



DRONACHARYA COLLEGE OF ENGINEERING

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ISSUE OF BIO-MEDICAL ENGINEERING DEPARTMENT

From Editor's Desk :

"If you wish to bear fruits, you should go to your roots."


Dronacharya College of Engineering represents a collective being, and in it and by it the individual lives, and he owes to it all that he can give it. This is a place where you can attain perfection by devotion to and performance of duty. We always foster our students with a sense of accountability, integrity, sincerity and dignity.



Our college is well-known as a place where creativity, innovation, sustainability and technology converge to produce extraordinary results every year. This powerful clustering supply engineers, technocrats and entrepreneurs that are global leaders in their industries.

As a regional hub of cutting-edge creativity and innovation, Dronacharya College of Engineering flourishes the technical knowledge around the globe. We are playing even a greater role in building a technological nexus here in Gurgaon that is impacting the rest of the world.

Our endeavor is to make this Newsletter a source of information and a means of deepening, widening and heightening Dronacharya College of Engineering.

 Editor, (Dr. Sunil K. Mishra)

From HOD's Desk :

"In nature, hybrid species are usually sterile, but in science the reverse is often true. Hybrid subjects are often astonishingly fertile, whereas if a scientific discipline remains too pure it usually wilts."

It is my proud privilege to present the first Newsletter of Biomedical Engineering Department on the College Website.



Biomedical Engineering has recently emerged as its own discipline compared to many other Engineering fields. Biomedical Engineering course educates a student how to get technical expertise in Biology and Medicine simultaneously and contribute effectively in the development and improvement of health, society and country as a whole. Our combined efforts have been to nourish and nurture the department so that it blooms and takes new upper heights. Dronacharya College of Engineering provides well- equipped laboratories with the latest kits and equipments available so as to give practical experience to the students. Additional laboratory has been established for biomechanics to improve the technical skills of the students about prosthesis and orthosis of human body. The department has also taken a number of initiatives to impart the best of knowledge in this field and to improve their overall personality.



Special measures are taken to give exposure and training to the students in the reputed hospitals, special classes are incorporated in their course curriculum so that the department churns out not only successful Biomedical Engineers but also good citizens who contribute to the society. The department has well envisaged future plans to strive for 100 percent success and most prestigious positions in the M.D. University merit list as it has been doing in the past.

We further aim to emphasize on more Research and Development work to increase interaction with the Branch related Industries, Medical Institutes, etc. For this purpose the department plans to organize industrial as well as hospital tours for students. Guest lectures from experts in biomedical fields are also arranged for the benefit of the students. The popularity of Biomedical Engineering is bound to rise both as a course and effect of improvements in medical technology.



Head of the Department, (Prof. (Dr.) D. P. Singh)

Faculty :

Department of Biomedical Engineering has a team of highly qualified and experienced faculty members. They are enthusiastic and dedicated for imparting high quality technical education among the students to achieve academic excellence. Besides this, our faculty members have inclination towards research activities. One of our faculty members **(Dr. Ruchi Rathi) has published research paper in International Journal in May 2009. She has also contributed a research paper for Dronacharya Research Journal of our College.**

Recently, one new faculty **Ms. Tanu Rawal has joined our Department as Asst. Professor. She is an M. Tech in Bio-Engineering from IIT Kanpur.**

Laboratories :

This year Department of Biomedical Engineering has set up several laboratories fully equipped with modern and sophisticated instruments to provide our students sound technical skills to ensure their success.

Human Anatomy and Physiology lab gives the understanding of various systems working in the human body. Various hematological tests are also performed in the labs. Thus, this lab gives the initial flavour of the biomedical field to the students. The entire diagnostic tests related to blood and urine analyses are performed in biochemistry labs which enable our students to understand the biochemical alteration and physiological changes related to various diseases. After experimenting these tests the students apply their knowledge to understand how various biomedical equipments are used to measure the body activities. This imparted knowledge is further helpful for other subjects also.

Biomedical Equipment Lab is established to give technical hand of expertise on various biomedical equipments like Pacemaker, ECG Telemetry, EMG, EEG etc. This would help the students to understand the operation of various equipments. Biomechanics labs will help the students to understand mechanics involved in the movement of body parts mainly muscles, bones and their joints. This knowledge will help the students to understand the working of various prosthesis & orthosis. All these labs would broaden the technical acumen of students which will increase their credibility in the industry.

Health Club :

"HEALTHY MIND RESIDES IN HEALTHY BODY"

This year our College has started various clubs to enhance extra-curricular activities of the students. Department of Biomedical Engineering is managing HEALTH CLUB of the College. Present day life -style leads to many problems related to physical and mental health. To handle routine work/stress one needs to be fit both physically and mentally. Health Club is a solution to all these problems as it helps the individuals/professionals/students in shedding off their physical and mental strain.

Health Club not only makes the people work out on machines but also trains them to use yoga and meditation. The mission of this club is to actively promote campus and community-wide leadership on healthy and safe lifestyle decisions concerning alcohol abuse, tobacco use, illegal drug use, unhealthy sexual practices and other high-risk behaviours among students & personnel. The club believes that students can play an effective role in encouraging their peers in developing good habits and attitudes toward high-risk health and safety issues.



Objectives of Health Club:

- To promote exchange of ideas and social exchange with students from other University clubs.
- To organise social functions, discussion groups and talks by guest speakers.
- To provide practical sessions which allow students to learn valuable health related skills.
- To act as a unifying force amongst students with common interests and goals.
- To promote health and cultural issues.
- To develop a multi disciplinary approach to rural health inviting local villagers for attending health lectures delivered by Professionals.

Activities:

- General awareness for fitness
- Aerobic
- Yogic lectures
- Exercise : Yoga & Meditation
- Diet counseling

In line with the motto specified by **Health Club**, a seminar was organized on **3rd Nov. 2009**. The theme of the seminar was **Yoga & Meditation**. **Mr. Trilok Sharma, Chairman of Bharat Swabhimaan Trust and Dr. Sunil Arya, member of Patangali Yoga Samithi** addressed the students.

A five-day Yoga Camp was also organized in the hostel premises from 9th to 13th November, 2009. It was a commendable confluence of students, staff and faculty members of Dronacharya College of Engineering, Gurgaon. Its objective was to enhance awareness and practical significance of Yoga. The camp also aimed at improving health, concentration, memory power, self-confidence, personality and life style as a whole.

Mr. Trilok Sharma, Dr. Sunil Arya with a well-skilled team took initiatives and made enviable endeavours to make this camp a thumping success. They also distributed books on Yoga among the students. These two leading Yoga practitioners demonstrated different Pranayams, Asans, Mudras and also shared their views on leading a stress-free life. They taught us the world is all delusion; meditate and leave it all behind.

Medical Cell :

Department of Biomedical Engineering has the responsibility to set up a **Medical Cell** to take care of day- to- day ailments of students, faculty and other staff members in the college. The main objective of the Medical Cell is to provide emergency medical services for asthmatic, diabetic, heart ailments, reaction of medicines, food-poisoning or eatables, blood pressure etc in addition to day- to -day common ailments. The College has a tie- up with some hospitals in **Farukhnagar and Gurgaon**. The **Medical Cell** is well equipped with instruments like nebulizers, oxygen cylinders, infrared lamps, stretchers, inhalers, BP instruments and Ambo bags etc for emergency. It also provides physiotherapy to the patients if required.

Achievers :

Six students of our department got position in the M.D. University merit list in December 2008 examination. Following this tradition, we produced **three merit holders in May 2009**.

A list of University Merit Holders in December 2008, III Semester

Student Name	Position	Marks Obtained
■ Shobha Saini	3rd	908/1150
■ Raghuwar Dayal	7th	888/1150
■ Shivika Awal	9th	882/1150
■ Maneesh	11th	870/1150
■ Kanika Malhotra	15th	858/1150
■ Madhurima Gupta	15th	858/1150

A list of University Merit Holders in May 2009, IV Semester

Student Name	Position	Marks Obtained
Madhurima Gupta	11th	905/1150
Raghuwar Dayal	12th	896/1150
Shivika Awal	14th	892/1150

Co-Curricular Activities :

Our students actively participate in cultural activities also. **III semester student Pooja Deswal** was involved in stage-handling, anchoring etc. in Fresher Function 2009 and **V semester students Shivika Awal and Harish Bhardwaj** were co-ordinators of the program.

Our Department ensures that the students get practical experience and first-hand feel of theory taught in their course. Students are given exposure to short- term training in reputed hospitals and Medical Colleges like AIIMS. Our students have also participated in National Workshop on Biomedical Engineering held at **Sir Chhotu Ram Deen Bandhu College, Sonapat**. Our students **Ms. Shobha Saini and Mr. Rahul Tiwari** got 1st prize in the quiz organized at workshop. **Ms. Shivika Awal, Mr. Maneesh and Mr. Rahul Tiwari** have also attended a Seminar conducted by **Entrepreneurship Development** Centre of the College.

Student's Viewpoint About The Department :**The beautiful thing about learning is that no one can take it away from you.**

Dronacharya, the Guru with par excellent teaching skills under whose guidance great warriors like Arjun exhibited marvelous skills of technical use of weapons & fought against Kauravas as a one man army. So is our DCE encouraging the students to exceed beyond their limits along with discipline which is one of the key tools of Success. As per our Biomedical branch is concerned, the alumni with their collaborative teaching skills make the lecture hall atmosphere much friendly signifying a single big-small family. It is the integration of medicine, instruments, biotechnology & pharmaceuticals etc. Hence, it summarizes the course of scientific development & research around the world as "borderless".

Aditya Sharma

(Roll No. 11407)



A Biomedical Engineering course educates a student on how to gain technical expertise in biology and Medicine simultaneously and contribute effectively in the development and improvement of health care solutions. This unique field encompasses bio instrumentation, biomaterials, bio-mechanics, medical imaging, genetic engineering, orthopedic surgery, cellular and tissue engineering. Bio-medical Engineering strives towards attaining perfection in the world of healthcare and medicine. This course proves to be very handy for the career development of the students and the job prospects for this course are really bright.

Pooja Deswal

(Roll No. 11414)



I am truly thankful to the College administration for providing me this great opportunity. Gurukul is the exact word for our prestigious College which is on the way of getting global success in Academic field. **Our college has become beginner's guide for all other institutions. Highly educated and painstaking faculties** treat us as their own children & devote their valuable time to impart not only the technical knowledge but also the much needed social values to us.

Akriti

(Roll No. 11402)