



**DCSA**



**DEPARTMENT OF COMPUTER SCIENCE & APPLICATIONS**

**DCSA**

An unbeatable combination of  
Patience, Persistence & Perspiration

**Department of Computer Science and Applications  
Panjab University, Chandigarh**

## The University

The origin of Panjab University dates back to the year 1882 at Lahore. However, after independence, it was relocated to Chandigarh. The university has maintained its position of eminence among the leading educational institutes of India. The glorious traditions of the university, established during the period of more than 125 years holds a dominant position in academics and research, each day setting new milestones in imparting education. Panjab University has a legacy of hard work and commitment with its highly competitive and committed faculty towards research and teaching. National Assessment and Accreditation Council (NAAC) has given five star status to Panjab University which is the maximum status any university can have.



## Infrastructure

1. Campus-Wide Network and Wi-Fi connectivity..
2. A fully Air-Conditioned Library, a modern well equipped Gymnasium, Swimming Pool, Tennis Court, Outdoor Tracks and Play Fields which provide ample opportunity for the overall development of students.
3. One of the six centers in the country for Super Computing Facilities to serve High Performance computing needs of the entire north-western region.
4. 550 acres of sprawling campus in Sector-14 and Sector-25
5. 55 teaching and research departments on the main campus.
6. Four Museums and a department of Indian Theatre with its own theatre lab.
7. A Botanical Garden and a garden of Medicinal Plants developed and maintained by Department of Botany.

## The Library

The A.C.Joshi Library was formally inaugurated in 1963 by Pt. Jawaharlal Nehru, the then Prime Minister of India. The five storeys library building is centrally air-conditioned and fully computerized. It houses approximately six and a half lakh publications that include books, journals, theses, reports, government documents, back files of newspapers and a prized collection of 1490 manuscripts. The library subscribes to about 600 current periodicals and has access to 775 online full text journals. It has a seating accommodation of more than 500 readers.

This library possesses the facilities of photocopiers, overhead projectors, e-mail, Internet, Multimedia, GISTNIC and CD-ROM databases. The specialized library of the Indian

Council of Social Science Research is too located in the Central Library. In addition, the library is linked to and supported by 50 Departmental libraries geared largely to meet the requirements of students. It also provides digital library facility for research scholars.

## Department of Computer Science & Applications

The Computer Culture at the Panjab University dates back to 1966. An independent department for Computer Science and Applications was set-up in 1983. The department aims at ingraining the spirit of ingenuity, innovativeness and technical competence in the students through rigorous competition and regular guidance. The department also caters to the need of users in the region and organizes training programmes for teaching and research communities.



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The Department is running Master of Computer Applications (MCA -3 year regular course) that was initiated in 1992-93. Two new courses of (i) Bachelors of Science (Honors School) in Computer Science (ii) Masters of Science (Honors School) in Computer Science have been introduced from 2001 and 2004 respectively. All students who have done B.Sc. (Honors Comp.Sc.), BCA or B.Tech are eligible for this course. All Admissions are held through an annual entrance test conducted by the Panjab University. The Ph.D. program has been started from year 2005.

The students at the Department have the unique opportunity of working in various development environments like MS-DOS, LINUX, MS Windows (9x/XP/NT/2000), Sun Solaris and HP-Unix. The students also have the opportunity to work on Internet development tools among other Visual and Non-Visual ones.

The department has also been identified as a Level-III National High Performance Computing Centre under the ICOSER project of TIFAC, Department of Science and Technology. The department is also providing Wi-Fi connectivity to the whole campus.

The department has its own library with over 2000 books for exclusive use of the students and the faculty. The library has separate magazine and journal sections. Various computer journals are available online through the University library.

## Regional Centres



### Muktsar

The Panjab University established its regional centre at Muktsar in 1998. This centre is presently running MCA course with the strength of 60 students, as an extension of its MCA course at Chandigarh. In its complex this centre has 38 rooms, an entirely air-conditioned library hall, computer laboratories, canteen and a common room. Infrastructure facilities that are being provided at this centre for MCA students, are extremely good as per the industry requirements.

### Hoshiarpur

To fulfill the growing need of talented and high quality computer professionals the Panjab University established its new regional centre named as Swami Sarvanand Giri. Campus, at Hoshiarpur. The centre is equipped with highly sophisticated lab facilities and state of the art infrastructure. The MCA and B-Tech courses have been introduced at this centre.

# MCA Course Curriculum

## **First Semester**

### **Theory**

- Mathematical Foundations of Computer Science
- Computer Programming & Problem Solving (Using C)
- Computer Organization & Assembly Language
- Fundamentals of Information Technology
- Unix and Shell Programming

### **Practical**

- Programming in C & Assembly language
- PC Software & Unix

## **Third Semester**

### **Theory**

- Information System Design and Implementation
- Software Engineering
- Visual Basic Programming
- Data Base Management System
- Data Communication & Networks

### **Practical**

- HTML & Java Script
- Visual Basic

## **Fifth Semester**

### **Theory**

- Artificial Intelligence (Using LISP)
- Computer Based Optimization Techniques
- Linux Administration
- Multimedia & Its Applications
- Seminar : Each student is required to give a

Seminar on selected topics

### **Practical**

- Artificial Intelligence & Multimedia
- Linux System Administration

## **Second Semester**

### **Theory**

- Data & File Structures (Using C)
- Computer Based Numerical & Statistical Methods
- Accounting & Financial Management
- Relational Data Base Management Systems
- Object Oriented Programming using C++

### **Practical**

- Data Structure using (C/C++)
- C++ Programming Languages

## **Fourth Semester**

### **Theory**

- Software Testing & Quality Assurance
- Interactive Computer Graphics
- Analysis & Design of Algorithm
- Operating Systems
- Web Application tools & e-commerce

### **Practical**

- Java & Computer Graphics (Using C/C++)
- RDBMS (SQL Server/Oracle)

## **Sixth Semester**

• The Project involves development of Applications/systems software in Industries as well as Commercial & Scientific environments. The Project period is 20-24 weeks.

## M.Sc. (Honors School) Computer Science

### **Subject covered at graduation level :**

C/C++, RDBMS, Data Structure, Numerical Methods, Networks, Visual Basic, Computer Organization.

## **First Year**

### **Theory**

- Operating System
- Artificial Intelligence
- Design & Analysis of Algorithms
- Software Engineering
- Computer Graphics
- Advanced Java Programming
- Visual C++ Programming

### **Practical**

- Design and Analysis of Algorithms
- Computer Graphics
- Advanced Java Programming
- Visual C++ Programming

## **Second Year**

### **Theory**

- Unix System Programming
- Parallel Programming
- E-Commerce & Web Technologies
- Optimization Techniques
- Seminar
- Project Work

### **Practical**

- Parallel Programming
- E-Commerce & Web Technologies

# OUR PAST RECRUITERS



## MCA/M.Sc. 2008 Campus Placements

Company	DCSA (PU, Campus, Chd.)	Regional Centre Muktsar
Wipro Technologies	9	8
HCL	11	3
Newgen	2	2
Infosys	1	2
Nagarro	3	-
Aricent	2	-
Satyam	2	-
CMS	2	-
L&T Info Tech	2	-
Hughes Systique	1	-
Infogain	1	-
Accenture	1	-
JK Technosoft	-	1
Mphasis	1	-
Total	38	16



Chairperson: Mrs.Anu Gupta  
Placement Coordinator: Dr.Indu Chhabra  
Consultant (Central Placement Cell): Dr. R.K. Singla

## **Department of Computer Science & Applications**

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