Five days
"Skill Development Training Program on Electronic System Design"
From
10.04.2023 to 14.04.2023

Organized by

Centre for Wireless System Design, Anna University, Chennai - 25.
Department of Electronics and Communication Engineering,
CEG Campus, Anna University, Chennai - 25.

ORGANIZING COMMITTEE

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Vice-Chancellor,
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Chennai

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Registrar,
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About the Institute: Anna University was established on 4th September, 1978 as a unitary type of University. This University was named after Late Dr.C.N.Annadurai, former Chief Minister of Tamil Nadu. It offers higher education in Engineering, Technology, Architecture and Applied Sciences relevant to the current and projected needs of the society. Besides promoting research and disseminating knowledge gained there from, it fosters cooperation between the academic and industrial communities.

About the Department: The Department of Electronics and Communications Engineering (DECE), which became a part of this celebrated institution in the year 1945, is one of the leaders in India in this field of technology. Keeping in line with fast changing technology, the department has a well designed, constantly reviewed syllabus to incorporate all advancements in existing and emerging technologies. The state-of-the-art laboratories complement the high standards set by the competitive syllabus and nurture the inclination of the students towards research and development, besides giving them the necessary and sufficient backing of practical knowledge that they need.

About the C-WiSD: The Centre for Wireless System Design (C-WiSD), established recently as an autonomous centre of Anna University, at CEG Campus, aims to leverage the expertise available in the University in the areas of Baseband and Signal Processing, RF and Microwave Design, and Hardware Design, Fabrication and Testing, towards building Wireless Systems to cater to the needs of the society and the industry requirements. The centre envisions to grow as a knowledge hub that addresses the needs of upskilling the academic community in the domain of Wireless System Design and strive to be a benchmark in research, innovation, design, development, deployment and dissemination of knowledge in Wireless System Design through effective collaboration and good practices.

About the ESD Facility: The Electronic System Design Facility consisting of (PCB Component Assembling Lab, Soldering Station Lab Rapid Soldering and Inspection Lab, LASER Printed Circuit Board Lab and RF PCB Design Lab) has been created under the University with Potential for Excellence scheme funded by UGC in the Department of ECE and it has a well-established, state of art facility under one roof for Electronics System Design. This infrastructure currently trains the students of ECE department, who are performing exceedingly well and are hired by the leading industries and Institutes. With this foundation we would like to extend the advantage to the people involved with electronics system design and manufacturing. This will help create more entrepreneurs which is in-line with start-up India to develop a Electronic Prototype Product Development.

Course Coverage:

1: Overview of Electronic System/Product Design.
2: Electronic Design Automation Tools.
3: Printed Circuit Boards – Prototypes.
4:PCB Prototyping using the state-of-art Machine (Additive and Subtractive methods).
5: System Assembly Programming and Testing

Who Can Attend: Students of B.E/B.Tech, M.E/M.Tech, Research Scholars, Faculty Members and Industrial persons

Mode of Study:

- Hands-on Training (Theory & Practical Sessions)
- No. of Participants Limited to 20
- Course Duration: 5 days
- Certificate: Certificates will be provided on successful completion of training

Fee Details (inclusive of GST):

- Student - Rs. 5,900/-
- Faculty - Rs. 7,080/-
- Industry - Rs. 9,440/-

Last date for Registration: 20.03.2023

- Interested participants has to register for the course by using the google form link https://forms.gle/TCcLEpUCp9aZ7fWN6
- The student has to upload the HOD permission certificate available in the google forms to attend the training programme
- Number of seats is restricted to 20
- Refreshment will be provided
- No accommodation
- For queries related to registration and other details contact : Mrs. S. Shenbagakuzhalvaimozhi - TF (or) Mr. S. Kumaran - PA-I : 044-22358869

Date of Intimation to shortlisted candidates: 21.03.2023

- The Shortlisted participants will be updated through email/Phone
- DD must be taken only after receiving confirmation mail

Last date for Fee Payment: 31.03.2023

- The Fee Payment will be in the form of DD only
- The DD Details will be mailed to the shortlisted candidates
- Along with the DD, the copy of the confirmation mail has to be sent to the below postal address

DETAILED COURSE CONTENT

1. Overview of Electronic System/Product Design

Introduction Overview of Electronic System Design - Analog and Digital Circuits - Microcontroller based system design - Schematic design - Component selection - through-hole, SMT/SMD - PCB Layout - optimization - Design prototype Enclosure design - LASER Cutting - Rapid prototyping - 3D printing.

2. Electronic Design Automation Tools

Hands on training on the following: Electronic Design Automation Tools (EDA) - Schematic capture - Component Selection - Annotation - Foot print assignment - Wiring - Design Rule Check - Netlist generation -Convert to PCB - Component Placement - Manual Routing - Auto Routing - Gerber file generation.

3. Printed Circuit Boards – Prototypes

Hands on training on different types of PCBs: Single layer - Double layer - Prototyping - Drilling - Laser based Pattern Transfer Laser Etching - Tinning - Green Masking - Laser Legend Printing and the conventional method of making PCBs - Chemical Etching

4. PCB Prototyping using the state-of-art Machines (Additive and Subtractive methods)

PCB Prototyping - Additive and subtractive methods - PCB Printing with conductive ink - V-One - Voltera software - Bot factory SV2 PCB printer - Bantam tools desktop CNC milling machine - PCB Drilling and milling - end mill selection - CAM file generation - LASER based PCB prototyping.

5. System Assembly Programming and Testing

Hands on training on Pick and Place (Fritsch LM901) - Component assembly - wave Soldering - Fluxing - Preheating – Reflow Soldering (5 zone) - Robotic Soldering - Apollo Seiko - Microcontroller Programming - Testing & Troubleshooting - Enclosure Design.

The following machines will be introduced to the participants as they study the Electronic System Design process.

- Maxsell Machine (PCB Printing using LASER Technology (Sources are 40W CO2, 50W IPG, 50W MOPA and 50W RAYCUS))
- Bantom Tools Machine (CNC Milling for PCB Routing and Drilling)
- FRISTCH Machine (Pick and Place of SMD Components in PCBs)
- Reflow Oven Machine for SMD Components Soldering
- Wave soldering Machine for Through Hole Components soldering
- Bot Factory Machine (For Multi Layer PCB Printing)
- Voltera V-One Machine (For Two Layer PCB Printing)
- Plot Bot and make-block (For Non metal laser cutting and engraving)
- Apollo Seiko -Robotic Soldering - 3D Prototyping Dreamer & Formslab - LPKF UV Machine.






SURFACE


MAXSELL

Chennai, TN, India
Ranjith Road, Kotturpuram, Chennai,
Lat 13°0'44"N, Long 80°14'9"E
01/11/2023 02:21 PM



PCB