Five Day Internship program

"Circuit Simulation tools, PCB Design and Fabrication & Microcontrollers Basics"

Date : 8th , 9th, 10th, 11th & 12th July 2019
Venue: Royal College of Engineering & Technology, Akikkavu
Number of participants: 22 Students

Report

Department of Electronics and Communication Engineering (ECE) in association with IE(I), conducted a five day internship program on **"Circuit Simulation tools, PCB Design and Fabrication & Microcontrollers Basics",** during 8th to 12th july 2019. Twenty two Students, which include the second and third year RCET ECE students and the students from other colleges, participated in the workshop.

The sessions were handled by Mr. Narayanan P.P., Mr. Kiran Samuel and Mr. Rahul V, Mr. Shehin A U, Mrs. Shiji K., Mrs. Radhika E R (Assistant Professor's, department of ECE, RCET) and Mr. Sam Chungath, Mr. Moosa N M and Mrs. Siji P V (Lab instructors, department of ECE, RCET).

Day-1 (8/07/2019):

The 1st Day of internship started at 9:30am. An introduction to basics of microprocessors and microcontrollers were given to the students. Mr. Rahul V (AP/ECE) and Mr. Kiran Samuel (AP/ECE), explained various concepts that an engineering students must possess in order to understand a microprocessor. Hands on sessions of programming (simple basic programs) were done on the same day.

Day-2 (9/07/2019):

Day 2 primarily focused on various simulation softwares which are useful to simulate various electronic circuit ideas of the students. The Session was handled by ECE Department faculties Mr. Narayanan P.P., Mr. Shehin A U and Shiji K. Students simulated various basic analog and digital circuits using Proteus 8.6v (Simulation software tool).

Day-3 (10/07/2019):

Students were introduced new circuit simulation software: Circuit Wizard on the fourth day of the program. The Students were able to design and analyse various analog and digital circuits using this tool. In the afternoon session they were taught on how to design PCB layouts using the same tool for various familiarised circuits. The students were very much interested to learn the process of PCB design.

Day-4 (11/07/2019):

Various steps of preparing a PCB were taught on the fourth day. The students printed the PCB layout of an astable multivibrator, which they have designed on the previous day, on to the copper board (Over which PCB need to be prepared) and etched for the required tracks on the PCB. Each and every student was provided with the materials (Copper board, Ferric chloride solution, hand-drill, soldering iron and lead, components and equipments) for PCB fabrication. Students were able to show the individual outputs at the end of the afternoon session.

Day-5 (12/07/2019):

Last day of the internship concentrated on wiring techniques. The students were given sessions on how to deal with various electric connections. At the end of the session, students were divided into five groups and they were given group work to develop extension boards.

The valedictory function of the program was conducted at 3:30pm on the fifth day. Dr. S P. Subranian, Principal RCET, addressed the students and the staffs. He appreciated the department for hosting such a program and mentioned the importance of internships in the current engineering education system. Certificates were distributed to the students. Students gave good feedback about the program.

Group Photo of the students and the staffs who handled the internship program is shown below: