



# IMPACT OF MOU

Electronics and Computer Science

Departmental Newsletter

(Formerly known as Electronics & Telecommunication Engineering)

(July 2024 - June 2025)

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### ➤ MoUs Signed

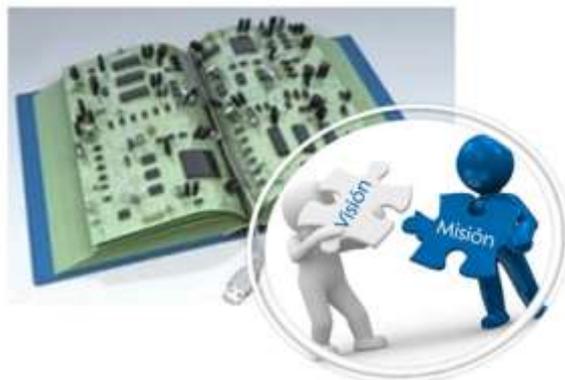
- Autotech Builds Automation, Mapusa, Goa and DBCE
- Enviro Guru (OPC) Pvt. Ltd.
- SUN360
- Mrinq Technologies LLP

### ➤ Trainings/Workshops/ FDPs/Expert Talk conducted

- Finishing School by Autotech
- Expert Talk from BITS Pilani, Goa
- Invited chief Guest from NIT Goa

## VISION

To evolve into a Holistic Learning Hub that moulds technologically proficient engineers in the field of Electronics and Computer Science; contributing to the global industry and society with Integrity, Ethics and Professionalism as envisaged by Don Bosco



## MISSION

- To impart quality education abreast with advances in technology and transform students into competent professionals.
- To promote innovation, research and entrepreneurship through collaboration and networking.
- To encourage various skill enhancing activities and extra-curricular activities to foster high levels of work ethics and responsibility for a better society.

# Memorandum of Understanding (MoU)

## MoU with Autotech Builds Automation, Mapusa, Goa

A bipartite agreement in the form MoU was signed between Don Bosco College of Engineering, Fatorda, Goa and Autotech Builds Automation, Mapusa, Goa on 5<sup>th</sup> July 2018 in the Don Bosco Engineering College (DBCE) Campus.

Rev. Fr. Kinley D’Cruz (Director, DBCE) and Mr. Subodh Mone (Autotech, Mapusa, Goa) signed the MoU in the presence of Dr. Neena Panandikar (Principal, DBCE ), Prof. Michelle Araujo (HOD, DBCE) and Prof. Flavia Leitao (Asst. Professor, DBCE).



After signing the MoU, Mr. Subodh Mone discussed the scope and objectives of the MoU, by stating that the MoU will:

- Provide Training and Internship as well as Placements at their organization or Placement Assistance at other organizations to the students of Don Bosco Engineering College.
- Conduct workshops, Training sessions, Guest lecturers and Technical model competitions at either organization as per the need and availability of the required resources.
- Conduct Field Visits at their organization or other organizations that are in collaboration with Autotech, Mapusa.



## MoU with Enviro Guru (OPC) Pvt. Ltd., SUN360 and Mring Technologies LLP

There is always a talk about the gap between academia and industry. To bridge the gap, Don Bosco College of Engineering signed 23 MoUs on 15th October 2019 at the Taleigao Community hall under the auspices of the inaugural of the Centre for Excellence for Employability Enhancement (CEEE) in the presence of Hon. Chief Minister – Dr Pramod Sawant.

Out of the 23 MoUs Signed, 4 were with the Industries in the Electronic Domain, which are as follows: Enviro Guru (OPC) Pvt. Ltd., InfiCorridor Solutions Private Limited, SUN360 and Mring Technologies LLP, out of which MoU with InfiCorridor Solutions is already expired.



### The Objectives and scope of the MoU was to:

- To identify domains with mutual interest, and to further collaborate for capacity-building, research and development.
- To provide mentoring to selected students by the industry-counterpart in the form of internship and guidance for academic projects.
- To organise lecture series for students from industry experts.
- To aid learning process with hands-on in the form of guided mini projects.
- To enable interaction of college teaching staff with industry professionals for research and development.



# Academic Year 2024-25

## Autotech Technologies: Finishing School on PLC, VFD and HMI

The Electronics and Computer Science Department (formerly known as Electronics and Telecommunication Department), of Don Bosco College of Engineering (DBCE), Fatorda, conducted a Finishing School, in association with Autotech Technologies on Industrial Automation Training. It was an 18 day course, which went on from 10<sup>th</sup> July to 2<sup>nd</sup> August 2024, and was based on Programmable logic controller (PLC), Variable-frequency drive (VFD) and the Human-Machine Interface (HMI) module of Industrial Automation.

The resource persons for this finishing school were Mr. Sandip Mone, Proprietor and Trainer of Autotech Technologies, and Ms. Sanjita Nadkarni, Project in-charge and Trainer of Autotech Technologies.

The Finishing School this year was organized for the Electronics and Telecommunication and Mechanical students of DBCE. Students from other colleges like Goa Engineering College, Agnel Polytechnic and Curchorem Polytechnic, also participated.

The different brands that were covered under this course were DELTA VFD, ALLEN BRADLEY PLC, DELTA HMI.



The course started with a brief introduction on DELTA VFD which included introduction to motor and explanation on motor name plate and some basic information on VFD, its advantages, and uses. Later students were shown to program a VFD by putting different VFD parameters. Reverse and forward motion of the motor was shown using the VFD. The other important concepts which were covered in the VFD module were Braking, multistep speed command, relay triggering, external input wiring, sensor wiring, and Load connection.

The second topic was on Programmable Logic Controller. The PLC that was covered for the students was Allen Bradley Micrologix 1000. Initially students were introduced to Allen Bradley PLC, its softwares and basics of Ladder Diagram Programming with different Industrial examples. The topics covered in PLC were Basic gates (AND, OR, XOR), One Shot Rising, Latching, Interlocking, Binary bit concept, Up counter, down counter, ON and OFF delay timer, and some basic and advance programs with Industrial examples. This was followed by wiring of the PLC. Students were taught to wire inputs as well as output such as Indicators and Relays.



The final topic that was covered was Delta HMI. In the initial introduction to HMI, the students were taught to handle a touch screen HMI and different communication ports of HMI to communicate with PLC. The concepts covered here were Page generation, Tag generation and Downloading pages to PC, including communication between the PLC and HMI. This included turning ON a PLC output via HMI keys. Variable Numeric input values were given to PLC's timer and counter using HMI. Value Display Concept was also shown wherein they could display Timer and Counter values.

On the 2<sup>nd</sup> August 2024, the Valedictory function was held of the Finishing course, which was graced by the Director Rev. Fr. Kinley Dacruz, Principal Dr. Neena Panandikar, HOD of ECE/ETC Dr. D. S. Vidhya and the Resource person Ms. Sanjita Nadkarni, Project in-charge and Trainer of Autotech Technologies.



The students were awarded certificates for the course, after which the students shared valuable feedback, emphasizing how enriching and fruitful the course was in preparing them for the industry. The Management as well as the students gave a token of appreciation to the Resource person Ms. Sanjita Nadkarni and thanked her for her dedication and commitment. The faculty coordinator for the Finishing School was Prof. Flavia Leitao.



## BITS Pilani – Expert talk on “Unlocking the Future: Advancements in 5G and 6G Antenna Technology”

The Institute Industry Cell (IIC) of Don Bosco college of Engineering, Fatorda, organized Tech Talks 2024 – Edging towards a connected future, for the Electronics and Computer Science department on 18th September 2024, along with Engineer’s Day Celebration.

Dr. Sudeep Baudha, Assistant Professor- E&EE, BITS Pilani, gave a talk on, “**Unlocking the Future: Advancements in 5G and 6G Antenna Technology**”. Mr. Baudha began by discussing the various applications of wireless technology, including movable devices like smartphones and tablets, medical treatment through remote monitoring and telemedicine, transportation systems as well as WiFi and GPS for location tracking and navigation. He highlighted the importance of antennas as an integral component for both receiving and transmitting electromagnetic signals (waves). Mr. Baudha mentioned that the world's largest antenna, located in China and completed in 2016, boasts a range of 500 meters and has a massive diameter, reflecting its high cost. This antenna can potentially serve defense purposes, including the capability to disrupt or destroy satellite systems of neighboring countries using a focused beam and micro weapons.



He concluded by addressing the effects of radiation on living beings, which can be lethal and associated with health issues such as cardiovascular problems, fatigue, ear warming, and different types of cancers. To mitigate these risks, he suggested reducing radiation exposure to 10 mV per square meter and recommended that cellular operators lower power density to 0.5 W per carrier. However, he pointed out the disadvantages of this approach, including reduced range of radiation, the need for more power transmitters, and consequently, increased costs due to the requirement for more towers.

The session was highly informative, with students gaining a wealth of knowledge on the subject matter. The Event coordinators were Prof. Flavia Leitao and Prof. Samantha Cardoso.

## NIT Goa – Chief Guest for the inaugural of Robotics Club of DBCE- ROBOCOM

The Robotics Club of Don Bosco College of Engineering, ROBOCOM, held its Inaugural ceremony with great enthusiasm and pride, for the academic year 2024-25 on October 26, 2024. The Chief Guest was Dr. T. Veerakumar, Associate Professor and head, ECE department, NIT, Goa and the Guest of Honor was Mr. Gilferd Gonsalves, Project Engineer, Sierra Circuits (India) Pvt. Ltd. The ceremony was also graced by Rev. Fr. Kinley D’Cruz, Director-DBCE and Dr. Neena Panandikar, Principal-DBCE, along with Robotics Faculty coordinator, Prof. Flavia Leitao.



The Introduction of the Chief Guest set the stage for Dr. T. Veerakumar, a distinguished figure in the field of robotics, who inspired the audience with his views on the transformative potential of robotics and urged students to embrace innovation. Then was the Inauguration of the Robocom, which formally introduced the dedicated council members who will lead and drive the club's initiatives forward. To honor contributions and recognize excellence, the winners of Technical Events were felicitated, for their skills and dedication. Prof. Flavia Leitao added a personal touch to this segment by speaking warmly about each team member's unique contributions and dedication and the profound impact they've made on the club's success. The Robotics Club's inaugural ceremony thus ended on a high note, igniting excitement and inspiration among all present, and setting a promising foundation for future endeavors.

