

## BE PROUD!!! YOU ARE ON THE RIGHT WAY...

## Our prestigious groups in VJEC



## GO GREEN....



Featured Article: Page 6

India's manufacturing industry, which is spurring the country's GDP (gross domestic product) growth, is undergoing a major transformation. This sector is scaling up and beginning to seek global competitiveness through a wider application of instruments. This trend is contributing to the robust growth of the instrumentation and control market. "According to a survey conducted by FICCI on Emerging Skill Shortage in the Indian Industry, few sectors have been highlighted with shortage of manpower. Out of which, many cater to the need for instrumentation engineers alone. The shortage of instrumentation engineers is more due to less number of colleges offering B. Tech degree in instrumentation and control in India.

Apart from this, automation of the small-scale indus-

try in India requires well-trained instrumentation engineers having knowledge of computers and instrumentation," opines Prof. Rekha Agarwal, head of Department of Instrumentation and Control Engineering, Amity School of Engineering and Technology.

Instrumentation engineering is one of the complicated but sophisticated branches of engineering discipline that may be studied as a separate branch or along with electronics engineering. The study mainly focuses on the design, configuration and automated systems.

According to Rohit Sinha, headhuman resources, L&T Engineering, E&C Division, "The Indian automation market has acquired the critical momentum to propel the instrumentation and control industry to a higher growth

trajectory. Instrumentation is a well-established technology, both in the manufacturing sector and infrastructure. He feels that India's hope of emerging as an economic superpower depends a lot on how we groom our engineers to leverage this technology.

An instrumentation engineer can find a wide range of career opportunities in all sectors of industries ranging from automotive to healthcare. The pass out are absorbed in power plants, fertilizers and chemicals industry, petrochemicals industry, pharmaceutical industry, cement factories, healthcare services, consulting services, navigational and aerospace organizations, food processing industry and weather stations to name a few.

— Report from Electronics For You, April '10

## YOKOGAWA'S "HANDS ON SESSION IN DCS & PLC": A BIG SUCCESS IN THE VJEC HISTORY...



A view From the Yokogawa's DCS/ PLC Training @ Virtual Instrumentation & Simulation Lab (Newly named as CAD Lab)

Yokogawa India is a big Manufactures for PLC & DCS. Yokogawa started their training works for last 5 years. The department of AEI & i- Zone, the departmental Association organized a 5 days training programme for the 8th semester students from 25th to 29th of January 2011. As per the students feedback, training had given them a good

idea in the area of automation in industries. The workshop was handled by, **Mr. Senthilkumar T**, M. Tech and **Mr. Hemagiri C**, M. Tech from Yokogawa Bangalore section.

As the programme had become a big success the department is planning to organize the same training for 6th semester students in

March 2011. The interested students from other departments can also participate in this program by registering their names to the AEI department.

Workshop contains full hands on sessions and the materials was provided to the students by the company for their further references.

## DEPARTMENT OF AEI BECOMES IDENTICAL

Since the inception in 2005, the Department of Applied Electronics & Instrumentation has brought laurels to Vimal Jyothi Engineering College. It is pertinent to point out that the academic structure in compliance with the syllabus of Kannur University has brought many Rank holders into this Heavenly Garden.

The growth of AEI was spontaneous & steady till to date. The co-operation of students and faculty along

with the divine hands of the management was the podium.

“Survival of the fittest”, was the motto that gave us the inspiration to win the battle of excellence. This incredulous inspiration has given birth to fully equipped technical laboratories. Our laboratories include Process Control & Instrumentation Lab, Industrial Instrumentation Lab, Transducer Lab, Advance Digital Lab, Applied Electronics Lab, Vir-

tual Instrumentation Lab. As a part of continuous assessment, we implemented a new methodology of “Comprehensive Test” that helped our students to excel in their academics.

But still the race to perfection continues and we are looking forward to achieve our motto “Perfection is our Tradition”.

— Dept. of AEI



Well Equipped Laboratories are one of the important feature of the Department

### Department Celebrated Engineers Day on 15th of September 2010.

As in the memory of Mr. Visweswarayya, Famous Civil Engineer of India the department celebrated the engineers day. An invited talk on “Renewable energy” was presented by Prof. Kumaravel, EEED, NIT Calicut as a part of the celebration. Many newspapers including Malaya Manorama reported the same on 16th of September.

### Need Soft Copy of Instrumentation Related Text Books !!!

- >> A VHDL Primer: J. Bhaskar
- >> Instrumentation Hand Books for Engineers:- Vol1, 2, 3- By Liptak
- >> Study PLC/DCS
- >> Basics of Electronics
- >> Digital Signal Processors
- >> Study of PLC & DCS, Yokogawa
- >> Electronic Circuits, Digital Electronics, Process Control Instrumentation, Instrumentation Laboratory Lab manuals.

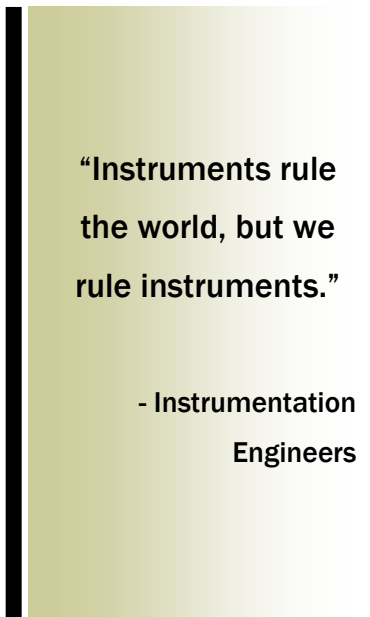
Contact Department of AEI

## STUDENT OF AEI GOT IEEE KERALA SECTION AWARD

*“For the notable services and contribution towards the advancement of IEEE and the engineering profession”*

Shone Jose of S6 AEI was honored with 2 awards by IEEE Kerala section. 2010 outstanding contribution for the hub activities award and the prestigious certificate of appreciation was given for his achievement in integrating engineering professionals in Malabar region of Kerala and also his successful

activities as a Link Hub Driver. His achievement were formally recognized at the inaugural function of IEEE Malabar subsection at NIT Calicut. The awards were given in the prestigious Annual General Meeting of IEEE Kerala Section conducted at Muscat Hotel Trivandrum on 16th January of 2011.



## ROBOTIC WORKSHOP "TATHVA" GOT A BIG CLAP FROM STUDENTS COMMUNITY

The department of Applied Electronics & Instrumentation in association with Instrument Society of India Student Chapter conducted a Technical National Level Workshop in AVR based Robots on September 25th and 26th. A total of 80 students from different departments are participated

in the 2 day workshop. The program was conducted in the Computer Center of our college.

An all in one robotic Kit worth Rs 2400/- were given to the team as for their future research and development. The experts from the "Technophilia" handled the session. The company is an

alumni venture of IIT Mumbai.

All participants have shown interest to participate a next level program of the same. As the world is going through an automated century the department is more concentrated on these type of programs and thus the development of the stu-

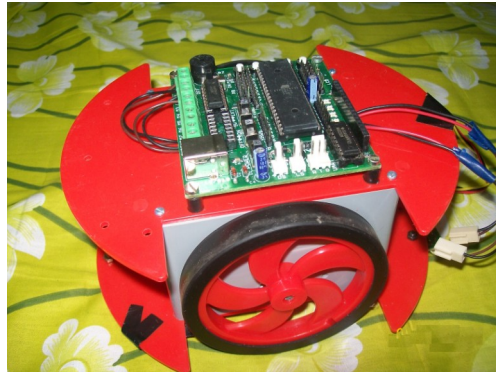


"We are programming the Future": Picture of New MP kit from Applied Electronics Lab

### Time of Blessings



Inauguration of AEI's new Labs: Advanced Digital Lab, Applied Electronics Lab, Transducer Lab



**"There will be plenty of time to sleep when you are dead. Life is for living, so wake up & perform."**

— Benjamin Franklin

### Comprehensive Test Toppers : S3

1. Ms. Prabitha Balakrishnan
2. Ms. Aswini V.
3. Ms. Anagha P. V
4. Ms. Daliya C Abraham
5. Ms. Chaithanya Chandran

### UNIVERSITY ARTS PRIZES TO AEI

#### Prize List:

Event: Group Song Western

**Ms. Donia Jose**

**Mr. Sreelesh Sreenivasan**

**Mr. Ben Baby**

**"Instrumentation deals with measurement of various physical quantities like temperature, pressure, level, flow, speed, sound, light intensity and control of the same in various industries. An instrumentation engineer is invariably required where there is an engineering activity."**

— Prof. R.D. Kokate, head of Department of Instrumentation Engineering, MGM's Jawaharlal Nehru Engineering College

Department of AEI again bagged 3 ranks in Kannur University in the year of 2010. Congratulations to the rank holders. Medals & certificate of honours were distributed on 6th January 2011 at VJEC campus.

1st rank: Shafna MTP

2nd rank: Joyal K Jose

3rd rank: Lexu Jose

### AGAIN 3 RANKS!!!

Kannur University rank Holders



2006-2010 Batch

**ROBOTIC TEAM OF AEI HANDLED A TWO DAY WORKSHOP AT CIT, VADAKARA**

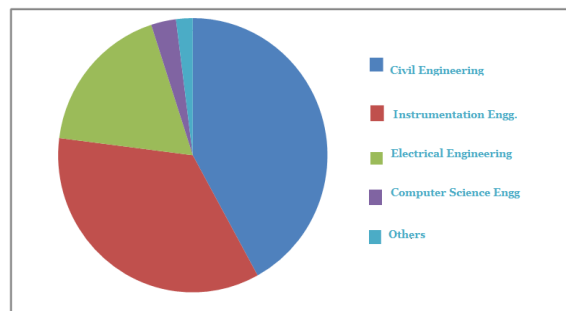
The Robotic Team of Applied Electronics & Instrumentation department those who scored a 3rd prize in the robotic competition conducted at NIT-C in the year of 2010, has handled a two day workshop on Robotics at Co-operative Institute of Technology, Vadakara. The programme was conducted as a part of their annual technical fest, QUASSO LIBEROM. The workshop

had become a grand success as per the feedback from the participants. A total of 250 students participated in the session.

The team has already proven their capabilities in the different competitions and workshops conducted inside and outside the campus. The team was guided by Mr. Sunil Paul, Sr. Lr., MED, VJEC and Mr. Jerry James, Lr., AEID, VJEC for the differ-

ent competitions.

**Team Members:** Jithin M Alias, Shone Jose, Kiran Hareesh, Sachin Francis, Fenil P Cyriac and Arun Jacob.



JOB CHANGES IN GULF COUNTRIES

**PCB DESIGNING WORKSHOP CONDUCTED ON FEB 26TH**

A simple method of PCB designing and Its manufacturing process was introduced to the S4, S6 students as a pre-project training by the department of AEI and its design club 'ISDC'. The programme was handled by Mr. Rahul Antony, HOD In charge AEI and was co-ordinated by Mr. Sreeraj P. V, Lr., ISDC Staff In charge, Ms. Sruthi P P, S6 AEI, ISDC Student In charge. The design club formed in the year of 2009 and was inaugurated by Mr. Sujith D. K

former HOD of AEI for the development of Students in the areas related to Designing & development of new technical instruments.

30 early registered students participated in the programme. The first session of the programme was conducted at the CAD Lab and was about the designing and drawing of PCB using Express PCB. The second session conducted at the Applied Electronics Laboratory included the etching, cutting,

drilling, and soldering processes.



**Watch Video Lectures for all subjects from the masters of different IIT's on: [www.nptel.iitm.ac.in](http://www.nptel.iitm.ac.in)**

**For More Details Please Contact Mr. Jerry James, Lr. AEI**

**JOIN US... BE WITH US... GROW WITH US...**

**AND MAKE NEW CAREER WITH YOUR IMPROVED TALENCE...**



**INSTRUMENT SOCIETY OF INDIA VJEC STUDENT BRANCH**

**For more details contact: Mr. Justil Jose, S6 AeID**

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## FACTS ABOUT INDIA

- ⇒ The name 'India' is derived from the River Indus, the valleys around which were the home of the early settlers. The Persian invaders converted it into Hindu. The name 'Hindustan' combines Sindhu and Hindu and thus refers to the land of the Hindus.
- ⇒ The number system was invented by India. Aryabhata was the scientist who invented the digit zero.
- ⇒ Chess was invented in India.
- ⇒ Algebra, Trigonometry and Calculus are studies which originated in India.
- ⇒ The 'place value system' and the 'decimal system' were developed in 100 BC in India.
- ⇒ The World's First Granite Temple is the Brihadeswara temple at Tanjavur in Tamil Nadu.
- ⇒ India is the Largest democracy in the world .
- ⇒ The game of snakes & ladders was created by the 13th century poet saint Gyandev. It was originally called 'Mokshapat.'
- ⇒ The world's highest cricket ground is in Chail, Himachal Pradesh. Built in 1893 after leveling a hilltop, this cricket pitch is 2444 meters above sea level.
- ⇒ India has the most post offices in the world !
- ⇒ The largest employer in the world is the Indian railway system, employing over a million people !
- ⇒ The World's first university was established in Takshila in 700 BC. More than 10,500 students from all over the world studied more than 60 subjects.
- ⇒ Ayurveda is the earliest school of medicine known to mankind.
- ⇒ The art of Navigation & Navigating was born in the river Sindh 6000 over years ago. The very word 'Navigation' is derived from the Sanskrit word NAVGATI. The word navy is also derived from the Sanskrit word 'Nou'.
- ⇒ Bhaskaracharya rightly calculated the time taken by the earth to orbit the sun hundreds of years before the astronomer Smart. His calculations was - Time taken by earth to orbit the sun: ( 5th century ) 365.258756484 days.

- ⇒ The value of "pi" was first calculated by the Indian Mathematician Budhayana, and he explained the concept of what is known as the Pythagorean Theorem.
- ⇒ Algebra, trigonometry and calculus also originated from India. Quadratic equations were used by Sridharacharya in the 11th century.
- ⇒ Until 1896, India was the only source for diamonds to the world.
- ⇒ The Baily Bridge is the highest bridge in the world. It is located in the Ladakh valley between the Dras and Suru rivers in the Himalayan mountains. It was built by the Indian Army in August 1982.
- ⇒ Sushruta is regarded as the father of surgery. Over 2600 years ago Sushruta & his team conducted complicated surgeries like cataract, artificial limbs, cesareans, fractures, urinary stones and also plastic surgery and brain surgeries.
- ⇒ Usage of anesthesia was well known in ancient India medicine. Detailed knowledge of anatomy, embryology, digestion, metabolism, physiology, etiol-



Department of AEI is Planning to conduct a Poster Competition on the Latest Technologies related to electronics, control & instrumentation. Those who are interested to submit the digital copies/ for more details of the poster please contact Ms. Amrutha T P on or before March 24.

— Dept. of AEI

### TOPIC FOR DISCUSSION

#### Is cultural Events needed in a technical Institution???

All the students may conduct Group Discussion about this topic.

## Team Metron

Department Of Applied Electronics & Instrumentation  
Gallery View Block,  
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A CTIVATE YOUR THOUGHTS...  
E XPLORE YOUR IDEAS... &  
I NNOVATE NEW TECHNOLOGIES...

## Go Green..! What is Green Engineering and for what...?

We all know that, we are living in a fast growing world and the technology is also changing day by day. Because of the population growth and industrialization, we have to depend more on modern technology to satisfy the increasing needs. The main energy sources which we depend on for the last few decades were our non-renewable energy sources. Being they are non-renewable, the excessive use will lead to an energy scarcity condition.

The industries or technologies which uses the non-renewable energy sources, pollutes the environment with poisonous gases and affects the human health dangerously. Thus to avoid all these problems and to save our nature or environment from pollution, we have to find out technologies which uses energy sources other than non-renewable energy sources, and is one of the main challenges faced by our scientists or engineers. But hopefully, the changing environmental conditions give the solution, with a variety of renewable energy sources and this opens wide opportunities for our scientists.

The continuous

global climate changes, increasing energy price and the actions from the Government lead the small or big companies, around the world, to think different and they were compelled to find out some plans for sustainability. In technical view, sustainability has been defined as, "meeting the needs of the current generation without impacting the needs of future generations to meet their own needs". This leads the engineers and the scientists to face the largest challenges made by the global climate changes and the government policies by creating some newer techniques for production without disturbing the needs of future. The term Green Engineering opens a great opportunity to those enthusiasts.

Green Engineering means designing a process or technology which is feasible and economical, while reducing the environmental pollution and risks to human health. In other words, Green engineering is the use of measurement and control techniques to design, develop, and improve products, technologies, and processes that result in environmental

and economic benefits.

While Green is the prior focus, there are no fundamental differences between performing the green engineering and any other type of engineering innovations. As we do in all cases we have to find out the variables concerned first. Then starts the fixing or designing of processes to achieve the goal desired.

While going green, we have to look for good graphical designing platform, high resolution measurements and some advanced control systems. Because of the great growth in semiconductor technology and the availability and improvements in the tools of high speed graphical designing platforms made Green engineering more profitable.

The main applications of green engineering include Renewable power generation; Power quality, Environmental monitoring, Machine and process optimization and

## Failure is the condiment that gives success its flavor...

As the Phoenix raised from its ashes... **METRON 2** is on its way to eminence. On the 5th anniversary of our department, we usher our Metron 2 as a souvenir to Vimal Jyothi...

"Metron", sprouted from the vibrant brainiac of our Dept. on August 2010. As a first venture in VJEC the news letter didn't get the permission to circulate because of some financial matters. The aim of this news letter is to percolate the news from the department to the student community. The second volume of "Metron" concentrates more on the technetronic updates of the last 4 months.

Next Issue: July 2011

Development and test of green products and technologies.

Science and technology will play a fundamental and vital role in advancing global sustainability by engaging in next generation design of fundamental products, processes, and systems necessary for maintaining and enhancing quality of life while protecting the planet. If the challenges of sustainability are seems to be a great problem for the industrialized countries as well as the developing nations, a systematic incorporation of new technologies like Green Engineering in the next generation of products and processes, is the answer.

So as a conclusion, all the future Engineers or scientists please note this line, 'It is better to prevent waste than to treat or clean up waste after it is formed'. This is one of the basic and is one of the main principles of **Green engineering...!**

- Mr. Sreeraj P. V, Lr

## William Shakesphere

## Three sentences for getting success:

- A. Know more than others.
- B. Work more than others.
- C. Expect less than others.