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JSS Mahavidyapeetha
JSS Science and Technology University, Mysuru
Department of Mechanical Engineering
&
Department of Electronics and Communication

Bosch Rexroth Center of Competence in Automation Technology
Report on
PLC, Pneumatics & Sensorics Workshop
March 22-24 & 29-30, 2021

Session 1- March 22nd, 2021

The session 1 was started with the blessings of Sri Shivarathri Deshikendra Mahaswamiji. Dr. Srinidhi R, HOD, Mechanical department, JSSSTU welcomed all the participants by explaining the importance of the workshop.



On session 1, the workshop concentrated to know the basics of PLCs, difference between PLC and PC. Later the workshop carried with function of PLC CPU, I/O interface, PLC Hardware: Different types of CPUs, onboard, inline extension, power supply modules, etc.



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The session continued Hands-on experience with BOSCH REXROTH PLC training kits. It carried with simple PLC Programming using Relay based instructions, Timers and counters

Resource person for session 1: Mrs. Ramya M V., Assistant Professor, Dept. of ECE, SJCE, JSS STU

Session 2- March 23rd 2021

Session 2 of the workshop was concentrated with the Application programmes of PLCs. Encouraged all the students to develop their own PLC programmes for the given set of problem statements like flash light, generation of square wave, control of double acting cylinder, automatic tank filling and traffic light control and so on. This hand-on practice session improved the knowledge of the students with respect to PLC programming. An individual attention was carried during the hands-on session.

With the available BOSCH REXROTH PLC universal simulator, the session was continued to teach the real-time applications of the industries. The session was ended by explaining the importance of integration with sensorics and pneumatics field to explore Mechatronics systems and its Applications.



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Resource person for session 2: Mrs. Ramya M V., Assistant Professor, Dept. of ECE, SJCE, JSS STU

Session 3- March 24th 2021

Session 3 was started by providing the basics of pneumatics and hydraulics fields. The session was carried hands-on session by explain the importance and applications of the Mechatronics systems. The session was encouraged the students to build their own experimental setup for both pneumatic and hydraulic stations.

About ten different set of experiments were carried by explaining the real-time applications of the pneumatic and hydraulic fields.



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Later, the session was carried with the integration of electrical modules with the pneumatic station i.e., Electro-Pneumatic concepts. This Electro-Pneumatics approach realize the students with more real-time industrial setup.



Resource person for session 3: Mrs. Kumar M., Assistant Professor, Dept. of ME, SJCE, JSS STU

Session 4- March 29th 2021



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Session 4 was concentrated with the importance of sensors and integration of the sensors to in the Mechatronics systems. Students were encouraged to understand the working principle of different types of industrial sensors by carrying the hand-on experimental setup. The different sensors like proximity inductive, capacitive, magnetic, through beam sensors so on taken up for experimentation.

Later, the session also carried how the integrated sensor with PLC and its programming with PLC. The students were assigned in group to complete the given exercises.

Later a demo session was carried by explaining the available BOSCH REXROTH Mechatronics Stations. Importance of the Mechatronics Stations in industries and integration of all the fields like PLC, Pneumatics, Hydraulics and Sensorics were also explained.



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Resource person for session 4: Mrs. Ramya M V., Assistant Professor, Dept. of ECE, SJCE, JSSSTU

Session 5- March 30th 2021

The session 5 was carried by Dr. K R Prakash, Professor, NIE, Mysuru by explaining the students about the importance of automation system and its opportunities in industries. He connected the importance of IoT in the field of automation and explained the importance of PLC, Pneumatics, Hydraulics and sensorics to develop real-time application projects. Many Real-time projects and idea to implement that was explained clearly. He was mentioned the different funding agencies to start off their own industries. And he also motivated students build their own automation industries and to become entrepreneur.

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Resource person for session 5: Dr. K R Prakash., Professor, Dept. of Mechanical Engineering, NIE, Mysuru

Lastly on the same day a valedictory program was carried. During the valedictory program Dr. Srinidhi R - HOD ME, Dr. M N Jayaram – HOD ECE, Dr. K R Prakash-Professor, NIE, Mysuru were present.

By explaining the brief note on the workshop, a valedictory program was started and an individual participant feedback was taken by the HOD's about the workshop. The students expressed to conduct more hands-on workshops like this.

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The last part of the workshop was the distribution of the certificate to each of the participants. The certificate distribution was carried by Dr. Srinidhi R - HOD ME, Dr. M N Jayaram – HOD ECE. Dr. Srinidhi R - HOD ME, Dr. M N Jayaram – HOD ECE encouraged the Co-ordinators Mr. Kumar M and Mrs. Ramya M V to conduct more such workshops like this.



Group of M. Tech Automotive Electronics students

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Group of M. Tech Industrial Electronics students

Programme Coordinators:

Prof. Kumar M

Assistant Professor

Department of ME, SJCE, JSSSTU, Mysuru

Phone: 9886784832

Email: Kumar.jce@gmail.com

Prof. Ramya M V

Assistant Professor

Department of ECE, SJCE, JSSSTU, Mysuru

Phone: 9901624176

Email: ramyamv@sjce.ac.in

Dr. Srinidhi R - HOD ME

Dr. M N Jayaram – HOD ECE

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**List of students Attended PLC, Pneumatics & Sensorics Workshop
from March 22nd -24th & 29th-30th , 2021**

All Students from JSSSTU PG Students (Automotive Electronics& Industrial Electronics)

Sl.NO	Student Name
1.	ADITHYA MANOHAR G S
2.	AISHWARYA J
3.	AISHWARYA M
4.	ANUSHA NARAYAN
5.	ASHRITHA P
6.	BHARAT Y KASHYAP
7.	BHOOMIKA S
8.	BHUVANESHWARI S M
9.	CHANDAN G R
10.	DEEPIKA
11.	KISHORE K
12.	MEGHANA N
13.	NAYANA J D
14.	NIVEDITHA T R
15.	PRITHVI HONNA
16.	SHESHANK R V
17.	SIDDARAJAMMA B
18.	VISHAL N S
19.	SYEDA SUHA AFSHAN

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20.	CHIDANANDA B
21.	SHASHANK GOWDA
22.	AISHWARYA KANCHIBAIL
23.	ASHA V
24.	BHUMIKA S M
25.	CHANDINI MANJUNATH
26.	GAGAN MARUTHI S
27.	KARTHIK RAJ M N
28.	LAXMI SAGAR B S
29.	LOCHANNA S
30.	MOUNASHREE B
31.	SHARAYU R SIDDHANTI
32.	SHIVANI N
33.	SWATHI P
34.	URMILA S
35.	HARSHITHA C A
36.	PRIYANKA
37.	PRIYANKA M

Feedback Response from student attended:



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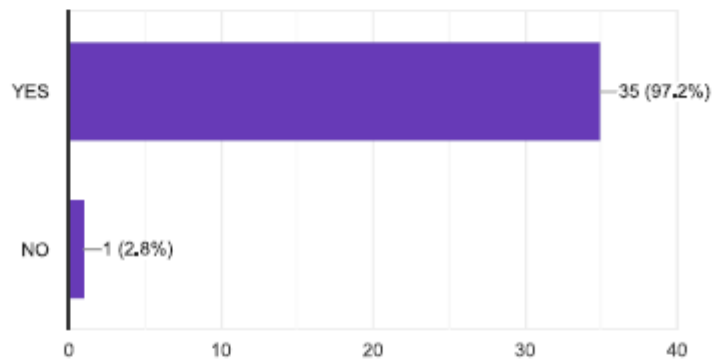
PLC, Pneumatics & Sensorics Workshop, March 2021

36 responses

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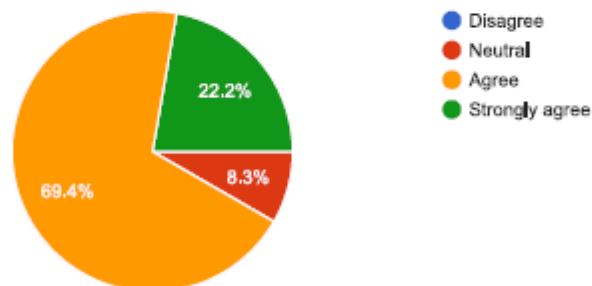
1. Were objectives of the course clear to you?

36 responses



2. The course contents met with your expectations

36 responses



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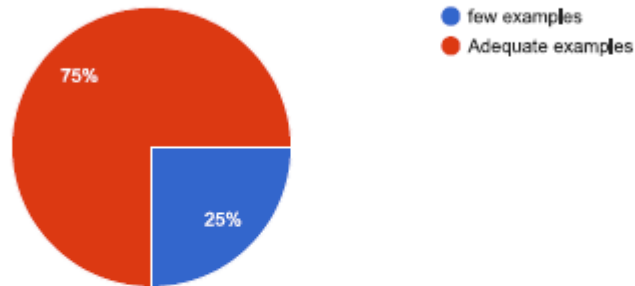


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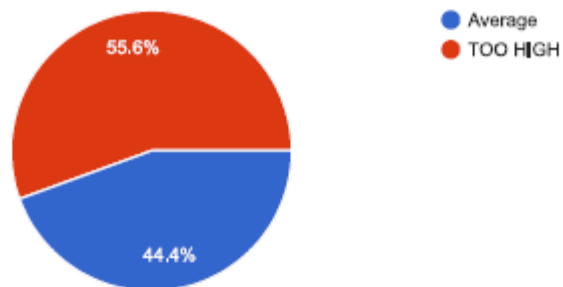
3. The contents were well illustrated with

36 responses



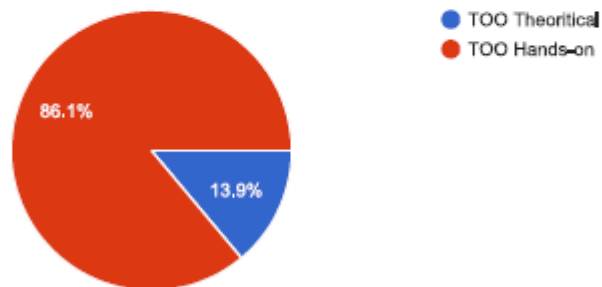
4. The level of the course was

36 responses



5. The course contents compared with your expectations

36 responses





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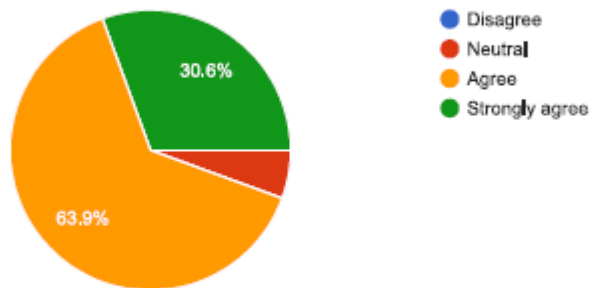


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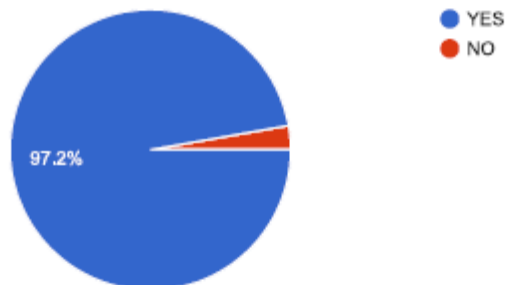
6. The course exposed you to new knowledge and practices

36 responses



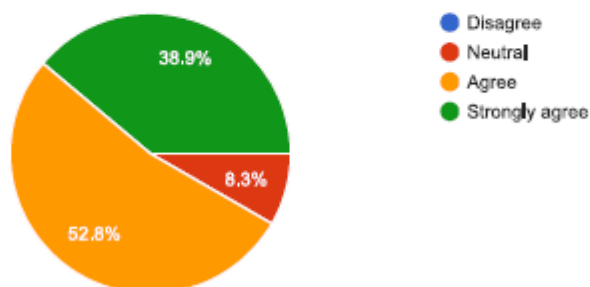
7. Will you recommend this course to your colleagues?

36 responses



8. The lectures were clear and easy to understand

36 responses



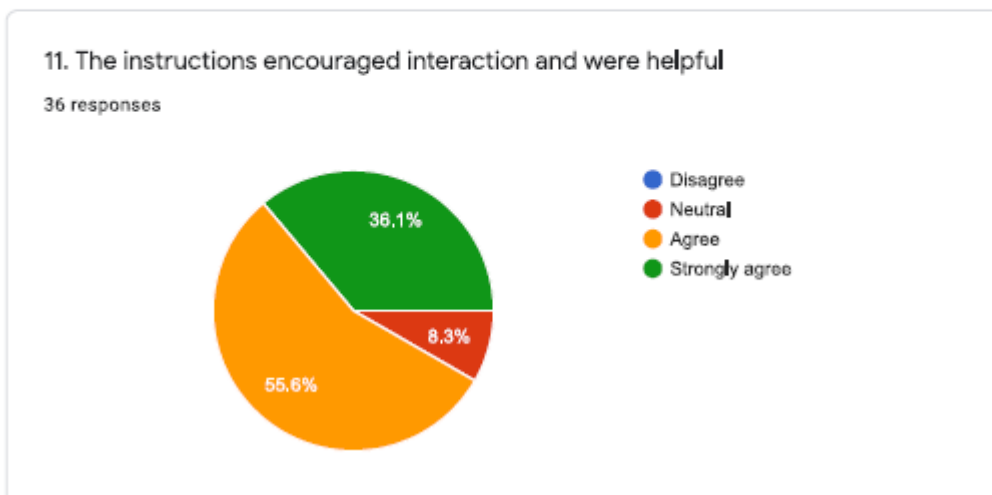
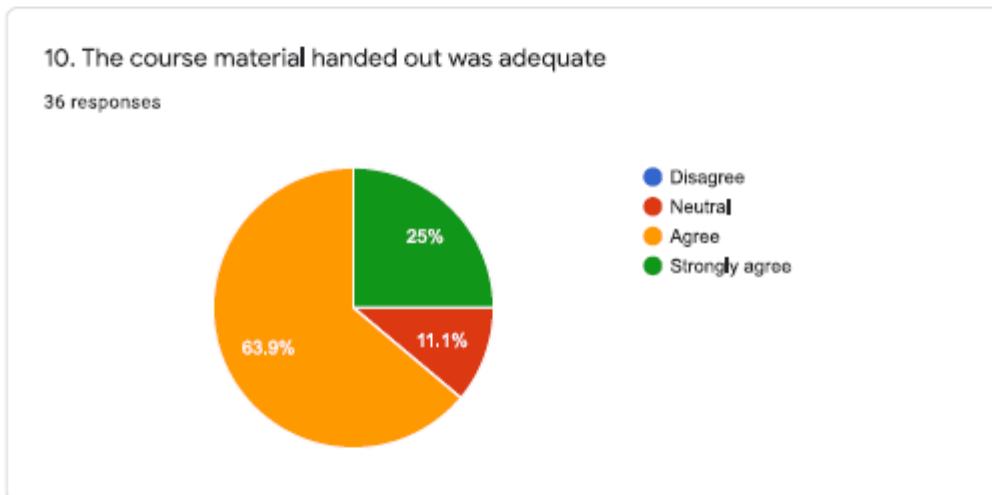
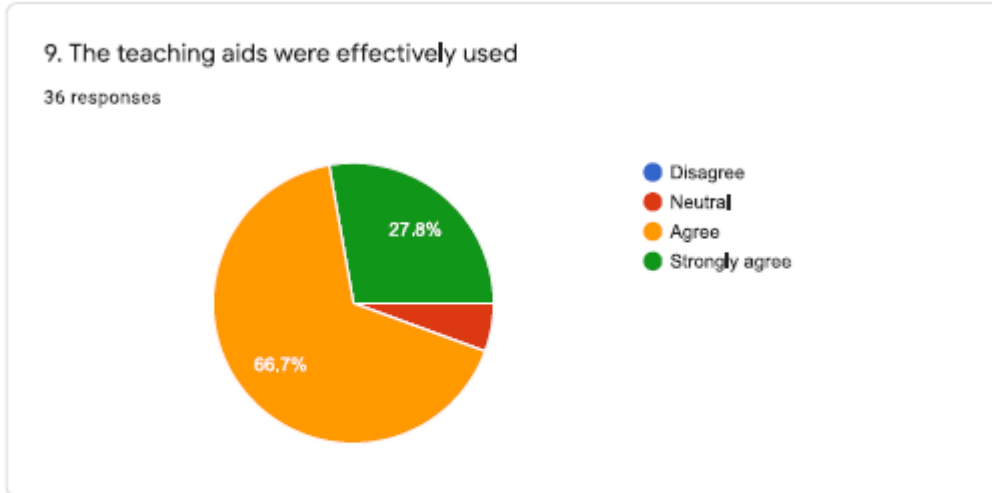


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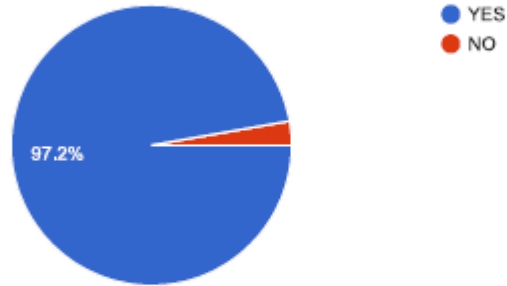


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12. Were objectives of the course realized?

36 responses



Any suggestions

13 responses

-

No suggestions

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Very well org

.

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good

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All the systems and devices should maintained properly

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