided the students on how the creative ideas can be transformed into practical solutions using modern tools and technology.
- During the session, the students were introduced to the working of the 3D printers, laser cutting machines, and the PCB (Printed Circuit Board) machine. The working of these modern tools was explained to the students so that they can understand how these modern tools are used for the development of innovative ideas. The working principles, applications, and precautions of the machines were explained in detail to the students.

The session began with a comprehensive introduction to the AICTE IDEA Lab, wherein the trainers described in detail the vision, objectives, and importance of the lab in cultivating creativity, innovation, and experiential learning among students. They described how it is a dynamic platform wherein students can convert their ideas into reality with the help of advanced technologies and modern machines.

An overview of the machines available in the lab, including 3D Printers, Laser Cutting Machines, and PCB Fabrication Machines, was presented to the students, along with their importance in product development, design, and manufacturing. The trainers also described how IDEA Lab is an interdisciplinary platform wherein concepts from Science, Engineering, and Design disciplines are combined to provide a comprehensive learning environment.

The trainers then provided a comprehensive, step-by-step explanation of how each machine operates and is utilized in modern-day engineering and product development fields. During the presentation on 3D Printers, students learned how a digital 3D object can be converted into a real object with the help of additive manufacturing technology.

The Heavy-Duty Laser Cutting Machine presentation demonstrated how precise shapes can be created from materials like Acrylic with the help of specialized design software. In the presentation on PCB Fabrication Machines, students learned how electronic devices are developed with the help of electronic circuit boards, wherein they gained insights into how electronic devices can be designed and manufactured with the help of specialized software like Eagle, Copper CAM, and Mach3 Mill.

Outcome

- The students developed an understanding of how creative ideas can be transformed into practical products with the help of advanced facilities available at the AICTE IDEA Lab.
- The students were introduced to the importance of the concept of Design Thinking and how it can be used to develop user-centric and problem-centric solutions.
- The students were motivated to incorporate innovative ideas in their future academic projects.
- The students developed an understanding of advanced prototyping machines, such as the PCB Fabrication Machine and the Heavy-Duty Laser Cutting Machine, along with their applications.

Conclusion

The Open Day program for school students was successfully completed, which was highly impactful. The students were given meaningful exposure to the concepts of innovation, creativity, and experiential learning. The students were able to understand how modern technologies can help transform ideas into practical, real-world solutions with the help of the visit to the AICTE IDEA Lab. The students were able to develop an understanding of advanced prototyping tools, the concept of Design Thinking, and the basics of product development with the help of live demonstrations. The students were inspired to think creatively, explore new technologies, and develop a scientific and innovative mindset.