Mechanical Department

21th April to 24th April 2018

SMT. S. R. PATEL ENGINEERING COLLEGE

Faculty Development Programme Report

Four days
Faculty Development Program
on
Arduino and PLC Based Automation in Thermal, Production and Automobile Fields

Objectives:

The main objective of this FDP is to make the aspiring engineers acquainted with the conceptual as well as practical knowledge of the Industrial Automation & latest technologies being used to achieve industrial automation.

The Most Used Guiding Force Behind An Automated Industrial Plant Is A "Programmable Logic Controller" Generally Known As A PLC. PLCs Along With Certain Other Necessary Ingredients Like Sensors, Motors, Actuators, Valves, Conveyors, Boilers, SCADA Systems, Computers & Many More, Makes A Real Automated Manufacturing Plant.

Course Expert:

Mr. H. C. Patel
Assistant Professors, Mechanical Department
SRPEC, Unjha

Mr. Kaushik Patel
Site Engineer
CHICAGO Pneumatic, Gandhinagar

Coordinators :

Asst. Prof. R. V. Chaudhari
Asst. Prof. M. P. Rajpara
Mechanical Department
SRPEC, Unjha

Summary:

Basics related to PLC and ARDUINO Controller with different variety of Sensors and Motors.

DETAIL OF VARIOUS SESSIONS

Topics :

1. ATMEGA8 AVR Controller

2. Use of Relay, LCD display and Sensor on controller

3. PLC Basic & Programming

4. ARDUINO Basic & Programming

The day one: The Co-ordinators of this STTP, Mr. R. V. Chaudhari and Mr. M. P. Rajpara introduced the Experts and delivered a short and sweet inaugural speech for the importance of FDP. First day's expert Mr. Harshad Patel covered ATMEGA8 AVR controller in detail with lots of basic programme of LED on-off, LED blink, Motor Start Stop, Relay etc. He also well explained abour PCB design and each and every component of electronic components. First Day is Pure fundamental base and teaching learning process with lots of question and answer sessions.
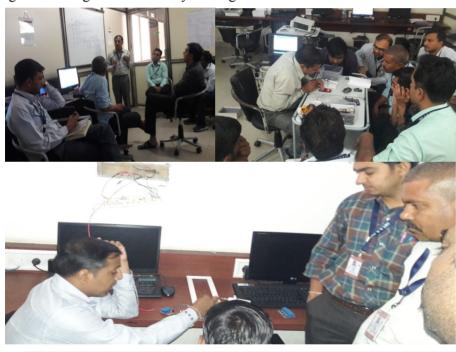
The second day: Second day was conducted by Mr. Kaushik Patel, Site Engineer at CHICAGO Pneumatic, Gandhinagar. In this session Expert of PLC Mr. Kaushik Patel started from history of PLC and ended with Practical sessions on PLC programming and recent trends in automation industries. In addition to this he also included hands on practice on PLC Training KIT which was developed in our department.

The Third day started to strengthen previous topics and advanced programming controller with different sensors and motors. Post lunch session was started with AIDURNO controller basic and types of AIDURNO board available in market. Advantages of AIDURNO over Old controller and its working principal is well explained by expert H. C. Patel. Last few minutes of session is about ideas of using automation in thermal, automobile and production fields with different sensors attached to AIDURNO and Relay.

The Forth day: Day 4 sessions carried out by assistant professor H. C. Patel by showing different sensors and electronic devices available in our department and previous students and faculties projects to find applicability of previous 3 day sessions. Post lunch session was totally practical by assigning different tasks to individual participants. They are involved with full enthusiasm and innovative ideas. Finally, the valedictory session was started in the presence of the Head of the department Prof. V. P. Rajput and Coordinators of the FDP. The participants expressed their views. It was a great learning time of four days during this FDP.

FDP Participant :

There are 10 participants from Mechanical department of the college have participated this 4 day FDP .

Feedback from the participant	Excellent	Very good	Good	Inadequate
1. The workshop was applicable to my job	100 %	0 %	0 %	0 %
2. The program was well paced within the allotted time	97%	3 %	0 %	0 %
3. The instructor was a good communicator	100 %	0 %	0 %	0 %
4. The material was presented in an organized manner	100 %	0%	0 %	0 %
5. The instructor was knowledgeable on the topic	100 %	0 %	0 %	0 %
6. I would be interested in attending a follow-up, more advanced workshop on this same subject	100 %	0 %	0 %	0 %
7. In your opinion, was this workshop	100 %	0 %	0 %	0 %