Diet

DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

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> Anakapalle, Dt: 12-09-2019

From,
Dr.B RajaRao
HOD - ECE,
Dadi Institute of Engineering & Technology.

(Through Proper Channel)

To.

The Principal,

Dadi Institute of Engineering & Technology.

Sub: Permission for Conduction of one week workshop on PCB Design in association with Andhra Skill Development and Corporation for ECE students from 16-09-2019 to 21-09-2019 Reg

Sir.

With due respect, hereby stating that I on behalf of the ECE Department, request you to approve the conduction of a one week workshop on PCB Design in association with Andhra Skill Development and Corporation for ECE students from 16-09-2019 to 21-09-2019. Mr.B.Suresh Kumar, Electronics Engineer-APSSDC, Mr.Ch.Santhosh, Electronics Engineer-APSSDC, Mr.R. Anish Kumar, Technical support-APSSDC, Ms. B.Sireesha, Technical support-APSSDC are chosen as resource persons for the workshop. Arrangements are done without disturbing the regular classwork schedule.

We, therefore, hope that you would be kind enough to permit us to conduct this workshop. Kindly grant us the permission. Waiting anxiously for your reply.

Thanking you Sir

Yours Sincerely,

Head of the Department
Electronics & Communication Enga
Dadi Institute of Force 1

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CIRCULAR

DATE:14/09/2019

This is to inform all the Students, Teaching & Technical Staff of Dadi Institute of Engineering and Technology that the Department of ECE is going to conduct one week workshop on PCB Design in association with Andhra Skill Development and Corporation for ECE students in the Institute from 16-09-2019 to 21-09-2019 .All the Students, Teaching & Technical staff are requested to attend the workshop.

Date & Time: 16-09-2019 to 21-09-2019

Venue: Laboratory 1 and Laboratory 2, DIET.

HOD-ECE, DIET

Fleat of the Department
Electronics & Communication Engg
Dadi Institute of Engg. & Tech
Anakapalle 531 002

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A SIX DAY WORKSHOP

ON

PCB DESIGN

(16th Sep, 2019 to 21st Sep, 2019)

Organized by

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

In association with

Andhra Pradesh State Skill Development Corporation (APSSDC)

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Resource Persons: 1. Mr.B.Suresh Kumar, Electronics Engineer-APSSDC.

2. Mr.Ch.Santhosh, Electronics Engineer-APSSDC.

3. Mr.R. Anish Kumar, Technical support-APSSDC.

4. Ms. B.Sireesha, Technical support-APSSDC.

Convenor : Dr.B.Raja Rao, HOD ECE, DIET, Anakapalle.

Faculty Coordinators: 1. Mr.P.Jagan Mohan, Assistant Professor, E.C.E Department.

2. Ms.Sk.Shabeena, Assistant Professor, E.C.E Department.

Student organizers: Mr.B.Balaji- 18U41A0407.

Mr.B.Raghuram - 19U45A0405.

Mr.K.Teja - 19U45A0415.

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Ms.A.Bhargavi - 18U41A0458. Ms.M.Pavithra -18U41A0455. Ms.R.Indraja -19U45A0433.

Venue : Laboratory 1 and Laboratory 2, DIET.

Report on Workshop

The Department of Electronics and Communication Engineering of DIET, in association with Andhra Pradesh State Skill Development Corporation (APSSDC) has organized a Six-day workshop on "PCB DESIGN" for II B.Tech. ECE Students from 16-09-2019 to 21-09-2019. The main aim of the workshop is to develop the practical knowledge of students in advanced PCB software's and to design the multiple circuits. The workshop was aimed to provide knowledge about complete PCB Designing using simulation tools to test electronics & electrical circuits in software environments.

About PCB:

A **Printed Circuit Board** (**PCB**) mechanically supports and electrically connects electronic or electrical components using conductive tracks, pads and other features etched from one or more sheet layers of copper laminated onto and / or between sheet layers of a non-conductive substrate. Components are generally soldered onto the PCB to both electrically connect and mechanically fasten them to it and point-to-point construction. PCBs require additional design effort to layout the circuit, but manufacturing and assembly can be automated. Printed circuit boards are used in all electronic products. They are also used in electrical products, such as passive switch boxes.

Inauguration:

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The inauguration of the workshop was conducted in the Seminar Hall 2, DIET Campus on 16-09-2019 at 9.30 AM with a prayer song. The dignitaries of the Inaugural Function includes, **Dr.Ch.S.Naga Prasad, Principal**, **Dr.B.Raja Rao**, HoD-ECE & Workshop Convenor and resource persons **Mr.B.Suresh Kumar**, Electronics Engineer-**APSSDC**, **Mr.Ch.Santhosh**, Electronics Engineer-**APSSDC**. The HoD's of other departments, E.C. E Department faculty members and 93 students from II B.Tech ECE Department have participated in the inaugural function. The Welcome speech was given by students Ms.A.Bhargavi and Mr.B.Raghuram of II B.Tech. ECE.





Fig 1Dignitaries on the Dias

Fig. 2 Students of II B.Tech E.C.E

The Convenor Dr.B.Raja Rao, H.O.D, E.C.E Department, gave the opening remarks about the workshop. He has addressed all the student participants to make use of this workshop and improve their practical knowledge.

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Fig 3.Dr.B. Raja Rao, H.O.D, E.C.E, addressing the gathering.

The Principal Dr. Ch. S. Naga Prasad, addressed the students about the workshop and importance of APSSDC. He said that it is an opportunity for all the II B.Tech. ECE students learnt different PCB Software. Apart from theoretical knowledge, practical knowledge is also very important for Engineering students. So, he has suggested that all the students to make use of this six-day workshop effectively.



Fig. 4 Dr.Ch.S.Naga Prasad, Principal - DIET, addressing the gathering.

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Mr.B.Suresh Kumar, Electronics Engineer-APSSDC, briefed the students about the workshop and importance of PCB Design.



Fig 5 Mr.B.Suresh Kumar, Resource Person-APSSDC, addressing the students about workshop.



Fig. 6 Presented vote of thanks by Ms.R.Indraja, for Inaugural function.

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Day Wise Program Details

Day-1: Workshop on "PCB DESIGN" - DIET – 16th Sep 2019

Resource Persons: Mr.B.Suresh Kumar Electronics Engineer-APSSDC and Mr.Ch.Santhosh, **Electronics Engineer-APSSDC**

Topics covered: Introduction to PCB and Software

Mr.B.Suresh Kumar, in the forenoon session started with introduction of PCB Designing, layouts, benefits of the workshop and its applications. He has explained about Schematic Design of a demo Circuit and pointers to make precise schematic design from 11.00 AM to 12.30 PM.

Mr.Ch.Santhosh has explained about the types of software and their usage 1) Live wire and 2) PCB wizard. All the 93 participants designed basic circuits by using Live Wire software from 01.00 PM-04.00 PM.

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Fig.7 Introduction to PCB Design



Fig. 8 Explained how to use live wire software for designing circuits

Day-2: Workshop on "PCB DESIGN" - DIET – 17th Sep 2019

Resource Persons: Mr.B.Suresh Kumar, Electronics Engineer-APSSDC

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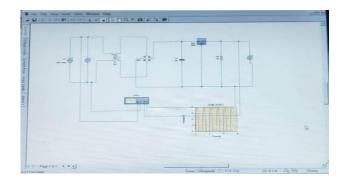
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Topics covered: Rectifiers, 555 timer and LED circuits

Mr.B.Suresh Kumar, explained how to design different types of rectifiers, 555 timer and LED circuits by using Live wire software.



Fig. 9 Placing the components on the schematic window



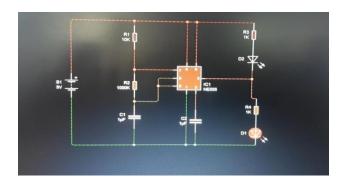


Fig. 10 Designed few circuits by using live wire software

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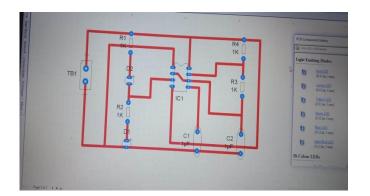
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Day-3: Workshop on "PCB DESIGN" - DIET – 18th Sep 2019

Resource Persons: Mr.Ch.Santhosh , Electronics Engineer-APSSDC

Topics covered: Design of electronic die, Motor and Seven segment display circuits etc.

Mr.Ch.Santhosh explained how to design an electronic die, motor and seven segment display by using Live Wire software from 09.00 AM to 04.00 PM. All the participants designed so many circuits and tested by simulating the circuits by changing the voltage values.



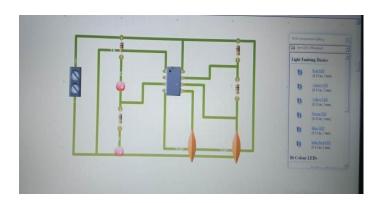


Fig 11 Simulation of circuits

Day-4: Workshop on "PCB DESIGN" - DIET – 19th Sep 2019

Resource Persons: Mr.Ch.Santhosh , Electronics Engineer-APSSDC

Topics covered: Layout design by using PCB wizard software.

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Mr.Ch.Santhosh explained how to create symbolic representation of circuits (schematic diagram), searching, loading and placing of components, Wiring connections between components, Updating component information in PCB layout (Auto packaging), Entering Page Notes and Saving the circuit from 09:00 AM to 12:30 PM.

He has explained about the layout design with auto routing and manual routing directly from 01.30 PM to 04.00 PM. All the participants designed layouts by using PCB Wizard software for the circuits which were designed by using Live wire software by hands on experience in the laboratory.

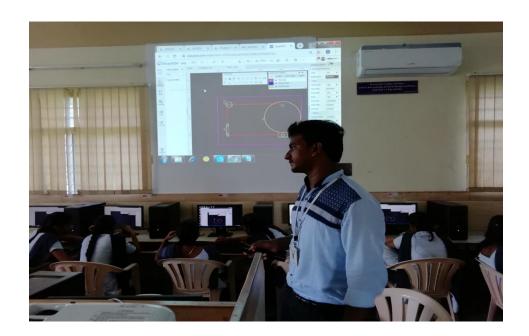


Fig. 12 Explaining how to draw layout for circuits by manual and automatic routing using PCB Wizard software

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Day-5: Workshop on "PCB DESIGN" - DIET – 20th Sep 2019

Resource Persons: Mr.B.Suresh Kumar, Electronics Engineer-APSSDC

Topics covered: layout design by using PCB wizard software.

Mr.B.Suresh Kumar continued the layout design for remaining circuits with auto routing and manual routing directly from 09.00 AM to 4.00 PM. All the 93 participants designed layouts for all the circuits which were designed by using Live wire software in lab 1 & lab 2.

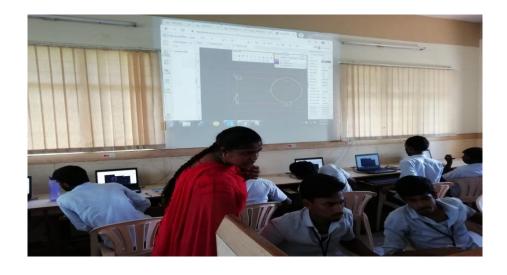


Fig.13 Layout design by using PCB Wizard software

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Day-6: Workshop on "PCB DESIGN" - DIET – 21st Sep 2019

Resource Persons: Mr.B.Suresh Kumar Electronics Engineer-APSSDC and Mr.Ch.Santhosh, **Electronics Engineer-APSSDC**

Topics covered: Online Simulation by using Easy EDA software.

Mr.B.Suresh Kumar, has given a detailed introduction for online simulation by using Easy EDA software and how to simulate and test the circuits in lab 1 & lab 2 from 11.00 AM to 12.30 PM.

Mr.Ch.Santhosh, has explained about the design of 16 segment display by using Easy EDA software from 01.30 PM to 04.00 PM.



Fig 14 Explained how to use Easy EDA Software

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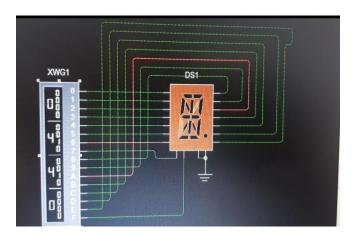


Fig 15 Designed 16 segment display by using Easy EDA Software

Outcome of workshop:

All the 93 participants effectively utilized the workshop and learned about PCB related softwares for designing different electronic circuits.

Now all the participants are able to:

- ☐ Design circuits by using Live Wire Software.
- ☐ Design circuits by using PCB Wizard Software. Design circuits by using Easyeda Software.

After attending this workshop students have expressed their views as follows:

- In 2nd year itself we all got an opportunity to participate in workshop which was conducted on PCB design in association with Andhra Pradesh State Skill Development Corporation (APSSDC).
- We all have learned the basics of PCB, different types of PCB software to design circuits.
- It's very interesting for all the 6 days.
- It is a very good experience for us to have hands-on experience.

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I would like to thank our honourable Chairman, Sri Dadi Ratnakar garu , for his continuous cooperation and support for conducting this workshop .

I would like to thank our beloved principal, Dr.Ch.S.Naga Prasad for his encouragement in all aspects for conducting industry based workshops .

I would like to thank Vice-Principal - DIET , A.O , All the Departmental HOD's , Faculty coordinators , Student coordinators , ECE department teaching and non teaching faculty members , Admin staff who knowingly and unknowingly helped in all aspects for making this workshop a grand success.



Fig. 16Student Organizers of II ECE for Workshop

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Fig.17 Group photo with Convener, Principal, Resource persons, Faculty and Participants.

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Andhra Pradesh State Skill Development Corporation (APSSDC) (Department of Skill Development, Enterprenureship & Innovation, Govt. of Andhra Pradesh) Regd Id: 18U41A0413				
This is to certify that Mr./Ms./Mrs.	Sandrana Rootitute of Engineering and Technology			
participated in		<u>/</u>		
held from 16-09-2019 to				
MD & CEO- APSSDC (Dr. Srikanth Arja, IRTS)	(Principal)	(Head of Department)		

Fig. 18. Sample Certificate

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Fig. 19 Invitation for PCB Design Workshop

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FEEDBACK FORM

On Industrial Automation – Applications in Electronics

1.F	Has the Workshop attained its objectives?	
	Yes	
	No	
2. Workshop was relevant to my needs		
	Strongly agree	
	Agree	
	Neutral	
	Disagree	
	Strongly disagree	
3.	Instructions were clear and understandable	
	Strongly agree	
	Agree	
	Neutral	
	Disagree	
	Strongly disagree	
4.	Content was well organised	
	Strongly agree	
	Agree	
	Neutral	
	Disagree	
	Strongly disagree	

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5. Was the Duration of the training sufficient.
□ Yes
□ No
6.Resource persons were effective.
□ Strongly agree
□ Agree
□ Neutral
□ Disagree
□ Strongly disagree
7. Queries were encouraged
□ Strongly agree
□ Agree
□ Neutral
□ Disagree
□ Strongly disagree
8. Any additional remarks
9. Overall how would you rate this event
□ Excellent
□ Very good

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- C1	
□ Good	
□ Fair	
□ Poor	
10.Propose the name of training program you will be interested in participating in future	e.
Feedback from students :	