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REFLECTIONS

ECE DEPARTMENT

ISSUE 1
JAN - MAR

HOD'S DESK

Co-curricular activities play a **very crucial role in giving the young boys and girls the ability to mould their lives to become well rounded people**. Co-Curricular activities are undertaken side by side with the curricular activities.

A co-curricular activity essentially takes place outside a typical pen and pencil classroom experience. It gives the students an opportunity to develop particular skills and exhibit their academic and non-academic abilities. A Chinese proverb very aptly states, **"Teach me, and I will forget. Show me, and I might remember. Involve me, and I will never forget."**

To a very great extent, the theoretical knowledge is enhanced when a co-curricular activity related to the content taught, is organized. Intellectual development of the personality is achieved to a great extent, in the classroom itself. But, **the aesthetic development like character building, spiritual and moral values, physical growth, creativity** and many more are backed up by co-curricular activities only. It also professes co-ordination, adjustment, and speech fluency, extempore and debating skills amongst students. It **teaches the students to stand up for their rights**.

Co-curricular activities render a number of values like:
1. Educational value 2. Psychological Values 3. Development of Social Values 4. Development of Civic Values 5. Physical Development Values 6. Recreational Values 7. Cultural Values

As part of co curricular activities BTech ECE Second Year Students have been offered Hobby projects this year.

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STUDENT ENRICHMENT PROGRAM

The student enrichment program was conducted for S4 students during 11-22 of January 2016. The aim of the program was to

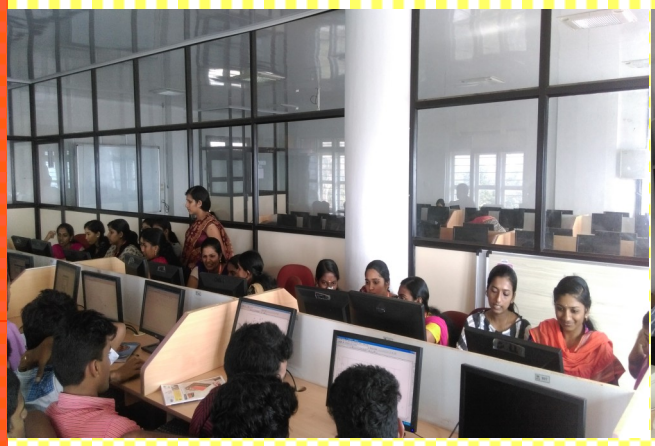
- **Develop innovative ideas and skills in the field of electronics**

The students were given training on

- OrCAD
- Hobby Circuit designing in OrCAD
- Soldering Practice
- PCB connection

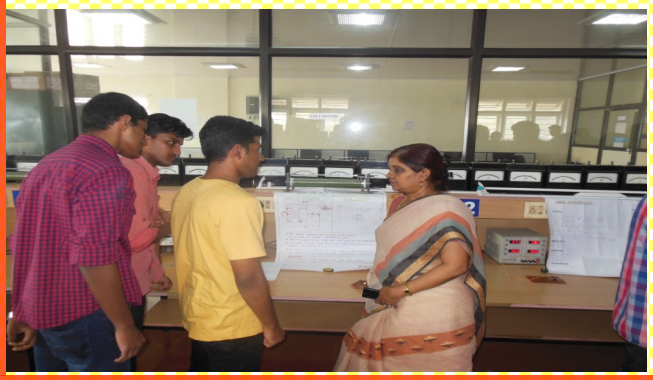
A big team of faculty members from the department handled the classes and lab assistants gave the support for the lab practice.

The S4 students exhibited their hobby projects to inspire and motivate the junior S2 students.



HOBBY PROJECT EXHIBITION

A hobby project exhibition was conducted for S2 students on 22nd Jan 2016. It was conducted by S4 students and they were very keen in explaining the circuits to the junior batch. It was an inspiration and motivation to the junior students.



SPECIAL AWARD FOR PROJECT

1. ECE VIII Sem Students received special Prize for TECHFEST -2016 Organized by KSCSTE & KTU at AJCE on 8-9 Jan 2016.
Name of the Project: Electric Lineman Safety
Members: Jidhin John, Jithin Jose, Jerin J Xavier, Mohammed Diab K
Mentor of the Project: Jinu Issac Kuruvila (AP, ECE)
Members participated in the function: Our CM Shri Oomen chandy, Mr.Anto antony M.P, Dr.N.Jayaraj M.L.A, Kuncheria P Isaac VC-KTU, Dr.Abdul Rahiman PVC-KTU

2. The project Smart Speed Governor done by Asish Mathew Johnson, Aparna Jose, Ashitha V and Anuja Jacob under the guidance of Asst. Prof. Simi P Thomas was selected into the top 25 projects in Kerala for YUVA Master Mind 2015.

The project was a Speed Governor that selectively implements speed control on a zonal basis. By implementing a transmitter on the start and end of a control zone and a receiver and a microcontroller in the vehicle this system can be implemented for a total cost of Rs.3500.

The project was well appreciated by the assistant collector of Kottayam and was suggested to present before the government. The project was covered By the Manorama News Paper as the top 5 projects with social relevance.

OPEN HOUSE

The open house was conducted for S2, S4, S6 and S8 batches as in the schedule given.

BATCH	DATE
S4	14/3/2016
S6A	16/3/2016
S6B	17/3/2016
S2	18/3/2016
S8A & B	19/3/2016

Many parents came and attended the meeting inorder to know about their ward's academic performance. Prof. Asha Panicker (HOD), class advisors and all the subject teachers interacted with the parents and gave them the information about the areas on which the students should work more and improve.

UNDERWATER ACOUSTIC POSITIONING

Underwater acoustic (UWA) networks are generally formed by acoustically connected ocean-bottom sensors, autonomous underwater vehicles, and a surface station, which provides a link to an on-shore control center.In underwater sensor networks (UWSNs), determining the location of every sensor is important and the process of estimating the location of each node in a sensor network is known as localization.Commercial localization methods used under water are : Long base line (LBL), Short base line (SBL) ,Ultra short base line (USBL),GPS intelligent buoys (GIBS).

Long Baseline Acoustic Positioning System: The LBL technique results in very high positioning accuracy and position stability that is independent of water depth. It is generally better than 1-meter and can reach a few centimeters accuracy. Long baseline systems determine the position of a vehicle or diver by acoustically measuring the distance from a vehicle or diver interrogator to three or more seafloor deployed baseline transponders. These range measurements, which are often supplemented by depth data from pressure sensors on the devices, are then used to triangulate the position of the vehicle or diver.

Short Baseline Acoustic Positioning System: SBL systems do not require any seafloor mounted transponders or equipment and are thus suitable for tracking underwater targets from boats or ships that are either anchored or under way. Short baseline systems determine the position of a tracked target such as a ROV by measuring the target's distance from three or more transducers that are lowered over the side of the surface vessel from which tracking operations take place. These range measurements, which are often supplemented by depth data from a pressure sensor, are then used to triangulate the position of the target. In case where tracking is conducted from a moving boat but the target position must be known in earth coordinates such as latitude/ longitude or UTM, the SBL system is combined with a GPS receiver

and an electronic compass, both mounted on the boat. These instruments determine the location and orientation of the boat, which are combined with the relative position data from the SBL system to establish the position of the tracked target in earth coordinates. Ultra-short baseline: USBL system consists of a transceiver, which is mounted on a pole under a ship, and a transponder/responder on the seafloor, a towfish, or on a ROV. A computer, or "topside unit", is used to calculate a position from the ranges and bearings measured by the transceiver. An acoustic pulse is transmitted by the transceiver and detected by the subsea transponder, which replies with its own acoustic pulse. This return pulse is detected by the shipboard transceiver. The time from the transmission of the initial acoustic pulse until the reply is detected is measured by the USBL system. GPS Intelligent Buoys (GIBS): GIBs may be used in conjunction with an active underwater device (such as a pinger equipped torpedo), or with a passive acoustic sound source (such as an inert bomb striking the surface of the water). Every cycle (typically one second), the acoustic transmitter transmits two successive signals, one synchronous to GPS time and the other delayed proportionally to the depth. Each buoy measures the GPS time of arrival of those two signals and transmits this information together with its own Differential GPS (DGPS) position to the Control and Display Unit via a radio link. Knowing the sound velocity, the propagation time is directly converted to the pinger/buoy distance. As the depth is precisely known (measured on each buoy), the position of the acoustic source is given by triangulation method.The positions of the buoys and acoustic source position are known in WGS-84 coordinates.The GIB systems are composed of: A set of 4 to 12 buoys.

SREELEKSHMI K, AP, ECE

FINAL YEAR PLACEMENTS 2016

Seethalakshmi	Mindtree, TCS
Angel Henry	CTS
Merin Jacob	CTS, TCS
Vishnu Prasad	Aditya Birla Minacs
Ashitha V	Aditya Birla Minacs
Saranya C S	Aditya Birla Minacs
Neenu Ann	Aditya Birla Minacs
Bichu Thomas	Aditya Birla Minacs
Aparna S	Aditya Birla Minacs
Ancy James	Aditya Birla Minacs
Anakha M V	Aditya Birla Minacs
Rahul Raj K	Aditya Birla Minacs
Arjun Haridas	Aditya Birla Minacs
Manjula M	Aditya Birla Minacs
Jayana Sebastian	Aditya Birla Minacs
Anandhu S K	Aditya Birla Minacs
Amal C S	Aditya Birla Minacs
Asish Mathew	Aditya Birla Minacs
Athira Parvathy	Aditya Birla Minacs
Athira Parvathy	Tech Mahindra
Manjula M	Tech Mahindra
Rahul Raj K	Tech Mahindra
Bichu Thomas	Tech Mahindra
Vishnu Vijay	Tech Mahindra
Thushara K	Tech Mahindra
Anuja Jacob	Tech Mahindra
Aparna S	Tech Mahindra

Jomit O Devassia	Tech Mahindra
Ancy James	Tech Mahindra
Blenny Johny	Tech Mahindra
Ashmi Ramanan	Tech Mahindra
Neethu Haridas	Tech Mahindra
Mariyakkutty V	Tech Mahindra
Smitha Sunil	Tech Mahindra
Jessinimol Seethi	Tech Mahindra
Liya John	Tech Mahindra
Vrinda Vijay	Tech Mahindra
Anakha M V	Tech Mahindra
Asish Mathew	Tech Mahindra
Anu Philip	Tech Mahindra
Cilpha Sholly	Tech Mahindra
Neenu Ann	Tech Mahindra
Ansu Jacob	Tech Mahindra
Vishnu Prasad	Tech Mahindra
Ashitha V	Tech Mahindra
Amal C S	Tech Mahindra
Arjun Haridas	Tech Mahindra
Saranya C S	Tech Mahindra
Arjun Haridas	Poornam Infovision
Ansu Jacob	GICE
Asish Mathew	GICE
Sessma Elsa	GICE

WEDDING BELLS

Mr. Anu Philip Mathew, Assistant Professor, is married to Ms. Susan on 1st February 2016. We wish him all the best for a prosperous married life.

FUN ZONE

1. You are given two candles of equal size, which can burn 1 hour each. You have to measure 90 minutes with these candles. (There is no scale or clock). Also u r given a lighter.
2. Two men were playing tennis. They played five sets and each man won three sets. How did they do this ?
3. What is the four-digit number in which the first digit is one-third the second, the third is the sum of the first and second, and the last is three times the second?
4. Assume 9 is twice 5; how will you write 6 times 5 in the same system of notation?

ANSWERS

1. First light up the two ends of the 1st candle. When it will burn out light up one end of the second candle. (30+60=90).
2. The two men were partners playing doubles.
3. 1349
4. 27. Once you assume that 9 is twice 5, you conclude that 5 = 4.5 (9/2). Therefore, 6 times 4.5 is 27.

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