DTE Code : EN6315
MSBTE Code : 1739

HOLY-WOOD ACADEMY'S
SANJEEVAN
GROUP OF INSTITUTIONS, PANHALA
POLYTECHNIC
AICTE ID : 1-8019451
AISHE Code : C-11165
Sanjeevan Knowledge City, Somwar Peth-Injole, Panhala, Tal. Panhala, Dist. Kolhapur.
Pin- 416 201 (Maharashtra) Phone : 9146999500
❍ Approved By AICTE, New Delhi ❍ Recognized by Govt. of Maharashtra & DTE, Mumbai
❍ Affiliated to Maharashtra State Board of Technical Education (E), Mumbai

Date- 16/10/2024

Request Letter

To,
The Principal,
Sanjeevan Group of Institutions-Polytechnic,
Panhala-416201.

Subject: Request for Permission for Student Development Program on Industrial Automation

Respected Sir,

We would like to request your kind permission to organize a student development program on **Industrial Automation** on **21st October 2024**. This program aims to enhance the technical skills of our students in a crucial area of industrial automation.

We have arranged for Mr. Shubham Narake to conduct this program.

Thank you for your consideration.

Sincerely,

Guest Lecture Co-Ordinator **HOD**

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Date- 17/10/2024

Invitation Letter

To,
Mr. Shubham Narake
MESON Valves India Limited.

Subject: Invitation to Conduct Student Development Program on Industrial Automation
Respected Mr. Narake,

On behalf of Sanjeevan Group of Institutions-Polytechnic, Panhala, we extend a warm invitation to you to conduct a student development program on **Industrial Automation** for our students on **21st October 2024**.

We believe your expertise in this field will be highly beneficial for our students who are aspiring to build careers in automation and related industries. This program aims to provide them with practical knowledge and skills in PLC programming.

We would be honored if you could lead this program on **21st October 2024** at 10:00 am in Central Drawing Hall, Sanjeevan Group of Institutions-Polytechnic, Panhala. The expected duration of the program is 6 hours.

Please let us know if this date and time are convenient for you. We are open to discussing the specific content and format of the program to best suit the needs of our students.

Thank you for considering our invitation. We eagerly await your positive response.

Sincerely,

Mr. A. V. Patil,
HOD, Dept. of CSE
Sanjeevan Group of Institutions-Polytechnic,
Panhala.

DTE Code : EN6315
MSBTE Code : 1739

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Date- 17/10/2024

NOTICE

Student Development Program on Industrial Automation

All students are hereby informed that a student development program on **Industrial Automation** will be conducted on **21st October 2024**. This program will provide valuable knowledge and hands-on experience in Programmable Logic Controllers used in industrial automation.

The program will be led by **Mr. Shubham Narake**.

Date: 21st October 2024

Time: 10am Onwards

Venue: Central Drawing Hall

It is Mandatory for all students to attend the Guest Lecture

Don't miss this opportunity to enhance your technical skills!

Guest Lecture Co-Ordinator **HOD**

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Date- 21/10/2024

Thanking Letter

To,
Mr. Shubham Narake
MESON Valves India Limited

Subject: Thank You for Conducting the Student Development Program on Industrial Automation

Respected Mr. Narake,

On behalf of the students and faculty of Sanjeevan Group of Institutions-Polytechnic, Panhala, we would like to express our sincere gratitude for conducting the insightful student development program on Industrial Automation today, 21st October 2024.

The program was very informative and provided our students with a valuable understanding of PLC programming concepts and their applications in automation. Your expertise and the way you explained the technical aspects were highly appreciated by the students.

We are confident that this program will significantly enhance their technical skills and make them better prepared for their future careers in the field of automation.

Thank you once again for sharing your valuable time and expertise with our students. We hope to have the opportunity to collaborate with you again in the future.

Sincerely,

Mr. A. V. Patil,
HOD, Dept. of CSE
Sanjeevan Group of Institutions-Polytechnic,
Panhala.

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Date- 22/10/2024

One-Page Report on Student Development Program on Industrial

Date of Program: 21st October 2024
Venue: Central Drawing Hall, Sanjeevan Group of Institutions-Polytechnic, Panhala.
Resource Person: Mr. Shubham Narake

Overview:
A guest lecture was conducted for the Computer Science and Electrical Engineering Diploma students, focusing on the principles and applications of Industrial Automation using Programmable Logic Controllers (PLCs).

The lecture covered key aspects of PLC programming and its role in automating industrial processes. Specific topics included PLC basics, PLC programming languages (Ladder Logic, etc.), PLC architecture, industrial control applications

Key Takeaways:
The lecture provided valuable insights into the field of industrial automation and the critical role of PLC programming.

- Students gained an understanding of the fundamental concepts of PLC operation and architecture.
- The lecture highlighted the importance of PLC programming languages in designing automated systems.
- Students learned about real-world applications of PLCs in various industries.
- The lecture emphasized the growing demand for skilled PLC programmers in the automation industry.

Gap Identification in the Curriculum:
Based on the lecture, the following gaps were identified within the existing diploma curriculum:

- **Lack of a dedicated module on Industrial Automation and PLC Programming:** The current curriculum may offer limited coverage of this specialized area, focusing more on general electrical or computer engineering principles.

- **Insufficient hands-on experience with PLC hardware and software:** Students need practical training to develop PLC programming skills and understand the interaction between PLC hardware and industrial equipment.
- **Limited exposure to industry-standard PLC programming practices and tools:** The curriculum may not adequately prepare students for the specific PLC systems and software used in industrial settings.

Specific Subject Gap Analysis:

Here's how integrating industrial automation and PLC programming can enhance existing subjects:

- **Industrial Control Systems:**
  - Gap: The current curriculum may lack detailed coverage of PLC programming languages (Ladder Logic, Function Block Diagrams, Structured Text), PLC system design principles, Human-Machine Interface (HMI) integration, industrial communication protocols (e.g., Modbus, Profibus), and the application of PLCs in complex control scenarios.
  - Integration: Incorporate in-depth modules on PLC programming, emphasizing industry-standard languages and techniques, PLC system architecture and configuration, HMI design and interfacing, industrial communication networks, and advanced control strategies using PLCs (e.g., PID control, sequential control).
- **Automation and Robotics:**
  - Gap: The current curriculum may have insufficient focus on the role of PLCs in controlling automated systems, robotic operations, and the integration of PLCs with other automation components like sensors, actuators, and robotic controllers.
  - Integration: Add sections on PLC-based control of robotic workcells, integration of PLCs with sensors and actuators for automated tasks, the use of PLCs in automated manufacturing processes (e.g., assembly lines, material handling), and communication between PLCs and robotic systems.
- **Electrical Machines and Drives:**
  - Gap: The curriculum may have limited coverage of how PLCs are used to control and automate electric motors and drives in industrial applications, including variable speed control, motor protection, and automated drive sequences.
  - Integration: Include modules on PLC control of motor starters and drives, PLC-based closed-loop control of motor speed and torque, the use of PLCs in industrial drive systems for automation, and the integration of PLCs with motor protection devices.
- **Instrumentation and Measurement:**

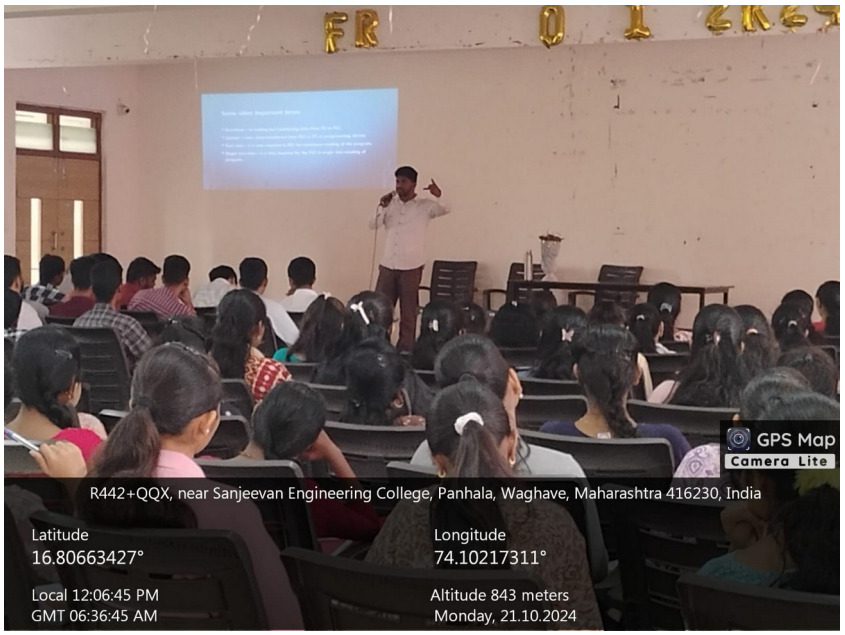
- Gap: The curriculum might not fully address the integration of PLCs with various industrial sensors, transducers, and measurement devices, as well as the use of PLCs for data acquisition, processing, and control based on sensor inputs.
- Integration: Incorporate topics on interfacing PLCs with analog and digital sensors, signal conditioning, data acquisition techniques using PLCs, and the use of PLC programs for process monitoring and control based on measured variables.

Recommendations:

- Introduce a dedicated module or elective course on Industrial Automation and PLC Programming to provide focused and in-depth training in this area.
- Provide hands-on training with industry-standard PLC hardware and programming software, including extensive laboratory sessions, practical exercises, and real-world case studies.
- Incorporate industry-relevant projects that involve designing, programming, and implementing PLC-based automation solutions for specific industrial applications.
- Encourage collaboration with industry partners to provide students with exposure to current automation technologies, real-world industrial practices, and opportunities for internships or industry visits.
- Establish a well-equipped automation lab with various PLC systems, HMI devices, sensors, actuators, and simulation software to facilitate effective hands-on learning.

Photos:

Felicitation of Mr. Shubham Narake



Mr. Shubham Narake Explaining what is PLC

Student Listening to the Lecture

Mr. Narake explaining building Blocks of PLC Programming

Guest Lecture Co-Ordinator **HOD**