SREE VENKATESWARA COLLEGE OF ENGINEERIN(



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DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Academic Year	Date	Year & Batch	Title	Name Of The Company	Name Of The Resource Person	No Of Students Attended
2020-21	07-01-2021 To 08-01-2021	2019 BATCH II YEAR	PCB Design	Lets Learn .Guru	Mr.K.Anish Project Manager	53
	08-12-2020 To 10-12-2020	2017&18 BATCH	Industrial Automation (ONLINE)	SV Technologies, Nellore	Mr.B.V.Sumanth Project Developer SV Technologies, Nellore	75
	11-08-2020 To 13-08-2020	2017&18 BATCH	Solar & Smart Energy Systems (ONLINE)	Lets Learn .Guru	Mr.K.Anish Project Manager Lets Learn Guru	80

LIST OF WORK SHOPS

REPORT-1

The Electrical and Electronics Engineering department has organized a **Workshop** on **"Printed Circuit Board Design"** from **7th Jan 2021 to 8th Jan 2021**. The resource person was Mr. K Anish,Project Manager, Lets Learn Guru. The 2nd year B.Tech students of EEE department have attended this workshop.

Number of students participated in this workshop: 53

The resource person shared his insights, real life scenarios, practical use cases and their solutions on the Printed Circuit Board Design.

On the first day the session started with keynote lecture on Printed Circuit Board and future of connected world. It also provided the insights of Printed Circuit Board for Light Emitting Diodes, medical devices, industrial equipment, Aerospace components, safety and security equipment and automotive components.

The second session began with that Before PCB design, circuit designers are recommended to get a tour of a PC board shop and communicate with fabricators face to face over their PCB manufacturing demands. It helps prevent designers making any unnecessary errors from getting transmitted during the design stage. However, as more companies outsource their PCB manufacturing inquiries to overseas suppliers, this becomes unpractical. On this account, we present this article in order to provide a proper understanding of PCB manufacturing steps. Hopefully it gives circuit designers and those new to PCB Industry a clear view on how printed circuit boards are manufactured, and avoid making those unnecessary errors.

The next session continued with the Importance of Printed Circuit Board design and he covered Design rules of Printed Circuit Board, Making of PCB, Types of PCBs it includes Single side bond PCB, Double side bond PCB and Multi layer bond PCB. He also explained the procedure to design PCB which includes various steps like designing of PCB, Printing of PCB, printing of copper for interior layers, getting Rid of unneeded copper, inspection and layer alignment, laminating PCB layers, drilling, PCB plating, etching, finishing PCB and electrical reliability testing.

In the later session he planned to provide hands on experience with PCB design and applications. Students were designed PCBs for blinking of LED and automatic sensing of water kevel detector with buzzer. All the students were participated in design of PCBs and they interacted with the resource person during the design process.

Photo 1:



Photo 2:



REPORT 2

The Electrical and Electronics Engineering department has organized an online **Workshop** on **"Industrial automation"** from **8th Dec 2020 to 10th Dec 2020**. The resource person was **Mr. B V Sumanth SV Technologies**. The 3rd and 4thB.Tech students of EEE department have attended this workshop.

Number of students participated in this workshop: 75

The resource person shared his insights, real life scenarios, practical use cases and their solutions on Industrial Automation..

On the first day the session started with keynote lecture on Industrial automation and future of connected world. It also provided the insights of Industrial automation applications for various control systems for operating machinery, processes in factories, boilers and heat treating ovens, switching in telephone networks, steering and stabilization of ships, aircrafts and chemical processes.

The second session began with that 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.The main objective of Industrial Automation Workshop 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 next session continued with the Architecture and hard ware over view of Programmable Logic Controller. He also explained programming of PLC, Features of SCADA Software, PLC and SCADA communication which were used in industrial automation.

In the later session, he gave a task to the students that made students for interaction with the resource person. The system acquires and processes real time data through direct interaction with the devices such as sensors and PLCs and records events into a log life. SCADA(Supervisory Control And Data Acquisition) is important for data analysis and enables effective decision making for optimization in industrial processes. The resource person discussed with real time examples and the session was made really interactive by providing an opportunity to suggest a solution to real life scenario.



REPORT 3

The Electrical and Electronics Engineering department has organized an online **Workshop** on **"Solar & Smart Energy Systems"** from **11th Aug 2020 to 13th Aug 2020**. The resource person was Mr. K. Anish, Project Manager, Lets Learn Guru. The 2ndyear B.Tech students of EEE department have attended this workshop.

Number of students participated in this workshop: 80

The resource person shared his insights, real life scenarios, practical use cases and their solutions on the Solar & Smart Energy Systems.

On the first day the session started with keynote lecture on smart energy and future of connected world. Solar energy has become one of the dominant focuses for those to looking to harvest the power of renewable energy. It also provided the insights Smart Energy Systems applications which includes power generation, transmission, distribution and monitoring at the consumer(user) end.

The second session began with the process of conversion of solar energy into electricity that is solar cells to convert sunlight into electricity, using sunlight hitting solar thermal panels to convert sunlight to heat water or air, using sunlight hitting a parabolic mirror to heat water (producing steam) or using sunlight entering windows for passive solar heating of a building. It would be advantages to place solar panels in the regions of highest solar radiation.

The next session continued with the importance of smart energy meters. Smart meters will increasingly replace conventional gas and electricity meters as national grids become more flexible, efficient and adoptable to renewable energy technologies such as wind and solar, but here he focused on solar energy. They offer a wealth of intelligent functions including the ability to inform consumers how much energy they are using via a display installed in their home. They can also communicate directly with the energy suppliers thereby eliminating need for staff to visit homes to read the meter. They do this by sending out a signal, rather like a mobile phone signal whichdelivers the meter reading straight to the energy supplier. It works the other way round as well, enabling the energy supplier to send information to send information to the display in consumer homes.

In the later session, he continued with solar and smart energy systems for sustainable environment, he covered hands on experience on solar photo- voltaic, solar thermal, energy conversion and storage devices, smart grid, energy management and audit. The resource person discussed with real time examples and the session was made really interactive by providing an opportunity to suggest a solution to real life scenario.

