



Newsletter April 2006

# DRONACHARYA COLLEGE OF ENGINEERING

Special Edition by Department of Applied Sciences and Humanities

## From Editor's Desk :

In the cyclic, steady and spiraling movement of the websiting of Department-wise issues of Dronacharya News Letter comes the turn of Department of Applied Sciences and Humanities that is of primary importance, if other Departments are of paramount importance.

Applied Sciences and Humanities operate in absolute synchronization at the First year level of the Four-year B.E course. The obvious objective is to provide a firm foundation to the aspirants of varied streams from Second year onwards. The Faculty at the Department is equipped with prestigious M.Tech, M.B.A, M.B.E, M.Phil, PhD and other degrees and adequate experience and make persistent endeavors to see that students of the First year go to the higher classes with all round development of their personality. In accordance with the quintessential of this Branch the Faculty members of this Department have made adequate endeavors to make a concise but uniquely useful contribution to the current issue. The blend of Applied Sciences and Humanities enables the minds to feel and the hearts to think. Amazing! Isn't it?

*Editor*  
(Dr.R.C. Narula)

## From HOD's Desk :

The Department of Applied Sciences and Humanities nurtures careers of excellence and leadership in technology for academically talented students. This Department is as well dedicated to encouraging understanding of science and its relevance in the technological sphere. We have a vision to instil Application of Science in the technology development and innovation into the hearts of the students for an enhanced quality of studies. This vision is achieved by securing a focused, yet significant contribution to well planned teaching methodologies using the latest available tools. Our vision includes carving of a niche for enhanced technology and know-how exportation of Application of Science in the field of Engineering.

As the Global situation warrants communication skills in English, this Department concentrates on providing best methods to make young students to develop keen interest in understanding the importance of English to become the leaders in their careers. The very interesting outcome is the participation of large number of First year students in the recently concluded **TECHNOFEST OPUS-2006** conducted by our College. It is satisfying that students have got the basic ideas about Science and its application in the Engineering field. This is amply shown in their participation, their courage in communicating their best understanding in various programmes including Paper presentation and Poster presentation.

*Head of the Department*  
( Dr. S.Srinivasan)

## Live Projects Undertaken by Students :

### **Environmental Studies :**

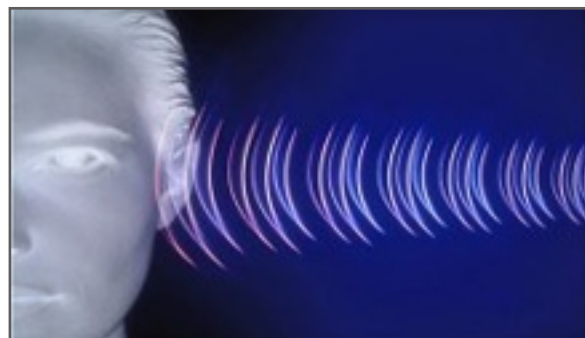
General Environmental Studies is a common subject for the First year students of all the branches. The main aim of the subject is to generate awareness about the environment. It also gives information about the various environmental issues, their impacts and control measures.

As a part of the curriculum for the subject, projects have to be made by the students. Different topics on environmental problems like air pollution, water pollution, noise pollution, their effects and control, global warming, acid rain etc were given to the students for preparing projects. This actually made them aware of the key issues concerning the environment and also trained the students in preparing formal projects. Some of the students made exceptionally impressive projects. For example there are some projects :

#### Noise Pollution

The noise pollution control techniques proposed by a student were :

- Design and Fabrication of silencing device and their use in aircraft engines, trucks, cars, industrial machines and home appliances.
- Making a change in the operation of machine, vibration control, sound proof cabins and sound absorbing materials.
- Orientation of rooms to reduce noise exposure, larger than normal roof overhangs and heavily insulated roofs with acoustically absorbent caves lining and soft finishes to the ground adjacent to windows to reduce sound reflection.



#### Disaster Management

Similarly action plan to be taken for disaster management (flood) proposed by a student includes three stages :

- Precautionary stage
- Action stage
- Evacuation stage

These steps are laid for relief, rehabilitation and health of flood-affected people. Also, he has mentioned about model studies with the use of computers using data from field regarding flood for the prediction of floods.

Innovative ideas have been given by the students which has helped in channelising their knowledge and creativity for the betterment of human society.

## Applied Sciences And Humanities Labs :



## Technology Update :

### Operations Research - Its Importance And Relevance In The Engineering Technology

Operations Research is a mathematical science concerned with optimal decision making and the modeling of deterministic and probabilistic systems. Its focus and field of application are interdisciplinary, embracing a range of quantitative techniques with components in Engineering, Economics, Computer Science, and Systems Theory. Industrial Engineering is concerned with the design, improvement, and installation of integrated systems of personnel, material, and equipment.

In practice, Operations Research and industrial engineering addresses both the performance objectives and the resource constraints of an organization; it works toward establishing the policies that are most beneficial to the organization as a whole. Problems may be as specific as improving the efficiency of a production line or as broad as developing a long-range corporate strategy to address a combination of financial, marketing, and technological concerns.

In industries, minimum cost and maximum profit are the two significant factors that play the vital role for its success. Operation Research finds applications in many major operations in any industry including production, marketing and so on. In any manufacturing industry, the two key factors men and machines decide the production. A simple assignment in Operation Research solves this problem. Depending upon the skill of men that machine is allotted to produce more in less time. The other significant role of Operation Research in industry is the transportation problem. It guides to minimize the cost while transporting the finished products to the warehouses.

As industrial and socio-economic systems become more complex, analysis in depth becomes more necessary. Operations research provides the basis for solving practical problems characterized by complicated and uncertain environments, whether in government, industry, or the military. The function of the Operations Research analyst is to guide decision making by identifying underlying cause-and-effect relationships, developing and proposing courses of action, establishing criteria by which to judge their effectiveness, and evaluating their probable effects.

Operations Research analysts often have one area of specialization, such as working in the transportation or the financial services industry, but the issues and industries in which Operations Research can be used are many. In general, Operations Research analysts may be involved in top-level strategizing, planning, forecasting, allocating resources, measuring performance, scheduling, designing production facilities and systems, managing the supply chain, pricing, coordinating transportation and distribution, or analyzing large databases.

Regardless of the type or structure of the client organization, Operations Research entails following a standard set of procedures and conducting analysis to help managers improve performance. Managers begin the process by describing the symptoms of a problem to the analyst, who then formally defines the problem.

## Student's Viewpoint About The Department :

The Department of Applied Sciences and Humanities has opened new *vistas* for the First year students of the college. It has provided us with a sea of practical and technical knowledge with lots of understanding. When we came to the college first time, our knowledge was limited and at that time we surely needed a helping hand to help us and a guide to lead us to fix our targets and later, slowly, step by step to get closer to them. At that crucial time, the Department of Applied Sciences and Humanities held our hands and extended their guidance to us which were much more than we expected. All the time they were supportive and cooperative, guiding us through the darkness of confusion and difficulties which all students face when they come out of school and enter a college. The members of the Department of Applied Sciences and Humanities are not less than the candles that burn themselves to give us sufficient light to distinguish between good and bad. They are the first ones to realize our talents and explore them at the same time. They helped us in creating a necessary balance between academic and co-curricular activities, without which we are a body without soul. They bridge the gap between what we are and what we want to be.

Our H.O.D, Faculty and the non-teaching staff have been very helpful throughout and have made us the members of this new charming world, which we can call as our own.

By : **Pulkit Garg**  
Roll No : **8170**

## Merits And Achievements :

The students get admission in our college through CEET and AIEEE entrance examinations. After this they go through a tough session of regular classes and tests etc. and prove their excellence at the end. The students are required to take two Sessional Examinations during each Semester and Faculties take several tests according to the University Examination pattern to polish their academic skills. It builds up the confidence in the students and helps them manage their time properly. As a result, our students achieve excellent positions in the University.

*In December 2004 and May 2005, Priyanka Kataria of ECE bagged the SECOND rank in the University.*

### Branch wise Toppers of December 2005 Session

| NAME          | ROLL NO. | BRANCH |
|---------------|----------|--------|
| Anita Kataria | 8007     | CSE    |
| Akash Gautam  | 8212     | ME     |
| Pulkit Garg   | 8170     | ECE    |
| Gulshan       | 8290     | IT     |

## Faculty Development Programme :

The Faculty is considered to be one of the greatest assets of any teaching institute. Believing in this dictum, the Department of Applied Sciences and Humanities is dedicated to support the personal and professional growth of all Faculties. To give these endeavors a practical shape, the Department conducts various Faculty Development Programs from time to time, which vitalizes the Faculty, strengthen their knowledge, improves the quality of instruction and helps the College better serve the society. The FDP is designed to train and develop the Faculty, equip them with skills and knowledge so that they can act as the resource persons for guiding and motivating the youngsters towards the entrepreneurial career. This program is aimed at providing inputs on process and practice of communication, inter-personal skills, creativity, problem-solving etc.

