



## Report on 5-Day Faculty Development Program on

### **ROBO Fusion for Future Engineers**

The Department of Mechanical Engineering at Sri Sairam College of Engineering, Anekal, Bengaluru, in association with the Corporate Academia Relationship along with robotics club, successfully organized a five-day Faculty Development Program (FDP) titled **“ROBO Fusion for Future Engineers” from 21st July to 25th July 2025**. The program aimed to enrich the knowledge base of faculty members by exposing them to modern advancements in robotics, automation, 3D printing, IoT integration, and design tools like Autodesk Fusion 360. It was designed to bridge the gap between academia and industry by offering theoretical understanding, practical demonstrations, and real-time industrial exposure. Renowned industry experts and academicians were invited to deliver the sessions, ensuring a comprehensive learning experience for all participants.

#### **Day - 1**

The FDP commenced on Monday, 21st July-2025, with an inaugural session that officially marked the beginning of the program. The sessions on the first two days were led by Mr. Arun Kumar (Founder and CEO of Nikkibuild EdTech Pvt. Ltd.) and Mr. Amruth (COO, Nikkibuild EdTech Pvt. Ltd.), who brought in their vast industry experience to the academic platform. The first session introduced the participants to the fundamentals of robotics, covering its history, components, and modern-day applications.

In the second session, a hands-on demonstration of a robotic arm was conducted, providing the participants with an opportunity to understand the movement, programming, and control of robotic mechanisms.

The day concluded with another interactive hands-on session with bots, allowing attendees to build, test, and operate simple robotic models, thereby gaining practical insights into robotic operations.





## Day - 2

On Tuesday, 22nd July 2025, the FDP continued with more advanced topics in robotics, again facilitated by Mr. Arun Kumar and Mr. Amruth. The day began with a session on the Robot Operating System (ROS), explaining its architecture, messaging system, and its significance in robotic software development.

The second session explored how Nikkibuild integrated its robotic solutions with IoT and smart devices, highlighting real-time data collection and automation workflows.

The final session of the day provided practical training on API integration, connected device communication, and mobile interface development, demonstrating how robotics can be combined with IoT to create intelligent, connected systems suitable for Industry

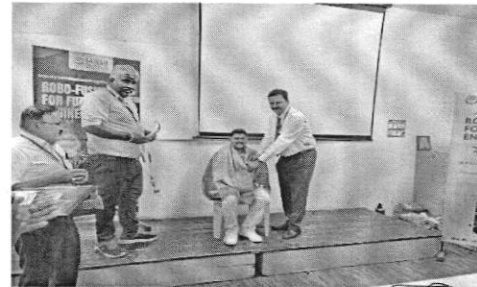


## Day - 3

On Wednesday, 23rd July 2025, the focus shifted to 3D Printing Technologies under the guidance of Mr. Lijith V V (CEO, Blueline Manufacturing Syndicate). The first session introduced the basics of 3D printing, explaining the different technologies, materials, and their applications in manufacturing and prototyping.

In the second session, the speaker elaborated on 3D slicing techniques, teaching participants how to prepare digital models for printing by adjusting layer height, print speed, and support structures.

The day concluded with a live hands-on demo using 3D printing software, where participants could slice a design and witness a prototype being printed, enhancing their understanding of the additive manufacturing process.



## Day - 4

On Thursday, 24th July 2025, was dedicated to Autodesk Fusion 360, led by Mr. Maruthi G V (Assistant Professor, Global Academy of Technology, Bangalore). The day started with a comprehensive introduction to Fusion 360, detailing its interface, modeling environment, and cloud collaboration capabilities.

The second session included hands-on training in 3D assembly design, where attendees practiced creating and assembling various parts to simulate real-world mechanical systems.

The third session showcased CAM (Computer-Aided Manufacturing) functionalities within Fusion 360, allowing participants to understand toolpath generation and CNC machining simulations. These sessions enabled participants to bridge the gap between digital design and physical product realization.



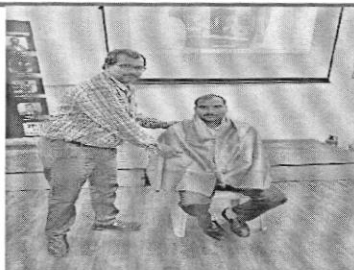


**Sri Sairam College of Engineering**  
(Accredited by NAAC, ISO 9001:2015 Certified Institution, Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi)



## **Department of Mechanical Engineering**

Anekal, Bengaluru – 562106, Karnataka



### **Day - 5**

On the final day, Friday, 25th July 2025, the focus was on industrial application and real-time exposure. Participants were taken on an industrial visit to NUMANN INDUSTRIES, a state-of-the-art facility specializing in precision-turned components. Spanning 30,000 sq. ft., the facility houses robot-operated CNC machines running 24/7, high-precision cylindrical testing machines (<3 microns accuracy), and a team of trained personnel operating various clusters of CNC machinery. This visit gave the participants a direct view of how advanced robotics and manufacturing technologies are deployed in an industrial setup.

In the final session of the FDP, a valedictory function was held, starting with participant feedback appreciating the quality and relevance of the sessions. Certificates were distributed to all participants by distinguished guests, including Dr. B. Shadakshappa (Principal, Sairam College of Engineering, Bengaluru), Dr. V. Balaji (Professor and Head, Department of Mechanical Engineering, Sairam College of Engineering, Bengaluru), and Sri. K. Patel (Public Relations Officer, Sairam College of Engineering, Bengaluru). The event concluded on a high note, celebrating the success and collaborative spirit of the entire program.



In conclusion, the Faculty Development Program on "ROBO Fusion for Future Engineers" was a resounding success, providing all attendees with valuable knowledge, hands-on experience, and exposure to emerging technologies that are transforming the engineering landscape.

The Department of Mechanical Engineering extends its sincere gratitude to the visionary leadership of Dr. Sai Prakash Leo Muthu (Chief Executive Officer, Sairam Institutions), and Dr. R. Arun Kumar (Chief Operating Officer, Sairam Institutions) for their continued support and encouragement.

We also express our heartfelt thanks to Dr. B. Shadakshappa (Principal, Sairam College of Engineering, Bengaluru), Mrs Malini K.V (Head, Corporate Academia Relationship, Sairam College of Engineering, Bengaluru) and Dr. V. Balaji (Professor and Head, Mechanical Engineering, Sairam College of Engineering, Bengaluru) for their guidance and



## Sri Sairam College of Engineering

(Accredited by NAAC, ISO 9001:2015 Certified Institution, Approved by AICTE, New Delhi, Affiliated to VTU, Belagavi)

### Department of Mechanical Engineering

Anekal, Bengaluru - 562106, Karnataka



involvement.

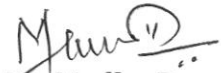
Special appreciation goes to our expert speakers — Mr. Arun Kumar and Mr. Amruth, (Nikkibuild EdTech Pvt Ltd), Mr. Lijith V V, (Blueline Manufacturing Syndicate), and Mr. Maruthi G V, (Global Academy of Technology, Bangalore) — for sharing their invaluable knowledge.

We also acknowledge the efforts of our faculty coordinators from the Mechanical Engineering Department for their impeccable organization and dedication.


Finally, we thank all the participants for their active involvement and enthusiastic participation, which made the FDP a memorable and impactful event.

**Thanking you.**

Yours sincerely,

  
**Dr. Madhu B**

Associate Professor

  
29/07/2025

  
29/7/2025  
**HOD/MECH**

**Head of the Department**  
**Dept. of Mechanical Engineering**  
**Sri Sairam College of Engineering**  
**Anekal, Bengaluru - 562 106.**