MVJ COLLEGE OF ENGINEERING
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INDUSTRIAL VISIT

The Department of **Electronics Engineering (VLSI Design and Technology) conducted an Industrial Visit** for 5th semester students to **FANUC India Pvt Ltd on 13-09-2025 at 10:30 AM, in Bommasandra, Bangalore**.

The visit provided students with an enriching opportunity to explore cutting-edge advancements in factory automation, robotics, and CNC systems. FANUC India, a global leader in industrial automation, showcased its innovative robotic solutions and precision technologies, offering students firsthand exposure to real-world automation applications. The experience helped deepen their understanding of CNC systems, industrial robotics, and modern manufacturing processes, while also highlighting current automation trends in the industry.

Objectives of the Event

The primary objectives of the industrial visit to FANUC India for the 5th semester VLSI students from MVJ College of Engineering:

1. To equip students with practical, first-hand experience in advanced automation technologies such as CNC machines, robotics, and factory automation systems.
2. To bridge the gap between theoretical knowledge and practical implementation by observing how electronics and design principles are applied in industrial settings.
3. To explore the role of robotics in manufacturing, including programming, control systems, and integration with industrial processes

4. To facilitate interaction with professionals and engineers at FANUC, allowing students to gain insights into current industry trends, challenges, and innovations.
5. To enhance students' understanding of hardware–software co-design, sensor interfacing, and communication protocols, with emphasis on their integration in automation and robotic systems relevant to industrial environments.

Event Overview

On 13th September 2025, a group of 36 students from the 5th semester Electronics Engineering (VLSI Design and Technology) department of MVJ College of Engineering, accompanied by 2 faculty members, visited FANUC India Pvt. Ltd. as part of an industrial exposure initiative. The visit aimed to provide students with practical insights into advanced automation technologies, including CNC systems and industrial robotics. Through live demonstrations and interactions with industry professionals, students gained a valuable understanding of real-world applications of electronics and communication principles in manufacturing and automation, enhancing their academic learning and inspiring future career interests in the field.

Exploring Automation Excellence – FANUC India Industrial Visit

During their visit, they explored various robotic machines, such as the Extensive Display line-up, Special CNC Package, Smart Digital Twin, AI Servo Monitor, Intelligent Shooting System, Flexible Spot Welding System, Automated Welding Machine, High Torque Heavy Machine and many more. A few of the glimpses of this visit are shown in Figure 1 and the corresponding Figure below.

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Figure 1: Deputy Manager Mr. Jaiker Neil Fernandez giving an overview of the current automation trends and their technology (above), and students are exploring the technology (below).

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Figure 2: Expert demonstrating different robotic automation developed at FANUC India Pvt Ltd. for students.

Outcomes and Impact

Outcomes:

Students gained firsthand exposure to industrial automation technologies, including FANUC's Smart Digital Twin, robotics, CNC systems, and IoT-enabled manufacturing solutions. They understood the integration of electronics, control systems, and communication networks in advanced industrial setups, bridging theoretical learning with real-world applications.

Figure 3: Bridging Classrooms with Industry – 5th Semester VLSI Students with Faculty at FANUC India Pvt. Ltd., marking the successful conclusion of an insightful industrial visit.

Impact:

The visit enhanced students' awareness of Industry 4.0 practices, fostering industry readiness and inspiring them to explore careers in automation, robotics, and embedded systems. It strengthened their practical understanding of VLSI concepts in industrial environments, promoting innovation-oriented thinking and aligning their skills with current and future industry demands.

Conclusions

The industrial visit to FANUC India provided Electronics Engineering (VLSI Design and Technology) students with valuable insights into cutting-edge automation, robotics, and digital twin technologies. By directly interacting with industry experts and witnessing real-time applications, students were able to connect classroom concepts with industrial practices. The experience not only deepened their technical knowledge but also motivated them to pursue innovation-driven careers, thereby bridging the gap between academic learning and industry requirements.

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