



## DEPARTMENT OF COMPUTER SCIENCE ENGINEERING

Department of Computer Science and Engineering at Chitkara University plays an important role in the educational system of the institute. The department is an inseparable part of a vibrant and sparkling university which guides and gives the faculty members the whole hearted support to nurture engineering students through their academic journey.

### Courses offered:

1. B.E. (CSE)
2. M.E. (CSE)
3. Ph D

### Vision

To build a rich intellectual potential embedded with inter-disciplinary knowledge, human values and professional ethics among the youth, aspirant of becoming engineers and technologists, so that they contribute to the society and create a niche for a successful career.

### Mission

Our endeavor is to play a major role in computer science and information technology by promoting innovative work in computer engineering, human-computer interaction, expert systems and electronic commerce. We intend to impart academic training to our undergraduate and postgraduate students enabling them to position themselves as problem solvers both for commerce and non-commerce sectors.

### Objectives

- To impart quality *instructions* to the students.
- To conduct leading-edge *research* in computer science and engineering.
- To provide *leadership and service* to industry and community.

### Some Highlights of the Department

1. Young, dynamic, energetic and well experienced faculty.
2. State of art facilities for carrying out research in computer science & engineering and allied fields.
3. Excellent facilities to faculty like desktop, laptop, laser printer, scanner, phone, Internet, etc.
4. Excellent infrastructure: building, space, class-rooms, seating arrangements, etc.
5. Adequate teaching aids like white boards, LCD projectors, etc.
6. Excellent results.
7. Students highly sought by industry and end up with lucrative jobs.
8. Excellent facilities for imparting training/courses to engineering & other faculty, students, community, etc.

9. Involvement of faculty members in institutional development work (automation, video conferencing, networking, etc.).
10. Transparency in academic and administrative processes.
11. Excellent teaching learning environment.

### **Lab Details:**

The Department is well equipped with air conditioned labs with PCs and workstations hosting several software packages, and linked through a local area network. Internet services are available to all the students and faculty members. The high speed broadband internet connectivity provides fast internet access for multiple users. There following internet connections are available:

1. 1 Gbps Internet connectivity from BSNL
2. 20 Mbps Internet connectivity from Reliance as backup
3. 22 Mbps Internet connectivity from Tata teleservice

### **Software Labs**

The Department has a set up of 6 full-fledged software Labs including CCNA and CUDA labs, well equipped with PCs of latest configuration. Students get option for using Windows and Linux. The softwares like JDK, Visual Paradigm, MySQL, and Turbo CPP are installed in the labs according to the requirement.



### **nVIDIA Parallel Computing Lab**

nVIDIA Parallel Computing Lab is Industry sponsored Lab. nVIDIA has developed Compute Unified Device Architecture which is a parallel computing architecture. CUDA is the computing engine in nVIDIA graphics processing units (GPUs) that is accessible to software developers through variants of industry standard programming languages. Programmers use 'C for CUDA', compiled through a NVCC compiler, to code algorithms for execution on the GPU.



### **CCNA Lab**

In networking lab the students are trained for learning Cisco Certified Network Associate (CCNA) courses that provides the ability to install, configure, operate, and troubleshoot medium-size route and switched networks, including implementation and verification of connections to remote sites in a WAN.



### Achievements of Students:

- Team SOCH (**Avinash, Anirudh Duggal, Kush Kumar Dhawan and Sushain Sharma**) of students of CSE department made it to the top 7 teams of the country. They took part in Microsoft's Imagine Cup competition 2011. After researching for a couple of months, the device that would automate growing plants was finalized as their Imagine Cup Project. The device developed by the students was named "Prithvi's Hellion".



In round1, team SOCH was shortlisted amongst top 150 teams all over the world and were given a mini computer (Ebox) worth 650\$ by Microsoft. Team built the OS and applications for their device and submitted the video of the working prototype. The competition was between top 25 teams in India and they were shortlisted amongst the best 7 teams in India to participate in National Finals in Delhi and Gurgaon from 26th-28th April 2011.

- **Akshit Mahajan** has been invited to present his research paper "**Decision Support System for Disaster Management using Remote Sensing and GIS-A case study of Sikkim Earthquake, September 18, 2011**" in *Geomatrix'12*, an International Conference on Geospatial Technologies and Applications to be held from 26<sup>th</sup>-29<sup>th</sup> February, 2012 at Indian Institute of Technology, Bombay (**IIT-Bombay**).
- Research paper authored by **Akshit Mahajan**, entitled "**Automated Decision Support System to Identify and Apply Ground Water Recharge Solution**" has been selected for

publication in *India Geospatial Forum 2012* held from 7-9 February, 2012 at **EPI Centre, Gurgaon (India)**.

- **Priyanka Shekhri**, Second Year student (along with her team) won 2<sup>nd</sup> prize in Pratibimbh'12 in footloose competition in Chitkara University, Punjab campus and in Dance Competition organized by Mass Communication Department of Punjab University.
- **Nikita Kumar(centre)**, has participated and won a lot of prizes in various fashion shows and dance competitions. She is the title holder for Miss. Punjab, 2010, Miss. Chandigarh 2010 and Miss. North India Supermodel, 2011. Her other achievements are:



- Ist in PEC fest duet dance competition
  - Mobsters (fashion show) winner in IIT Delhi, 2011
  - 2<sup>nd</sup> prize at Pratibimbh in Footloose competition, 2011
  - 2<sup>nd</sup> prize at Pratibimbh in Fashion show, 2010
  - 2<sup>nd</sup> prize in duet dance at Algorythm, 2011
  - 2<sup>nd</sup> prize in duet dance, 2011 held at Rayat and Bahra college.
  - 2<sup>nd</sup> prize in group dance competition held at Punjab University (Soch), 2011.
- **Kirandeep Kaur Sidhu**, Final year Student from CSE branch has won Gold medal in State level TT championship held at Bhiwani and Participated in Nationals Held in Chennai in 2003 . Her other Achievements are as follows:
    - She won Silver Medal in Cluster Level TT Championship held at Gurgaon in 2003

- She won Silver medal in Cluster level TT championship held at Rohatak and Participated in Nationals Held in M.P. in 2001
- She also Won Silver Medal in State Level TT Tournament in 2001

### **Projects:**

#### **1. Implementation of CPU scheduling in DS**

Various CPU scheduling algorithms like FCFS, SJF, RR Scheduling are automated using C language and data structures.

#### **2. Blog on programs of C**

Various programs in C language, various games are made and then are included in a website so that the others can also learn and play the same.

#### **3. Computerized Entrance Exam Website**

An online quiz for various exams is created using HTML and DBMS.

#### **4. Dictionary in C using Files**

A dictionary for C language keywords is created using File handling concept in C.

#### **5. Banking System in C**

A banking system in C language is created to through which one can withdraw, deposit money and can view the details of the various transactions made by that user.