



DRONACHARYA COLLEGE OF ENGINEERING

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In This Issue

- Editor's Desk
- HOD's Desk
- Live Projects Undertaken By Students
- Placement Achievements
- Labs And Hardware
- Honours And Awards
- Student's Viewpoint

ISSUE OF ELECTRONICS AND COMMUNICATION DEPARTMENT



Wishing all
Dronacharyians
a Happy Diwali !!



From Editor's Desk :

"As silent as a fish in the ocean, endowed with the stir of the earth and blessed with the music of the birds in the sky - Man is the crown of existence."

Dr. Rabinder Nath Tagore



Yea! undeniably man is the crown of existence. And that is not all, since there are human beings who are gifted with tremendous talent.

Such specially crownable persons earn luminous laurels. It makes us think of the talented freshers who were crowned at a memorable Freshers' Welcome Function nomenclatured Initiation or '**Deeksha Samaroh**' held on **12th September, 2008**. The Function was held in the exemplary form of tilak and offering of roses by seniors to the freshers followed by a colourful cultural programme concluding with a community dinner for all. Excellent University Results of various Departments, with myriad Merits, enhanced the academic glory of the College lending greater sheen to the Honors Board of DCE Blood Donation with a smile by a large number of our vibrant students at an instant notice by the prestigious Red Cross Society affirms their intensely human attitude. DCE has once again proved that it is a modern '**gurukula**' where mental development co-incides with cultural and physical growth alongside spiritual upliftment. 29th of September 2008 will go down in the annals of the College as special discourses replete with ethical spirit were delivered by distinguished Indian orators and foreign delegates in the College Auditorium with a view to motivate students. Meaningful motivational lectures delivered during this month by **commendable counselor Mr. Anil Sethi** literally mesmerised the students. To cap all a major facelifting renovation has given a brand new look to the college campus. So much happened in the month of September marking this month as a significant step on the road of multi-dimensional progress. Quite a splendid step at the outset of the second decade of DCE's sky-soaring flight to Himalyan heights. Isn't it? Congrats Management for the enviable unprecedented and glorious growth!



Editor, (Dr. R. C. Narula)

From HOD's Desk :

The Department of Electronics & Comm. Engineering is imparting the theory and practical knowledge to the students. An effort is being made to groom these students not only to become successful Electronics & Comm. Engineers but also very good citizens of the society. The Department has well equipped laboratories with the latest of kits and equipment available so as to give practical hands on experience to our students. The equipments available in the labs are enhanced /upgraded as an on going process so as to keep pace with the latest developments in the field of Electronics & Comm. Engineering. The Department makes efforts to ensure that knowledge of the faculty is also updated regularly by arranging National Seminars, short courses, Faculty Development Programmes in the college as well as by sending them to attend seminars/conferences at outside institutions.



It is because we believe that a well qualified and learned faculty is able to disseminate the knowledge to the students in a better way. Lectures on Personality Development, ethics, confidence - building and conduct of group discussions are conducted by senior faculty as well as distinguish Personal prestigious companies which help our students to develop themselves into good, confident professionals so as to prove to be an asset to any organization they choose to work with. Our department has shown very good University results declared during last month. Five students from our department have been placed in University Merit. My special congratulations and good wishes to **Ms. Priyanka Katriya VIII semester and Ms. Kanika Vashist VI semester who secured 2nd and 4th positions in University Merit** respectively this year and maintained the high temperament of the department.

Head of the Department, (Prof. Satya Prakash)

Live Projects Undertaken By Students :

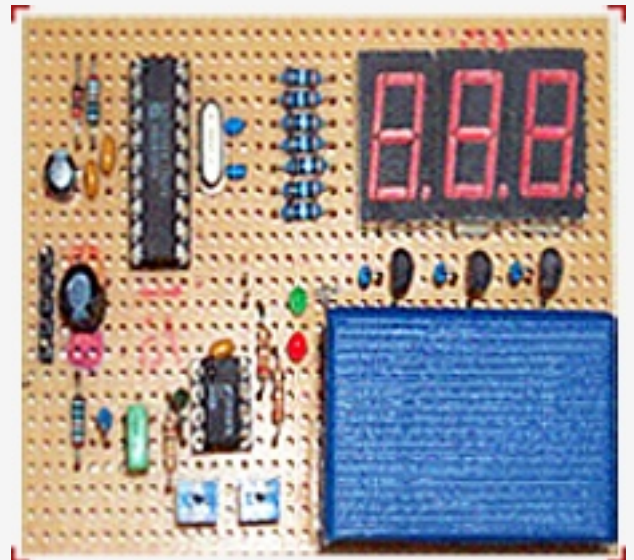
Our project named **"MOBILE IRRIGATION"** was conferred first prize for Best Project category in the Project Competition organized by Faridabad Industries Association (FIA) held at Faridabad. There were in all six projects presented by our college from different departments and out of which four of them got prizes.

Well prepared Synopsis has been received for projects out of which following projects are considered to be innovative:

HEART BEAT MONITOR

The project Heart Beat Monitor is very useful for medical field. This can be used to monitor the heartbeats in digital display format. The heart beat information available in digital format is easy to understand. In our heartbeat monitor project we have used two electrodes to sense the blood pumping done by heart which are proportional to heartbeats. The sensing electrode sense the blood pumping cycles and send the signal to current amplifier. We are using three stages of amplifiers to amplify weak signals sensed by sensing electrodes. The amplified signals are processes to extract the cycles of blood through our body. The average value of sensed cycles of blood pumps are displayed at per minute interval. We have used microcontroller AT89S51 to process the sensed signal from sensor and displayed on 16x2 LCD display.

Heart Beat Circuit: The most significant component that is being used in this project is the microcontroller from the 8051 family of microcontrollers.



Positive Outcomes and Future Prospects of the Project:

- It is meant to be a user friendly device and can be used by anyone, anytime, anywhere as not much of technical or medical knowledge is needed to implement this device into practice.
- When not being used as a separate device, the heartbeat monitor can be devised as a mobile phone program which would make it rather compatible and popular as people would prefer to buy not an ordinary mobile phone but would rather go for buying the mobile phones which would have the heartbeat monitor as it can help the customers to not only enjoy the uses of a mobile phone like Bluetooth technology or mp3 music but can also help them to keep a check on their health.
- It is seen how a doctor or a medical personnel would study the heartbeat, which is done by counting the pulse of the person while the time is taken into account too, but then, like everything in this world even this particular too can come under the scrutiny of human error, thus to avoid any mishaps or other various possible problems. This whole practice is practically being encapsulated into a device or a program which can be used as a mobile phone program or even be displayed on LCD.
- As a future prospect, this device can be connected with a television screen or a computer screen which would thus help the user to get a better view and analysis of the output of the device.

REMOTE CONTROL CAR (CONTROLLED VIA BLUETOOTH WIRELESS TECHNOLOGY)

Today's RC toys are controlled by a single dedicated (and often proprietary) controller. We endeavoured to develop a remote control car that would be controlled via Bluetooth wireless technology. Since Bluetooth is a standardized and relatively reliable wireless protocol, we hoped to create a car controllable by any Bluetooth device. Additionally, Bluetooth consumes low power and has a larger bandwidth than the standard 900MHz RF link, which drives most toys. This added benefit allows for sending of complex information from the car to the controlling devicesomething unseen in consumer grade RC cars.

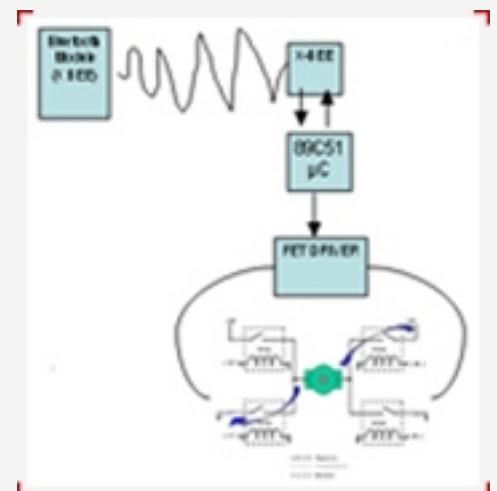
The main aim is to give command to a Bluetooth enabled car with the help of a computer. The computer is connected to a transmitting Bluetooth module via a RS-232 (9 Pin) connector.

Bluetooth: As one of the youngest member of the LAN family, wireless LANs were little used until recently. The main reasons for this were high prices and low data rates, as well as licensing requirements. However, increasing requirements for mobility, relocation and coverage of locations difficult to wire are making wireless LANs more popular everyday.

Wireless LANs can be designed in many different ways depending on their applications; one kind is a wireless ad-hoc network. An ad-hoc network is a peer-to-peer network set up temporarily to meet some immediate need. In contrast to the majority of radio systems in use today, it doesn't have any centralized server. Ad-hoc radio systems have been in use for some time, for example police, military and fire departments broadly use walky-talky systems. However, the Bluetooth system is the first commercial ad hoc radio system envisioned to be used on a large scale and widely available to the public.

Microcontroller: A microcontroller (also MCU or μC) is a computer-on-a-chip. It is a type of microprocessor emphasizing high integration, low power consumption, self-sufficiency and cost-effectiveness, in contrast to a general-purpose microprocessor (the kind used in a PC). In addition to the usual arithmetic and logic elements of a general-purpose microprocessor, peripheral devices, and input/output interfaces. At clock speeds of as little as a few MHz or even lower, microcontrollers often operate at a very low speed compared to modern day microprocessors, but this is adequate for typical applications. They consume relatively little power (milliwatts).

Microcontrollers are frequently used in automatically controlled products and devices, such as automobile engine control systems, remote controls, office machines, appliances, power tools, and toys. By reducing the size, cost, and power consumption compared to a design using a separate microprocessor, memory, and input/output devices, microcontrollers make it economical to electronically control many more.



Placement Achievements :

Some of the prominent and leading companies visited our college as well as called our students for placement to other locations during the Semester. **Seventeen students of our department were selected during campus placement in prestigious Companies as Infosys, L & T, I Flex and others.**

Labs And Hardware :

Laboratories are being constantly upgraded to improve and boost the quality of training and learning. Varieties of additional equipments like digital oscilloscope, base-band transmitter trainer, data communication trainer, QAM trainer are acquired for Data and Communication systems lab. This has made the labs more efficient and offers a great helping hand for the students who regularly involve themselves in model programs on microcontroller based systems and projects.

Honours And Awards :

The University Results of our Department result have been excellent especially, in the Final Year Result which nearly touched the mark of 100% (99.53%). The fourth and sixth Semester results being 89.14% and 87.34% respectively were encouraging.

The following students of our Department were felicitated by Hon'ble Chairman Sir and Chief Guest on stage and were given Prize Cheques for their extraordinary academic performances in previous semesters:

VIII Semester

Rank	Name	Percentage
1st	Priyanka Kataria	83.5%
2nd	Anuj Chugh	79%
3rd	Neeraj Sharma	78.7%

VI Semester

Rank	Name	Percentage
1st	Kanika Vashist	85.1%
2nd	Rahul Gupta	84%
3rd	Garima Khatri	83.7%

IV Semester

Rank	Name	Percentage
1st	Ritika Lamba	83%
2nd	Koduri Smitha	83% Appox.
3rd	Shivangi Luthra	82%

Our Department has also scored very well in distribution of grades, where more than 90% of students of VI and VIII Semester have got more than 60 % respectively. Out of those over 30% of students have scored Distinction (i.e. more than 75 %). Percentage wise distribution of grades for all three semesters is given below:

Semester	Branch	% of students passed in different grades		
		60 to 75%	>75%	>80%
VIII	ECE	104	24	04
VI	ECE	84	25	12
IV	ECE	51	16	08

Student's Viewpoint About The Department :



This is not a college, but our home. The bond we share with our faculty and staff members is unparalleled to any other bond we share with anybody else. Our college stay till now has been pure bliss and we strive to spread the lessons of achievement and success to the world outside.

Priyam Kumar
(Roll No. 8168)



The Dronacharya College of Engineering, functioning defiantly, determinedly and dynamically, has accepted education as an '**Express Way**' to achieve its long cherished glorious goals and tantalizing targets. The Department of Electronics and Communications is one of the four departments of this highly esteemed institution. The department is led by a highly professional and an effective Head of the Department and is governed and functioned by the state-of-art facilities and a well equipped teaching and extremely professional and experienced teaching staff. The department and its students are an active part of the various activities taking place in the college campus and it is believed to give the students a chance to nurture their talent and ability which would help them to stand in the society and the competitive world in the future and this is supported by a warm and kind-hearted faculty members who are always ready to help the students.

Anmol
(Roll No. 8107)



Tradition blended with modernity, discipline blended with knowledge and perfect guidance: this is what defines Dronacharya College of Engineering. Our prestigious modern Gurukul provides a perfect platform for future engineers to develop their skill set with the help of highly trained and experienced faculty members. The unique approach of our Gurukul helps students to develop and lead to the right path heading towards progress and success.

Lokesh
(Roll No. 8140)



Dronacharya College of Engineering is a prestigious institution which has stood the test of time and delivered a large number of bright and inventive students. The College has not only fulfilled students' needs but also encouraged us to move forward on the path to success. The trained and experienced faculty members of the college not only provided solutions but also accepted creative inputs from students.

Kartik
(Roll No. 8134)