ELECTRONICS HOBBY CLUB

About Electronics Hobby Club:

Electronics Hobby club established on 16 February 2017 and caters second year level students to motivate towards practical orientation of electronics subjects. This club intends to develop expertise in students to prepare them for taking up interviews and placements in core sectors of Electronics and Communication Engineering. The club will conduct Workshops with hands-on sessions that will enable students to expertise on industry relevant concepts and skills. Hardware and software resources existing in Electronics Hobby Club will be utilized for the development of students as well as faculty.

OBJECTIVES:

1. To motivate the students to do In-house projects using latest equipment and technology.
2. To cultivate the transfer of knowledge from senior students to their juniors.
3. To conduct workshops and hands on sessions using internal faculty and outside resource persons.

VISION
To become a centre of excellence in Embedded system and other thrust areas in Electronics and communication Engineering
MISSION
Build Innovative Techniques in the area of agricultural, Medical, Industrial Applications using IOT and Embedded Systems

FACULTY COORDINATORS:

1. Sri. K.MIRANJI $_{M.Tech,MBA}$ Asst.Professor, Dept Of ECE
2. Sri. A.VAMSI KRISHNA$_{M.Tech}$ Asst.Professor, Dept Of ECE
3. Sri. V.RANJITH KUMAR$_{M.Tech}$ Asst.Professor, Dept Of ECE

LIST OF COMPO1NENTS AVAILABLE UNDER ELECTRONICS HOBBY CLUB:

S.NO	NAME OF THE COMPONENT	QUANTITY
1	USB CABLES	14
2	BO MOTORS	13
3	SERVO MOTORS	01
4	PIR SENSORS	07
5	POTENTIO METERS	15
6	MOTOR DRIVERS	05

7	RELAYS	07
8	CRYSTALS	05
9	LM 35	05
10	ULTRASONIC	05
11	BLUETOOTH MODULES	05
12	ACCELROMETERS	04
13	SCREW DRIVERS	05
14	METAL CHASIS	04
15	NODE MCU	12
16	ESP 8266	02
17	IOT PORTING CABLES	12
18	PHOTO TRANSISTORS	15
19	MQ2 SENSORS	05
20	MQ2 PCB BOARDS	05
21	PHOTO RECEIVERS	14
22	LEDS	--
23	PUSH BUTTONS	--
24	LDRs	--
25	RESISTORS	--
26	MALE TO MALE CONNECTORS	--
27	MALE TO FEMALE CONNECTORS	--
28	FEMALE TO FEMALE CONNECTORS	--
29	BATTERIES	--

PROJECTS CARRIED OUT SO FAR UNDER EHC:

S.NO	PROJECT TITLE
1	AGRICULTURAL SOIL TESTING SYTEM
2	WAR FIELD ROBOT
3	BORE WELL CLIMBING ROBOT
4	SMART CAR PARKING SYSTEM
5	IMPLEMENTATION OF HILL CLIMBING ALGORITHM
6	BIOMETRIC BASED ATTENDANCE SYSTEM

Workshops Conducted In association with EHC

1. AURDIONO PROGRAMMING AND SENSOR INTERFACING

The **Arduino Programming & Sensor Interfacing Workshop** is a beginner's workshop designed to get new comers up and running with Arduino microcontrollers. This workshop was organized by the department of ECE, in association with R&D Cell (ECE Dept.), Electronics Hobby Club (EHC) of ECE Dept. and ROBOTICS CLUB of CRRCOE. There were 215 students participated from ECE discipline (2nd year). The workshop conducted into three separate batches.

The workshop was inaugurated by **Dr. G. Samba Sivarao, Principal, Sir C R Reddy college of Engineering**.

The workshop is coordinated by **Mr. A.M. Vamsee Krishna, Assistant Professor, Dept. of ECE**.

As a part of inaugural function, student coordinator from 2/4 ECE invited head of the department of ECE, Dr. T. Venkateswara rao, head of the department of EEE Dr.A.Srnivas reddy, Principal Dr. G. Sambasiva rao and Resource person Mr V.Satyasurendra from 4/4 ECE on the dias.

HOD of ECE Dr. T.Venkateswara rao addressed the dignitaries on the dias and the students and explained the importance of workshop in student point of view.

HOD of EEE Dr. A.Srinivas Reddy address the students and faculty members who are attended for the program

Principal Dr. G. Samba Sivarao address the students and faculty members who are attended for the program and explained, how it is useful for the students.

Resource person Mr V.Satya surendra address the students who are attended for the program and explained, how it is useful for the students.

The entire team (Coordinators & Resource persons) With the Principal and Head of The Departments.

After addressed the gathering Mr. V.Satya Surendra started the day-1 session with introduction of Arduino and microcontroller.

The following are some of the screenshots during work shop

Resource Person V.Surendra Explains programming concepts , Who raised the doubts during Workshop.

Student's coordinator support the students during writing the programming of Ardino in workshop.

CONCLUSION

The workshop was success. Each member participated and seemed to enjoy themselves. We met our stated learning objectives. The participants varied from very little familiarity with electronics and programming to near expert. Even with the disparity everyone could complete the most of the task and everyone needed help at some point. The participants were expected to try on their own first and initially attempt to troubleshoot problems. This caused a little frustration in a couple people, but overall it seemed to go well. We had one helper to six students and this level of interaction was really necessary to stay on time. The workshop lasted eight hours per day and it is conducted for two days and it was tight, but we finished on time.

Feedback:

- It might have been helpful for the participants if the more number of Arduino kits and sensors are provided as the each batch has 6 members.
- Would like to see the participants interacting with each other after and participating in making the workshop better in the future. Doing things like commenting on the wiki. Having students participate in the teaching.

2.WORKSHOP ON AURDINO AND IOT

Title of the Event : A workshop on "**Arduino & IOT"**

Venue : A.C. Seminar hall

Benefited Students : **III/IV B.E E.C.E Students**

Resource Persons : 1. V.SatyaSurendra

Address : Final year ECE students
Sir C R Reddy college of Engineering

Organized By : Department of ECE
In association with R&D Cell (ECE Dept.) and ROBOTICS CLUB of CRRCOE , Electronics Hobby Club (EHC) of ECE Dept.

Workshop Coordinator : 1. Sri K.Lashmi Narayana, Sr.Assistant Professor, ECE Dept.
2. G.Vishnu Vardhan, Assistant Professor, ECE Dept.

LEARNING OUTCOME OF THE PROGRAM:

Internet of things is a new revolution of the internet and industry, IOT is a world, where the real, digital & virtual devices are converging to create smart environments that make energy, transport, cities, and many other areas more intelligent. But, it is a lot different from internet and M2M networks. In this system, value of sensors will be shown on GUI or web server or android application through wireless communication and device will be controlled automatically.

The theory should be taught and practical should be carried out in such a manner that students are able to acquire different learning outcomes in cognitive, psychomotor and affective domain to demonstrate following course outcomes.

1. The objective of this session to create an interest to walk through students or embedded programmers with android in internet of things using ARDUINO.

2. To know how one can control and monitor many devices or systems.

3. Creating an environment that every student can implement their own IOT project.

4. Intended to bring together experts and students to discuss and simulate ideas, share experience on IOT applications through ARDUINO.

CONCLUSION:

Thus, learned about basics of Internet of things and how to extend Arduino programming to implement IOT Projects.