



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

12-Day Bootcamp for Engineering Students

A 12-Day Bootcamp 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
Tech Gurus	: Mr. Amrit Das, Mr. Thanuj Kumar
Date	: 8 th May 2026 to 21 th May 2026
Participants	: Students of New Horizon College of Engineering
Total No of Participants	: 41 students
Trainers	: Dr. A. Sujin Jose

Objectives

- To provide participants with a comprehensive understanding of the core concepts, principles, and stages of the Design Thinking process.
- To foster creativity and critical thinking skills that enable participants to approach challenges from multiple perspectives.
- To strengthen problem-solving capabilities through innovative, user-centered, and empathetic approaches.
- To encourage the practical application of Design Thinking methodologies in developing effective, feasible, and impactful solutions to real-world problems.

Overview

To begin with, the training involved a thorough discussion of what Design Thinking is, the various stages that constitute the design thinking process, and why design thinking is critical in problem solving and innovation. According to the trainer, there are five key stages of the Design Thinking process: Empathize, Define, Ideate, Prototype, and Test. Of these, special focus was put on the first stage: the Empathy Stage, since it is the first step in developing the solutions that one can come up with using design thinking. This is because it requires that you understand the needs, experiences, and emotions of users. There were several practical activities carried out to help participants understand each step of the design thinking process. This involved putting participants in groups who would then work through the design thinking process starting with empathizing with their target users. At the Empathize stage, they had to observe users, talk to them, interview them, and discuss with them to understand more about them. Participants also learned the

importance of empathy mapping during the Empathize and Define phases. Through empathy maps, participants learned how to map what users say, do, think, and feel.

Day 1 (8th May 2026) : Design Thinking

Venue : IDEA Lab

Trainer : : Dr. A. Sujin Jose

This training program began with the introduction stage, where the coordinators welcomed the participants and explained to them the need for the workshop in helping the learners enhance their creativity, innovation, and problem-solving skills. An overview of the Design Thinking concept was made, and the five main stages of the process involved were outlined to include: Empathize, Define, Ideate, Prototype, and Test.

The focus of the workshop included the initial two stages of the Design Thinking process, namely Empathy and Define. The participants were taught how to employ these techniques in developing the desired innovation. For example, the Empathize stage helped the participants understand the importance of having empathy towards the users and their experiences. Thus, during this process, the students were taught how to collect information and insights from observing the users, communicating with them, and analyzing their needs.

In addition, they were shown how to make use of the collected data in defining a particular problem statement by synthesizing the information and insights gained at the Empathize stage. Further, participants were shown how to define the identified problems effectively, using the "How might we" technique. This process entailed redefining a challenge or problem facing a particular user.



Day 2 (9th May 2026) : Design Thinking

Venue : IDEA Lab

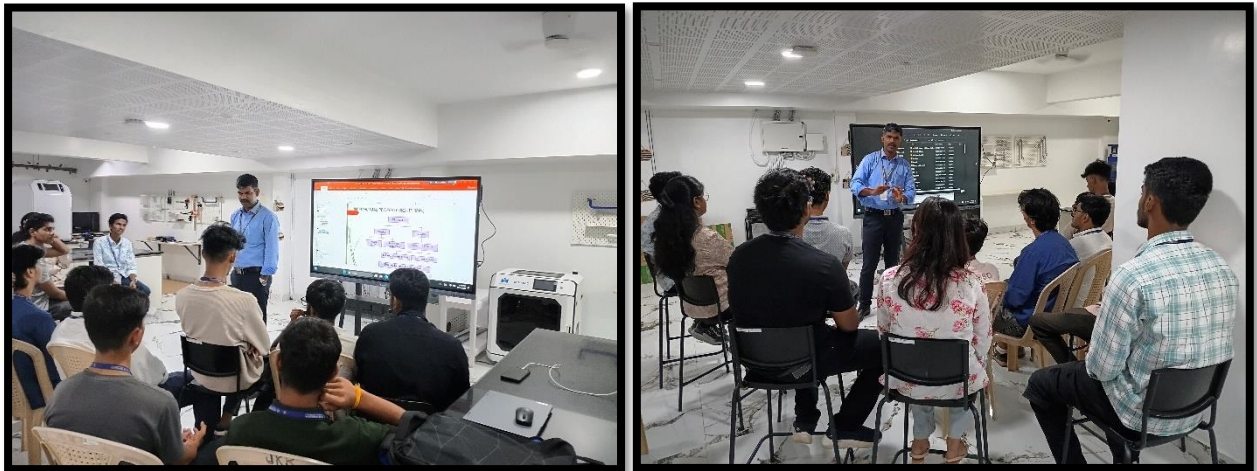
Trainer : : Dr. A. Sujin Jose

Following the Define stage came the Ideation stage, which is the second phase of the Design Thinking process. In the Ideation stage, participants worked on creative ideas to solve the problem defined in the first stage. Different ideation methods such as brainstorming, mind mapping, and brainwriting were taught by the trainers. Additionally, some interactive ideation methods such as sketching, storyboarding, and role-playing were also taught to stimulate creativity. Dot voting and

feasibility analysis were discussed as tools for selecting the best idea among different options.

In order to create a favorable atmosphere for creative ideas, several activities were conducted by the facilitators to encourage creativity. The use of unstructured brainstorming techniques stimulated innovation because ideas were generated with no restrictions.

During the ideation process, the students formed groups of three people and tried solving the problem as a group. Small team work was effective for generating many innovative solutions and coming up with feasible solutions to the problem. During the ideation process, the students formed groups of three people and tried solving the problem as a group. Small team work was effective for generating many innovative solutions and coming up with feasible solutions to the problem.

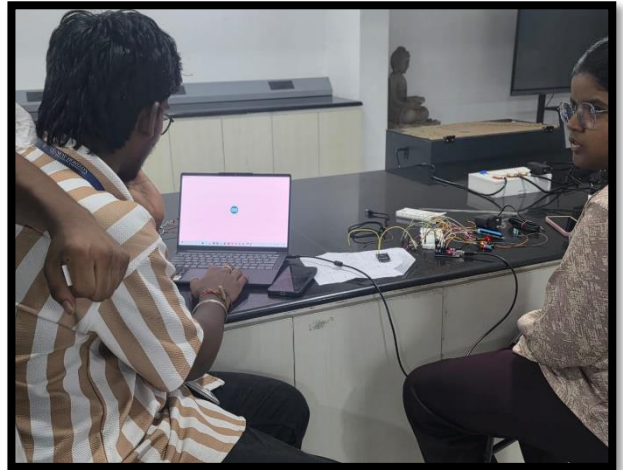
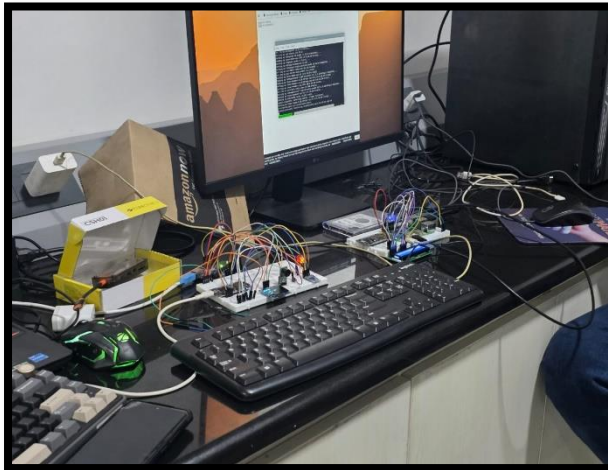
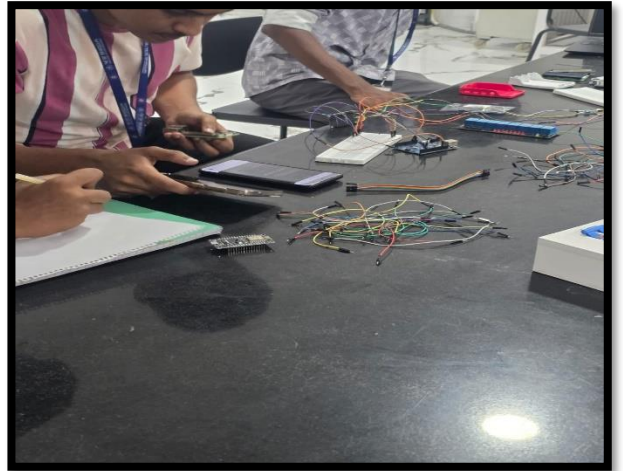
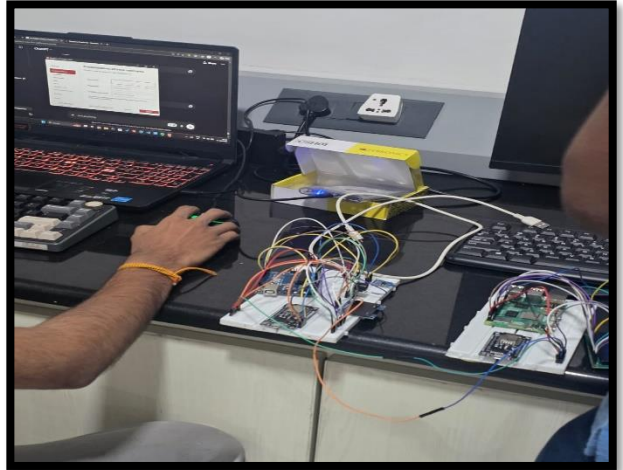
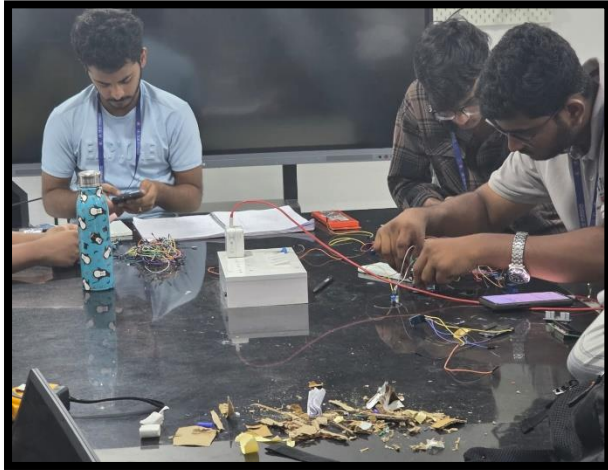


Day 3 to 11 : Students worked on there solution

Venue : IDEA Lab

During days three through eleven of the workshop, the students worked collectively within their own groups to develop their products. In this stage, the principles of Design Thinking taught during the workshops came into play, whereby the students brainstormed ideas, made prototypes, and tested these solutions. They took the time to come up with solutions based on the problems identified by their prospective users.

This process fostered teamwork, communication, and knowledge exchange amongst the students since they had a chance to learn from one another and pool their different skills and talents to generate unique solutions. Evaluation of their products was a continuous process until the desired outcome was reached.

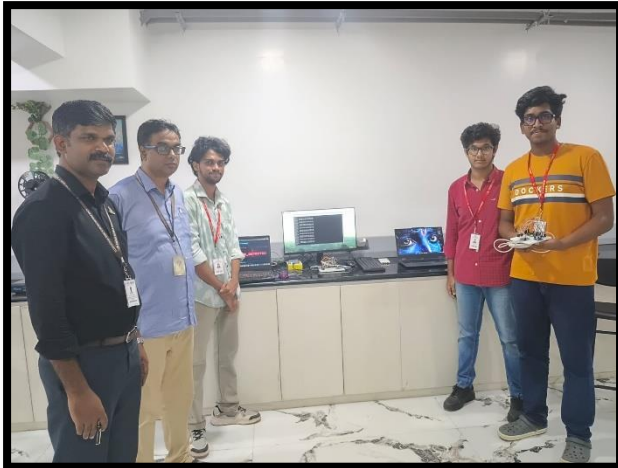


Day 12 : Presentation

Venue : IDEA Lab

When the workshop was nearing an end, each group showcased its prototype before the trainers and other participants. They explained what the problem they were addressing was, what solution they have come up with, and how the prototype works.

This phase gave the students an opportunity to communicate their ideas, showcase their creativity, and get feedback on their project. Moreover, they could improve their presentation skills through this exercise and learn about solutions created by other groups.



Reward Distribution

Venue : IDEA Lab

During the final stages of presenting prototypes, the performance of students was assessed based on the level of innovation, creativity, and usability of their proposed solutions. Those groups that came up with impressive ideas, good designs, and efficient ways of problem solving received accolades for their performance.

The awarding made the participants think out of the box, design solutions for users, and put into practice the lessons learned during the whole workshop process.

Sl. No	Project Name	Price
1	SOS	First
2	Man Hole	Second
3	Bus Crowd	Third
4	Sign Language	Fourth
5	Robot	Consolation
6	Sherpa	Consolation
7	NHCE Campus	Consolation

Outcomes

- Participants gained a strong understanding of the Design Thinking methodology and its application in solving real-world problems.
- Students developed skills in empathy, problem identification, ideation, prototyping, testing, and user-centered design.
- The workshop enhanced creativity, critical thinking, teamwork, communication, and presentation skills among the participants.
- Students worked collaboratively in groups to develop innovative solutions and transform their ideas into functional prototypes.
- Multiple projects were developed and presented during the workshop, demonstrating the participants' ability to apply Design Thinking principles effectively.
- Several projects were recognized and awarded based on their innovation, creativity, usability, and overall impact.
- The workshop encouraged students to approach challenges with a structured and innovative mindset and motivated them to develop practical solutions for societal needs.

Conclusion

The 12-day Bootcamp was successful in offering students a thorough understanding of Design Thinking along with practical knowledge about its implementation in resolving challenges. During the bootcamp, students had to work on the stages of empathizing, defining, ideating, prototyping, and testing, helping them to generate unique and user-based solutions to different challenges. Students managed to present functional prototypes by working in teams and coming up with innovative solutions.

The bootcamp helped improve students' creativity, critical thinking skills, problem-solving skills, collaboration, and communication. Recognition of best projects in the form of awards helped stimulate the spirit of innovation and perfection among participants. In all, it can be said that the bootcamp proved to be a useful learning experience for students, motivating them to use design thinking in their future academic projects and career paths.