



DADI INSTITUTE OF ENGINEERING & TECHNOLOGY

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NH-5, Anakapalle, Visakhapatnam-531002, Andhra Pradesh

Phone: 08924-221111/221122/9963981111, E-Mail: info@diet.edu.in, Web: www.diet.edu.in



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)

- 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.
Ms.A.Bhargavi, 18U41A0458.
Ms.M.Pavithra, 18U41A0455.
Ms.R.Indraja, 19U45A0433.
- Venue:** Laboratory 1 and Laboratory 2



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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 during 16-09-2019 to 21-09-2019. The main aim of 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 tool to test electronics & electrical circuit in software environment.

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 the electronic products. They are also used in electrical products, such as passive switch boxes.

Inauguration:

The inauguration of the workshop was done 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 included, **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, faculty and 93 students from



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II B.Tech ECE participated in the inaugural function . The Welcome speech was given by students Ms.A.Bhargavi and Mr.B.Raghuram of II ECE.



Dignitaries on the Dias



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 addressed all the student participants to make use of this workshop and improve their practical knowledge.



Dr.B.Raja Rao, H.O.D, addressing the gathering.

The Principal Dr. Ch. S. Naga Prasad , addressed the students about workshop and importance of APSSDC. He said that, it is an opportunity for all the II B.Tech ECE students to



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learn different softwares. Apart from theoretical knowledge, practical knowledge is very important for students. So, he suggested all the students to make use of this 6-day workshop effectively.



Dr.Ch.S.Naga Prasad, Principal, addressing the gathering.

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



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



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Presented vote of thanks by Ms.R.Indrajha, for Inaugural function.

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

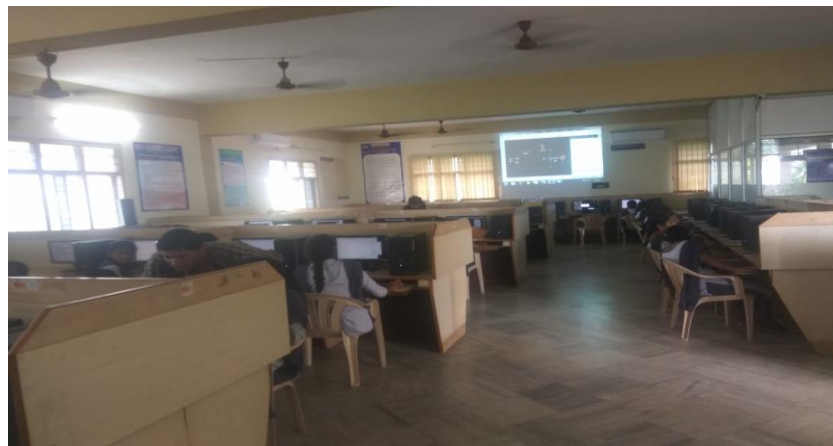
Topics covered: Introduction to PCB and Software

Mr.B.Suresh Kumar, in the Forenoon Session started with introduction of PCB Designing, layouts, benefits of the workshop and its applications. The Resource person have explained Schematic Design of a demo Circuit and pointers to make precise schematic design from 11.00 AM to 12.30 PM.

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



Introduction to PCB Design



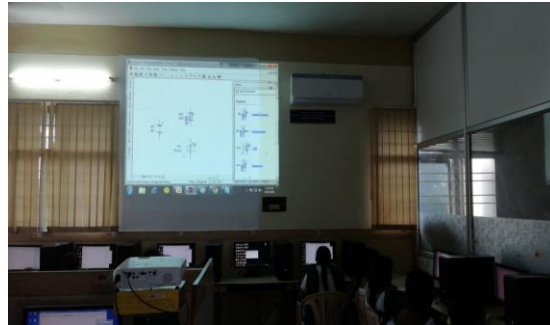
Explained how to use live wire software for designing circuits

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

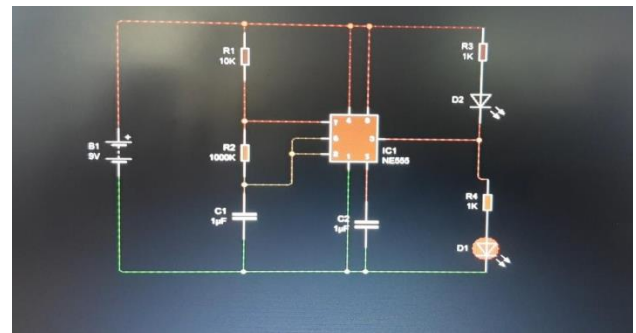
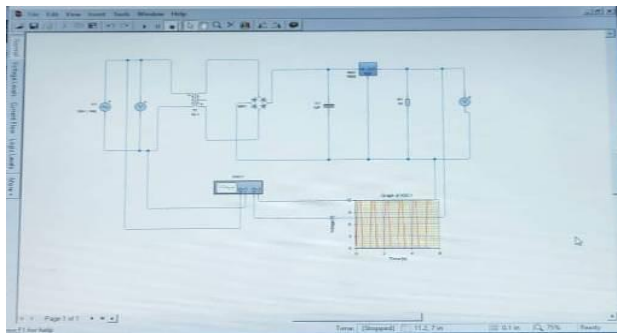
Resource Persons: Mr.B.Suresh Kumar Electronics Engineer-APSSDC

Topics covered: Rectifiers, 555 timer and LED circuits

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



Placing the components on the schematic window



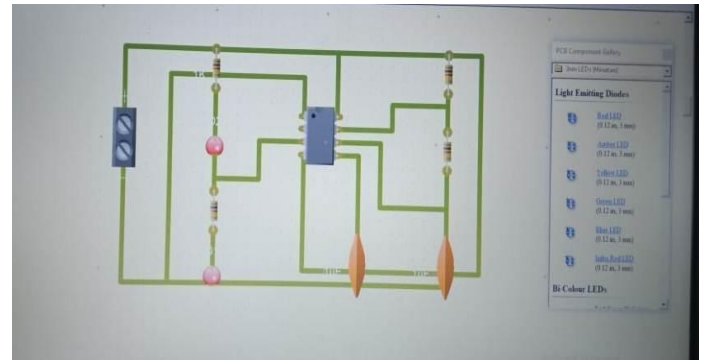
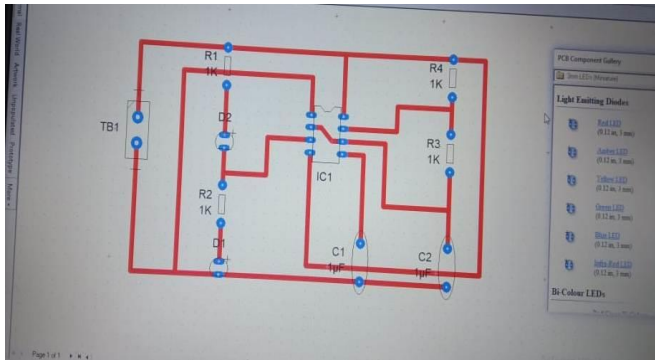
Designed few circuits by using live wire software

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

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

Topics covered: designing of electronic die, motor and seven segment display circuits etc.

Mr.Ch.Santhosh explained how to design 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.



Simulation of circuits

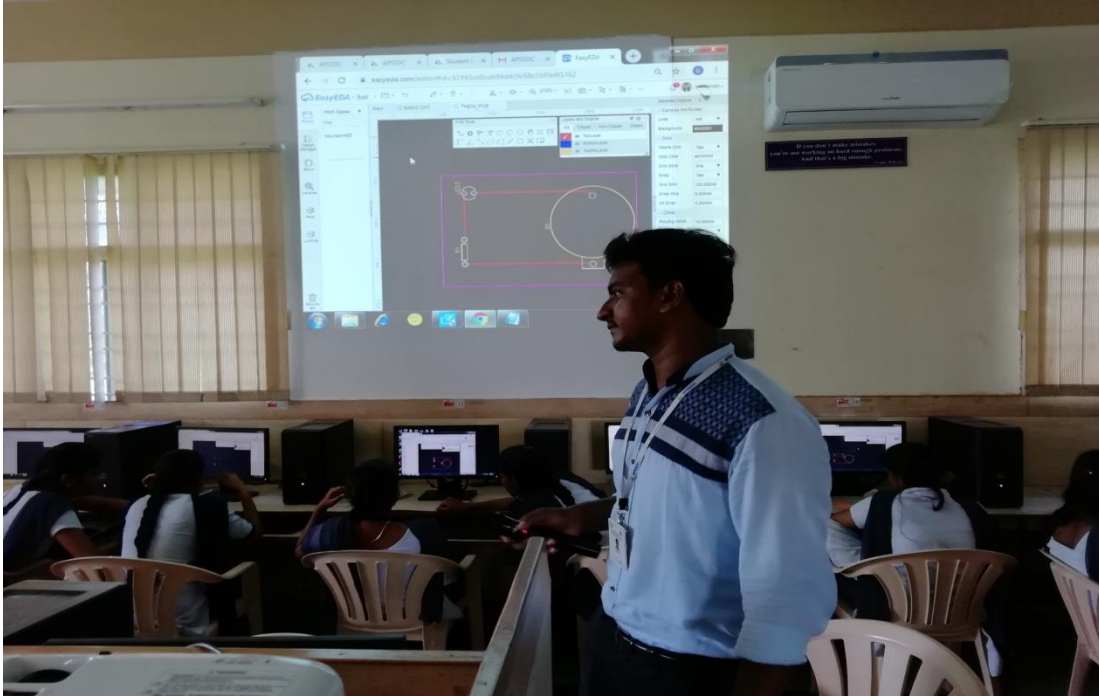
Day-4: Workshop on “PCB DESIGN” - DIET – 19th Sep 2019

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

Topics covered: Layout design by using PCB wizard software.

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 explained how to design the layout 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.



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

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.



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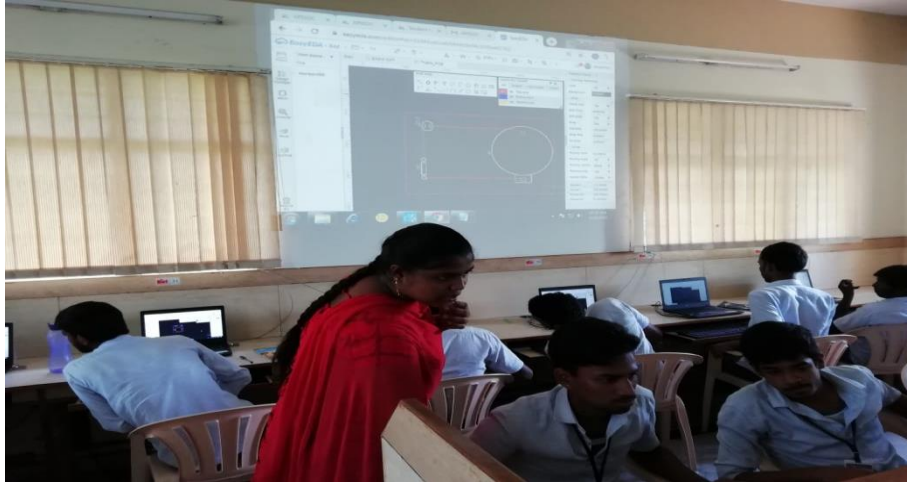
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Layout design by using PCB Wizard software

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

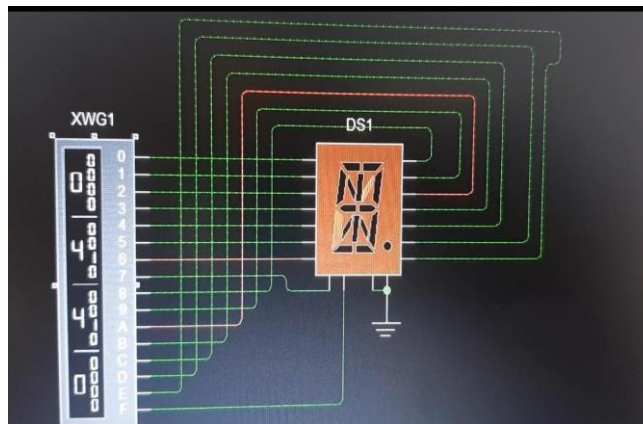
Topics covered: Online Simulation by using Easy EDA software.

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.



Explained how to use Easy EDA Software



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 Easy EDA Software.



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Feedback from students:

After attending this workshop students have expressed their views, in 2nd year itself we all got an opportunity to participate in workshop which is conducted on PCB design in association with Andhra Pradesh State Skill Development Corporation (APSSDC). We all learned the basics of PCB, different types of software to design circuits. It's very interesting, all the 6 days it is a very good experience for us with hands on experience in laboratory 1 & laboratory 2.

I would like to thank our honourable chairman, Sri Dadi Ratnakar garu for his continuous corporation and support for conducting this workshop for benefits of students to increase their practical knowledge.

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

I would like to thank faculty coordinators, student coordinators, ECE department teaching and non teaching faculty, Admin staff who knowingly and unknowingly helped in all aspects for making this workshop a grand success.



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Student Organizers of II ECE for Workshop



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



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సమావేశంలో మాట్లాడుతున్న సురేష్ కుమార్

డైట్ లో పీసీబీ డిజైన్ వర్క్ షాపు

అనకాపల్లి లో, సెప్టెంబరు 16: డైట్ ఇంజనీరింగ్ కళాశాలలోని ఈసీఈ విభాగంలో పీసీబీ డిజైన్ పై ఆరు రోజుల వర్క్ షాపు సోమవారం ప్రారంభమైంది. కార్త్యక్రమంలో వర్క్ షాపు కార్యక్రమం ఆధ్వర్యంలో జరిగిన కార్యక్రమంలో వర్క్ షాపు రిసోర్స్ డెవలప్ మెంట్ డివిజన్ చీఫ్ సురేష్ కుమార్ ప్రసంగం చేశారు. పీసీబీ డిజైన్ ప్రాముఖ్యతను, టెక్నాలజీ అవశ్యకతను విద్యార్థులకు వివరించారు. కళాశాల ఛైర్మన్ డాక్టర్ రత్నాకర్ మాట్లాడుతూ, వర్క్ షాపు ద్వారా వచ్చే ప్రాక్టికల్ నాణ్యతను, తద్వారా వచ్చే అవకాశాలను విద్యార్థులు అందిపుచ్చుకోవాలని సూచించారు. ప్రిన్సిపాల్ డాక్టర్ నీహాచేంద్ నాగప్రసాద్ మాట్లాడుతూ, ఇటువంటి వర్క్ షాపులు విద్యార్థులలో సృజనాత్మకతను పెంపొందించేందుకు భీమావనదళానిచ్చారు. కార్యక్రమంలో ఛైన్ ప్రిన్సిపాల్ డాక్టర్ ఈశ్వరరావు, వర్క్ షాపు కన్వీనర్ ఈసీఈ విభాగం వలె డాక్టర్ బి.రాజారావు, విద్యార్థులు పాల్గొన్నారు.

ఆంధ్రజ్యోతి **సంకల్ప** Tue, 17 September 2019
<https://epaper.andhrajyothy.com>

వృత్తి నైపుణ్యం అవసరం

అనకాపల్లిలో: విద్యార్థులు చదువు తోపాటు ఏదైనా వృత్తిలో నైపుణ్యం సాధించాలని ఆంధ్రప్రదేశ్ స్కిల్ డెవలప్ మెంట్ కో-ఆపరేషన్ ఇంజనీర్ బి.సురేష్ కుమార్ అన్నారు. సానిక డైట్ కళాశాలలో ఈసీఈ విభాగంలో పీసీబీ డిజైన్ పై ఆరు రోజుల వర్క్ షాపును సోమవారం ప్రారంభించారు. అనంతరం పీసీబీ డిజైన్ ప్రాధాన్యం, టెక్నాలజీ అవశ్యకతను విద్యార్థులకు వివరించారు. వర్క్ షాపుల ద్వారా వచ్చే ప్రాక్టిస్ నాణ్యత విద్యార్థులకు ఎంతగానో ఉపకరిస్తుందని వివరించారు. కార్యక్రమంలో కళాశాల ఛైర్మన్ డాక్టర్ రత్నాకర్, ఛైన్ ప్రిన్సిపాల్ ఈశ్వరరావు, వర్క్ షాపు కన్వీనర్ బి.రాజారావు, అధ్యాపకులు, విద్యార్థులు పాల్గొన్నారు.

సాక్షి Tue, 17 September 2019
<https://epaper.sakshi.com/c>



డైట్ లో వర్క్ షాపు ప్రారంభం

అనకాపల్లి పట్టణం, స్యూస్ టుడే: పట్టణంలోని డైట్ కళాశాల్లో ఆంధ్ర ప్రదేశ్ స్కిల్ డెవలప్ మెంట్ కార్యక్రమంలో ఈసీఈ విద్యార్థులకు ఆరురోజుల పాటు నిర్వహించిన వర్క్ షాపు సోమవారం ప్రారంభమైంది. ఈ కార్యక్రమంలో కార్యక్రమం ఇంజనీర్ సురేష్ కుమార్ పీసీబీ డిజైన్ ప్రాముఖ్యతను, టెక్నాలజీ ప్రాముఖ్యతను విద్యార్థులకు వివరించారు. కళాశాల ఛైర్మన్ డాక్టర్ రత్నాకర్ మాట్లాడుతూ అవకాశాలను విద్యార్థులు అంది పుచ్చుకోవాలని సూచించారు. కార్యక్రమంలో కళాశాల ప్రిన్సిపాల్ డాక్టర్ నాగ ప్రసాద్, ఛైన్ ప్రిన్సిపాల్ డాక్టర్ ఈశ్వరరావు, వర్క్ షాపు రిసోర్స్ డెవలప్ మెంట్ డివిజన్ చీఫ్ సురేష్ కుమార్ పాల్గొన్నారు.

Date : 17/09/2019 EditionName : ANDHRA PRADESH
 (VISAKHAPATNAM) PageNo : Page 05

Paper Clippings of 6-Day Workshop on PCB Design in DIET



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Department of Electronics & Communication Engineering

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