



Recruitment **Guide**

Department of Computer Science
University of Delhi

For Campus Placement **2016-2017**

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From the Vice-Chancellor's Desk



Prof. Yogesh Tyagi
Vice - Chancellor
University of Delhi

The Department of Computer Science, University of Delhi, runs two post graduate courses namely Master of Computer Applications (M.C.A.) & M.Sc. Computer Science and prepares the students for a bright future. Emphasis is laid on the theoretical concepts as well as on practical experience and industry interaction.

I am pleased that the Department of Computer Science has been successfully bringing out a placement brochure to facilitate campus recruitment of their students.

I am sure that many bright and enthusiastic students will continue to join these courses. My best wishes for this initiative at our university.

Best Wishes

Yogesh Tyagi

Message from the Head of Department



Dr. S.K. Muttoo
Head of the Department

The Department of Computer Science was set up in the year 1981 with three year Master of Computer Applications (M.C.A.) program as the first University in India to have three years Master's Program and a PhD program. Since then, the department has come long way with a research oriented MSc Computer Science program in the year 2004. The mandate is to build core competence among the students so that they can pick up and keep pace with fast changing technologies in the ever evolving IT sector.

M.C.A. is the flagship program of the department of Computer Science, University of Delhi, designed as a first level computer science program. The program inducts bright students through an entrance test and equips them with core computer science knowledge to prepare them for industry and academia. The blend of theory and practice, inherent in the curriculum and teaching methodology has produced a battery of trained software professionals, who have been contributing towards the growth and development of innumerable organizations. They have made their mark across the globe in both software development and research.

In view of the national need to participate in global computer science research, M.Sc. Computer Science was started in year 2004 as a second level computer science program. In this program advanced computer science courses and electives are taught to the students, giving them an option to join cutting edge computer science research. Regular assignments along with minor and major research projects, give these students a triple advantage of gaining sound theoretical concepts, sophisticated program development and research experience. We are proud of our alumni selected in prestigious PhD programs in and outside country.

Delhi University Computer Science Society of the department students is a platform for honing other valuable skills and nurturing hobbies. Students gain valuable experience in team work, leadership, organization and management while hosting annual technical festival SANKALAN. They are sensitive about environment and aware of their social responsibilities.

Ready with a proud batch of proficient M.C.A. and M.Sc. students, I cordially invite you to interact with them and offer them a window of opportunity. I am sure, they will make you proud.

Message from the Placement Advisor



**Prof. Vasudha
Bhatnagar
Placement Advisor**

Department of Computer Science, University of Delhi has the proud privilege of being one of the earliest university departments in the country to offer three years Master of Computer Applications (M.C.A.) programme and two years MSc Computer Science programs at master's level. The department also has a vibrant PhD program with currently more than 50 research scholars.

MCA program aims to develop core competence for developing high quality software and adapting nascent technologies. The M.C.A. students, as part of their curriculum undertake a project in the industry in their final semester. Projects are undertaken in diverse areas such as Database Systems, Computer Networks and Communication, Software Engineering, E-Business and Graphics. During the project, they are expected to apply their knowledge and experience gained during the course to develop IT applications. The success of our M.C.A students is well known in the industry. Three decades later, we are proud of our alumni holding top positions in many prominent IT/software companies all over the globe.

M.Sc. Computer Science programme is the flagship program of the department, aimed at inculcating innovative thinking. The focus of this program is to develop research skills, in addition to imparting relevant theoretical knowledge and practical skills in the global context. The students complete a Minor project in third semester and a Major project in the fourth semester. Project areas include Algorithms, Parallel Computing, Semantic Web, Computer security, Artificial Intelligence, Computer Networks, Data mining, Text mining, network analytics etc. A decade later, we have more than dozen alumni who have pursuing or completed doctoral studies from prestigious universities in India (DU, IISc, IITs, IIITs etc.), US, Belgium, Japan.

The Department is proud to have more than 1K alumni holding important positions in Information Technology industry and academic at national and international levels.

I am pleased to partner with you on the behalf of the department and hope that your visit to the department is productive and fruitful.

Welcome to DUCS - Placements 2016-17

Vasudha Bhatnagar

(Placement Advisor)

The Department

Department of Computer Science was established at the University of Delhi, in the year 1981, with the objective of imparting quality education in the field of Computer Science. With rapidly evolving technology and continuous need for innovation, the department has been producing quality professionals, holding important positions in the Information Technology industry both in India and abroad.

The Department started Master of Computer Applications (M.C.A.) programme in the year 1982, which was among the first such programmes in India. It is a comprehensive program of study intended to give students a thorough foundation in the theory and methodology of the techniques in Computer Science. They obtain skills and experience in up-to-date approaches to analysis, design, implementation, validation and documentation of computer software and hardware.



The Department started M.Sc. Computer Science course in the year 2004 with the aim to develop core competence in Computer Science and to prepare the students

to take up challenges of research and development. The students have the ability to apply high level of theoretical expertise and innovation to complex problems and application of new technologies.

The Department also offers Doctor of Philosophy (PhD) programme aimed at producing quality researchers in several diverse branches of Computer Science.

Apart from these, the Department coordinates B.Sc. (H) Computer Science, B.Sc. Physical Science (Computer Science) and other courses taught at constituent colleges of University of Delhi.

The Faculty



(From left to right: Dr. S.K. Muttou, Dr. Naveen Kumar, Dr. Neelima Gupta, Dr. Punam Bedi, Dr. Vasudha Bhatnagar)

DEPARTMENT'S FACULTY

❖ **Dr. S.K. Muttou**

Head of Department, Associate Professor

M.tech IIT Kharagpur, PhD University of Delhi

Research Interests: Information Security, Steganography, Digital Watermarking, Coding theory & Computer Graphics

Homepage: <http://people.du.ac.in/~skmuttoo/>

Email: skmuttoo@cs.du.ac.in

❖ **Mr. P.K. Hazra**

Associate Professor

BE, ME Jadavpur University (Calcutta)

Research Interests: Wireless LAN, Mobile Communication Networks, Satellite Communication Networks & Quality of Service in Communication Networks

Email: pkhazra@cs.du.ac.in

❖ **Dr. Naveen Kumar**

Associate Professor

M.Sc, M.Tech, PhD IIT Delhi

Research Interests: Computational Intelligence, Data Mining & Information Security.

Homepage: <http://people.du.ac.in/~nk/>

Email: nk@cs.du.ac.in

❖ **Dr. PunamBedi**

Associate Professor

M.Tech IIT Delhi, PhD University of Delhi

Research Interests: Artificial Intelligence, Machine Intelligence, Semantic Web, Multi-agent Systems, Software Engineering, Trust, Steganography &Steganalysis.

Homepage: <http://people.du.ac.in/~pbedi/>

Email: pbedi@cs.du.ac.in

❖ **Dr. NeelimaGupta**

Associate Professor

M.Tech, PhD IIT Delhi

Research Interests: Algorithms, Networks, Data Mining & BioInformatics

Homepage: <http://people.du.ac.in/~ngupta/>

Email: ngupta@cs.du.ac.in

❖ **Dr. Vasudha Bhatnagar**

Professor

M.C.A. (DU), PhD Jamia Milia Islamia

Research Interests: Intelligent Data Analysis, Modelling of KDD Process and Data Mining Algorithms

Homepage: <http://people.du.ac.in/~vbhatnagar/>

Email: vbhatnagar@cs.du.ac.in

THE GUEST/ADHOC FACULTY

Mr. Ashok Kumar Yadav
Assistant Professor

Mr. Aditya Pancholi
87, RamVihar,
New Delhi-110092

Dr. N.K. Oberoi
Associate Professor,
Sri Ram College of Commerce,
University of Delhi

Ms. Sapna Varshney
Assistant Professor,
B-19, Ramesh Nagar,
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Ms. Megha Khandelwal
Assistant Professor

Ms. Nisha
Associate Professor,
WZ-247, Street No. 7,
Sadh Nagar, Palam Colony,
New Delhi-110045

Dr. Sharanjit Kaur
Associate Professor,
Acharya Narendra Dev College,
University of Delhi

Dr. Karan Gupta
Associate Professor,
Keshav Mahavidyalaya
University of Delhi

Mr. Vipin Kumar
Assistant Professor

Academic Programmes

The M.C.A. Course

M.C.A is a full time 6-semester course, which includes one semester of professional training in the industry.

The objective of the Master of Computer Applications (M.C.A.) program is to impart core education in Computer Science and its applications, so that students are well prepared to face the challenges of the highly competitive IT industry. The course structure ensures overall development of the student, while concentrating on imparting technical skills required for an IT professional. No wonder, today after twenty eight years of its existence, its alumni are holding important positions in the IT industry and academics in India and abroad.

ADMISSION PROCEDURE OF M.C.A.

The intake in this course is graduates under 10+2+3 stream of examination of University of Delhi or an equivalent examination with at least one paper in Mathematics and another in Computer Science/ Mathematics/ Operational Research/ Statistics with minimum 60% marks in aggregate. The current batch of M.C.A. has students graduated from B.Sc. (H) Computer Science, B.C.A., B.Sc. (H) Mathematics, B.Sc. (H) Physics, B.Sc. (H) Electronics, B.Sc. (Gen) PCM and M.Sc. Mathematics.

- ❖ The seats are filled on the basis of National Level written examination conducted by the Department of Computer Science, University of Delhi in two stages:
 - The first stage is an objective examination involving Computer Science, Mathematics and Analytical skills.
 - The second stage is an interview to test the student's logical ability, communication skills, his/her knowledge of Computer Science and the current trends and technologies.

COURSE STRUCTURE OF M.C.A.

❖ Semester I

- Object Oriented Programming
- System Programming
- Statistical Techniques
- Computer System Architecture and Lab
- Technical Communication (Qualifying Paper)

Electives:

- Organizational Behaviour
- Economics

- Outside Department Elective (Mathematics, Statistics and Operational Research)

❖ Semester II

- Data Structures and File Processing
- Discrete Mathematics
- Computer Graphics
- Data Communication and Computer Networks

Electives:

- Fundamentals of Accounting and Finance

- Outside Department Elective (Mathematics, Statistics and Operational Research)

❖ Semester III

- Design and Analysis of Algorithms
- Software Engineering
- Database Systems
- Automata Theory
- Operating Systems

❖ Semester IV

- Compiler Design
- Information Security
- Network Programming
- Elective I within department
- Elective II within department

Electives:

- Data Base Applications
- Advanced Operating Systems
- Electronic Commerce
- Numerical Computing
- Computational Linguistics

❖ Semester V

Electives (five subjects to be chosen):

- Artificial Intelligence
- Combinatorial Optimization
- Computational Intelligence
- Cryptography
- Data Mining
- Database Systems and Implementation
- Digital Image Processing & Multimedia
- Embedded Systems
- Human Resource Management
- Modelling & Simulation
- Machine Learning
- Neural Networks
- Programming Paradigms
- Satellite and Mobile Communication Networks
- Software Quality Assurance & Testing
- Visual Programming
- XML and Databases

❖ Semester VI

- Full-time 6-month industrial training (Placement via campus interviews).

The M.Sc. Computer Science course

The M.Sc. Computer Science program, introduced in 2004, is a four-semester course which aims at imparting core education in various disciplines of Computer Science, so that the students are prepared to face the challenges of the highly competitive IT industry as well as carry out research and development. The objective of the program is to imbibe sound knowledge of theory and hands on practical skills in various areas of Computer Science. Taking into account the Computer Science curriculum that the students have undertaken at the graduate level, it aims at imparting advanced courses in Computer Science.

The course structure includes a minor project in the third semester followed by a major project in the final semester which helps in development of research skills in the areas of their interest.

ADMISSION PROCEDURE OF M.SC. COMPUTER SCIENCE

The students in this course are graduates with 10+2+3 stream in B.Sc. (H) Computer Science of University of Delhi/any other examination-recognized University or B. Tech. or B. Sc. Applied Physical Science / B. Sc. (Gen) Math. Sc. with Mathematics and Computer science from University of Delhi or any Bachelor's Degree with at least 6 Computer science papers and at least 2 Mathematics papers with minimum 60% aggregate marks in their graduation.

- ❖ 50% seats are reserved for the meritorious students of B.Sc. (H) Computer Science course of University of Delhi.
- ❖ Remaining 50% of the seats are filled on the basis of National Level written examination conducted in two stages:
 - The first stage is an objective examination involving Computer Science, Mathematics and Analytical skills.
 - The second stage is a subjective examination comprising questions on Computer Science and Mathematics.

COURSE STRUCTURE OF M.Sc. COMPUTER SCIENCE

- ❖ Semester I
 - Design and Analysis of Algorithms
 - Artificial Intelligence
 - Information Security
 - Database Systems and Implementations
 - Computational Intelligence
 - Advanced Operating Systems
 - Data Mining
 - Advanced Computer Networks
- ❖ Semester II
 - Compiler Design

Electives:

- Electronic Commerce
- Numerical Computing
- Combinatorial Optimization

❖ Semester III

- Minor project
- Three subjects to be chosen from a List of Electives

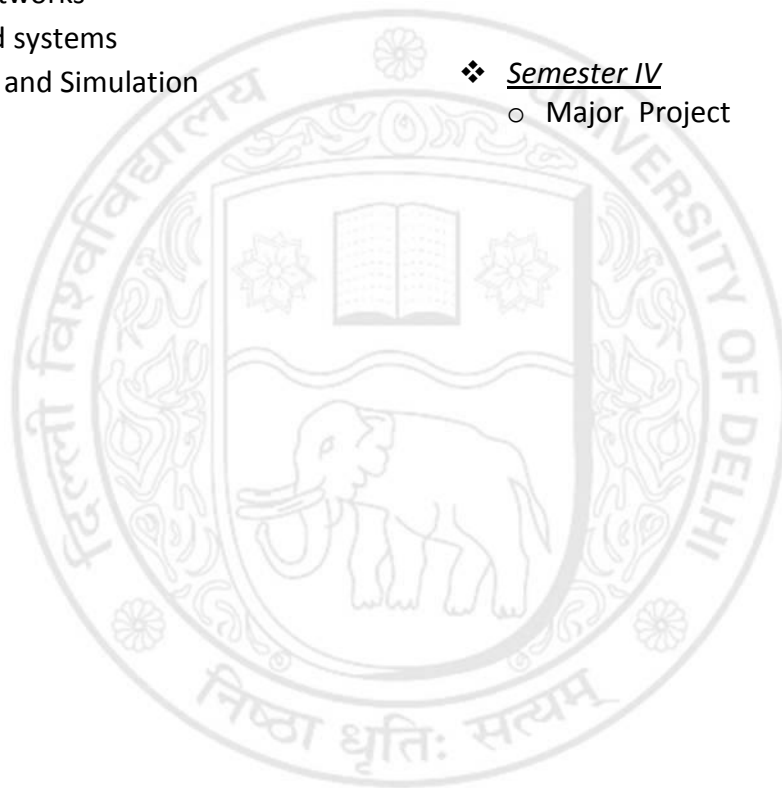
Electives:

- Cryptography
- Digital Image Processing and Multimedia
- Distributed Computing
- Machine Learning
- Neural Networks
- Embedded systems
- Modelling and Simulation

- Software Quality Assurance and Testing
- Special topics in Artificial Intelligence
- Special topics in Computer Networks
- Special topics in Database Systems
- Special topics in Data Mining
- Special topics in Information Security
- Special topics in Theoretical Computer Science
- Special topics in Computational Intelligence
- Special topics in Soft Computing

❖ Semester IV

- Major Project



THE DEPARTMENT IN THE NEWS

Get admission help on your smartphone app



Mallica Joshi
mallica.joshi@hindustantimes.com

NEW DELHI: Delhi University aspirants can now download a DU 'app' on their Android phones.

These applications, put up on the university website on Tuesday evening, were created by DU students and give information about admissions, colleges, courses, examinations and conferences and lectures.

The university had asked students to come up with applications as part of a competition last month.

One of the applications was created by a group of students doing their masters in computer application at the university.

"The application has all the elements that a student might be interested in. The content in the application will be from the university's official website and it will be converted in a mobile presentable form. It will have all admission-related information as well," said Gaurav Kumar, a

member of the team that created one of the two applications on the website.

"The app has a very vital tool that is called the 'get directions' tool. Once you switch on your GPS, it will track your position and will accordingly show you with a route to any college you want to visit," said Saurabh Garg, the co-creator of the application.

According to Manish Kumar, the third collaborator in the team, the application will use very little bandwidth.

"It has a feature that will help students get helpline numbers at the click of a button. We have provided a widget where by students can see any latest information about the university on their screens," Kumar said.

The university may put more such downloadable applications on their website in the coming couple of days. The competition was the university's way to engage students from across departments and colleges.

THE NEW APPLICATIONS WILL USE VERY LITTLE BANDWIDTH AND WILL HAVE ALL ADMISSION RELATED INFORMATION

On 5th June 2013, The Hindustan Times pg2 featured an article about a smartphone app for Android created by the students of the Department to assist the students with the admissions and familiarize the freshers with the University Campus.

The App, titled "Info@DU" featured several features such as navigation assist to colleges and dynamic information retrieval from the DU Website to get all the latest updates from the Website to the user. The App was widely appreciated and is a proud feat achieved by the Department students of the outgoing placement batch.

PUBLICATIONS AND INITIATIVES

Here are the list of publications and initiatives by the students:

Students from the Department have collaborated with IIT Delhi in their initiative Roshni to develop indoor navigation system for the visually impaired people.

Research Paper titled "Combining clustering solutions with varying number of clusters" published in IJCSI on March 31st 2014.

Students also developed **Android App "SANKALAN"** 2016 for our department's technical fest SANKALAN.

LIST OF AWARDS AND ACHEIVEMENTS

The students of the outgoing placement batch have demonstrated their skills and talent at literally every opportunity they get. This is apparent from the sheer amount of prizes they have won keeping in with the tradition of the department. Here is the list of a few prizes won by them:

- April 1, 2016: 1st Prize – IGDTU IP, “Break the Code” as an Encryption-Decryption event.
- April 1, 2016: 1st Prize – IGDTU IP, “Java Jousting” as an event based on Java Technology.
- April 1,2016 : 1st Prize – IGDTU IP, “Maze Runner” as an event which involved C, C++, Java, Puzzles .
- April 1, 2016: 1st Prize – IGDTU IP, “Code to unravel the Mystery” as a C and Puzzles event.
- April 1, 2016: 2nd prize – IGDTU IP, “C your Luck” as an event based on C, C++.
- March 19, 2016: 2nd prize - BVICAM, “Tractate Research paper presentation “.
- March 19, 2016: 2nd prize - BVICAM, “IT Quiz “event.
- March 11 2016 : 1st Prize - Jamia Millia Islamia , “Algowls” as an algorithms based event .
- March 11, 2016 : 3rd Prize - P.G.D.A.V College , “Code sense” as a coding event .
- March 11,2016 : 1st Prize - Shyam Lal College, “Battle Of Codes” as a debugging and coding event .
- March 11,2016 : 1st Prize - Shyam Lal College, “Brain O Teaser” as a IT Quiz event.
- March 11,2016 : 2nd Prize - Shyam Lal College, “Battle Of Codes” as a debugging and coding event .
- March 11,2016 : 2nd Prize - Shyam Lal College, Research Paper Presentation.
- March 11,2016 : 3rd Prize - Shyam Lal College, “Brain O Teaser” as a IT Quiz event.
- March 3,2016 : 1st Prize - SGGSCC, “Code-O-Mania” as an event based on algorithm and c++ coding .
- February 11,2016 : 1st Prize - SPM College ,”Cayenne Star” as a panel discussion event on Digital India.
- February 11,2016 : 1st Prize - SPM College ,”Tech Wizard” as IT based quiz event.
- February 11,2016 : 1st Prize - SPM College ,”Code-a-thon” as a C , C++ event.
- February 11,2016 : 2nd Prize - SPM College ,”Puzzle Event” .
- January 29,2016 : 1st Prize - DDU College ,”Web Gators” as a website making event.
- October 16,2015 : 3rd Prize - Shaheed Rajguru College of Applied Sciences , “E-Tambola” .
- March 2015 : 1st Prize – BVP (IP) , “Intellivision” as a C programming competition.
- February 21, 2015 : 1st Prize – JNU Technophilia , “Debugging”
- February 21, 2015, 1st prize – JNU Technophilia , “Inquisitive”
- February 21, 2015, 2nd prize – JNU Technophilia , “Code Insomnia”
- February 21, 2015, 3rd prize – JNU Technophilia , “Code Insomnia”

Classroom Projects

MASTER OF COMPUTER APPLICATIONS

Apart from the conventional methodologies of classroom teaching, students are expected to take up case studies, presentations and projects. This prepares them for industrial exposure and in addition to technical knowledge, helps them to acquire qualities like teamwork and communication skills.

Following are few of the projects/assignments taken up by the students:

- ❖ Stop-and-wait & Selective Repeat ARQ GUI simulation
- ❖ Chat server using Unix Domain Sockets
- ❖ Multi-client Database Unix Server
- ❖ Sentiments Analyser
- ❖ Text Editor in Java
- ❖ Library Management System using Java
- ❖ Implementation of DEQUE
- ❖ Regular Expression to DFA converter using Python
- ❖ Implementation of SHELL using C Language
- ❖ Implementation of Message Queue
- ❖ Implementation of Message Queue through Shared Memory
- ❖ Stock Market Website
- ❖ Weekly Magazine Website
- ❖ Lexical Analyser and Parser of SQL commands
- ❖ Implementation of Selective Repeat Protocol
- ❖ Student Record Management using Java
- ❖ Implementation of Cryptographic Algorithms

M.Sc. COMPUTER SCIENCE

As part of the curriculum itself, students are supposed to give presentations, group projects and programming assignments that not only help in honing the programming skills of the students but also inculcate good communication skills and develop a sense of teamwork.

Following are few of the projects/assignments taken up by the students:

- ❖ Implementation of K-means algorithm using Weka or Shell programming for specified number of times and for a given range of clusters.
- ❖ Implementation of Bisecting K-means and comparing the results with that of K-means for the same data set.
- ❖ Comparison of performance of NB, KNN and decision tree classifier using Weka implementation.
- ❖ Implementation of postfix function using C/C++ programming language.
- ❖ Implementation of Chat-Server using Socket programming (Unix Domain Sockets) to accomplish a lobby between multiple agents in which they can talk and get to perform other functions like: registering, logging in, logging out, checking status etc.
- ❖ Generation of a time table using any programming language for all the courses offered in department and also for each teacher (availability of rooms, teachers and optimality were some of the aspects considered).
- ❖ Implementation of simplex and bubble sort in MATLAB.
- ❖ Implementation of a chat server to accomplish web chat between two agents on different platforms using Jade.
- ❖ Implementation of Cryptographic Algorithms like AES, DES, RC4, IDEA and RSA.
- ❖ Implementation of Insertion and Search for a key in B+ Tree.
- ❖ Implementation of a Mini Database Management System in C using Lex and Yacc.
- ❖ Implementation of Kung et al's algorithm for finding set of non-dominated solutions using Python.
- ❖ Used genetic algorithm (Roulette Wheel Selection, Crossover and Mutation) to maximize $f(x) = x$ for integers as well as for floating point numbers in Python.
- ❖ Implementation of Pipe using Message queue.
- ❖ Implementation of Message Queue using Shared Memory.
- ❖ Website Development using JSP (Electronic Commerce students).
- ❖ Implementation of Simplex Method in MATLAB (Combinatorial Optimization students).
- ❖ Lexical analyser and Parser for arithmetic expressions evaluated when terminated by newline using Lex and Yacc.
- ❖ Generation of pixmap of images using MATLAB / Octave.

Infrastructure

LIBRARIES

The libraries of the University partner with the Department to facilitate learning, teaching, and research. We are committed to fostering intellectual discovery, critical thinking and life-long learning. Accordingly, the libraries tie our academic community to varied cultural and scholarly traditions by offering student-centred services. The students of the Department are affiliated to CSL library.

The Central Science Library (CSL) is one of the largest science libraries in India. It was established in 1981, and at present, it has a collection of over 220,000 volumes of books and periodicals. The website of CSL provides electronic subscription for approximately 27,088 e-journals of national and international repute including IEEE, ACM, Springer journals and proceedings.



LABORATORY FACILITIES



Resources

- Microsoft Academic Alliance Program, Open Source Alliance

Development Tools

- Dev C++, JDK 1.6.0, Oracle10g
- Microsoft Office 2010, Altova XML Suite 2008
- Tomcat, NetBeans 7.2, Glassfish, Eclipse, Apache
- MATLAB 2008b/2009b / 2010b, R
- Latex, Weks
- ADT Bundle for Android
- Sublime Text Editor

Operating Systems

- Windows 7/8/10
- Ubuntu 14

Security Tools

- Symantec Antivirus Corp. Bd. 10.2

Hardware Resources

- 2 HP Laptops Intel i5 4GB RAM, 30 HP ProBook 445
- 37 HP Intel i7, 4GB RAM, 500GB HDD Computer Systems
- 45 Pentium IVs with 1.5GB RAM, 80 GB HDD
- 34 Acer Core 2 Quad with 2 GB RAM, 350 GB HDD, 18'5" TFT Monitors
- 3 HP Core 2 Quad with 4GB RAM, 320 GB Hard disk
- 2 HP servers (Windows Server 2003 and Linux server)
- 6 LCD Projectors out of which 4 are roof fitted and 2 with cameras.
- HP Color Laser Jet 2500, 12 HP LaserJet 3030.
- 4 Laser Printers connected via LAN.
- Digital and Microprocessor Laboratory
- Sound System – Harman Kardan with collar mic.

Network Resources

- All the labs, offices and faculty rooms of the Department are connected to the internet through the university intranet providing NKN (National Knowledge Network) connectivity.
- Internet connectivity is provided using 4 switches through the university intranet. 24-port switch is used in LAN, providing internet to all systems in the laboratory, classrooms, seminar room and committee room.

DELHI UNIVERSITY COMPUTER CENTRE

The centre owns a multitude of software so as to allow students to gain practical experience. The following is a list of some of these tools:

Operating Systems

- Cent OS
- Red Hat Linux 9.0
- Windows 2008 R2.
- Windows 7 Pro
- Windows 8

Mathematical and Statistical Packages

- MATLAB
- Mathematica

Database Management Systems

- Oracle 10g
- MySQL
- MS-SQL 2008 Server

Graphical Packages

- Adobe Creative Suite 5/6

Programming Platforms

- Borland C++
- Visual Studio
- PROLOG
- MS-MASM 5.0

Application Packages

- MS Office
- Adobe Creative Suite 5/6
- Adobe Acrobat 10 Pro
- Corel Draw
- Page Maker

Hardware and Network

- Dell R815-AMD (16 core, 32 GB) servers, Dell R610 – Intel (12 core, 48 GB) servers, Acer AR 380F1 servers, HP Proliant DL180 and ML 350 servers, SUNfire V20Z-AMD, SUNfire V65x-Intel, SUNfire V440-Sparc, IBM RS/6000 machines having RISC architecture, 80 Nodes (Acer Desktop) Peripheral support includes network HP Laser and Inkjet printers.45 Mbps/1 Gbps2 leased lines.
- CISCO Core switches and Routers, Fortigate UTM including Firewalls, IPS and content filtering, Edge switches from CISCO, Nortel, HCL, 3com, Dlink.
- 5 IBM RS/6000 machines having RISC architecture using CMOSVLSI, Double precision.

All campus colleges and departments are networked through fibre optics to the University Intranet. South Campus colleges and all off-campus colleges are linked to North Campus through Fibre link.

DELHI UNIVERSITY COMPUTER SCIENCE SOCIETY

At the Department of Computer Science, education is about embracing all that technology has to offer i.e. flexibility towards incorporating various on ground and online modalities. The emphasis is on creating an environment for students to take up challenging tasks bringing forth the latent capabilities and in the process discovering their full potential. In order to achieve this, a number of activities are organised for students to help them build the traits of teamwork, trustworthiness and synchronization.

Delhi University Computer Science Society was established in 2005 with an objective of building better student-industry interface by conducting various seminars, conferences and technical fests which help in bridging the gap between education and industry demands. These events are conducted to enrich student life at the Department. The Society also provides a perfect breeding ground for interaction between students pursuing different courses within the department. As its first endeavour, DUCSS organised SANKALAN 2005, a two day technical fest which was a huge success and since then has been a part of annual calendar. SANKALAN encompasses an entire gamut of events that test the technical skills and thought process of students with problems. It aims at combining theoretical and practical aspects of computer science field along with management with an exposure on the latest trends and innovations.

ALUMNI WORKING CLUB

One of the biggest assets of an institute is its alumni. The Department of Computer Science is proud to have its alumni placed in the most prestigious companies in the world like Amazon, Adobe and Morgan Stanley among others. Among our distinguished alumni are the founders of the extremely successful Delhi-based start-ups Velmenni and JMoon Technologies. It is no wonder that we maintain a strong alumni network which allows the alumni to stay in contact with each other and the students who benefit from their invaluable life and work experience.

Department of Computer Science Society dedicatedly functions to strengthen the bonds between the institute and its alumni. Every new academic year begins with the Skit- that introduces the new students to their alumni. Every event- from Freshers, to seminars, to workshops, to Sankalan-our technical fest witness their participation and interaction with the students. The social views thus exchanged promote personality development and broaden the horizons of the students.

Our alumni bring their immense experience and guidance to the placement session. They take out time to prepare the students for the gruelling placement sessions with study sessions, pep talks, behavioural tips, and give them insights about the working of the industry. This helps the students in their overall development and become a package deal when the companies arrive.

WORKSHOPS

Workshops are organized in the Department to sensitize everyone about the latest trends in the today's world. Workshops are also conducted on global issues such impact of our activities have in polluting the environment and the role of IT in it. Various sessions are held on topics such as Global Warming, e-Waste Management and presentations by students on IT solutions for climate change. Following is the list of workshops conducted:

- ❖ A WordPress workshop was conducted last year for the students interested in web site development. This course enabled them to develop a custom web site starting from scratch.
- ❖ An Android workshop was conducted in the department this year to give students an insight into the most trending & brimming technology of Android development.
- ❖ A workshop on Ethical Hacking (Hackveda) by VMDD Technologies was organized to enlighten the students about the various security issues and train them to be safe from hackers.

OTHER INITIATIVES BY THE DEPARTMENT

It has been rightly said by Edward Bulwer-lytton that "The pen is mightier than the sword!". Indeed, what one can achieve with powerful use of right words at the right time can never be achieved by wars. Keeping these wise words in mind, the students of DUCS come up every year with their annual magazine- Srijan. The magazine is compiled by a team of editors and designers and includes articles, poems and sketches from students, teachers and alumni. Srijan provides the students and teachers a doorway to express their views on a wide array of technical as well as non-technical topics. The magazine encourages students to think beyond the pages of the textbook and brings out their creative side.

TECHNICAL SEMINARS

The discussions about current technology and day to day activities in IT are regular affair in the department. The following discussions were held in our department:

- ❖ Efficient, effective and practical mutation testing by Dr. Gregory M. Kapfhammer, Associate Professor, Dept. of Computer Science, Allegheny College, Pennsylvania, U.S.A.
- ❖ Social Network by Prof. VáclavSnášel and Prof. PavelBrandstetter, Faculty of Electrical Engineering and Computer Science, VSB Technical University of Ostrava, Czech Republic.
- ❖ Publish or Perish: Survival Guidelines by Dr.Ajith Abraham, Faculty of Electrical Engineering and Computer Science, VSB Technical University of Ostrava, Czech Republic.
- ❖ The Future is Smart Phone by Mr.VikasSahni, Softedge Systems, and Ireland.
- ❖ Perspectives on Development and Deployment of an Open Source Medical Record System by Prof. Barry Levine, Dept. of Computer Science, San Francisco, State University, U.S.A.

Life at DUCS

Never stop fighting until you arrive at your destined place - that is, the unique you. Have an aim in life, continuously acquire knowledge, work hard, and have perseverance to realise the great life.

These lines by Dr A. P. J. Abdul Kalam precisely define life at DUCS. The moment students set foot into the campus, this motto is instilled in our hearts. Our journey through these three years is a continual process of self-exploration and acquiring knowledge. Time is less, work is excessive and success or failure here depends on how one makes these two proportionately balanced.

The most important part of life here is education. Studies, periodic tests, rigorous assignments, gruelling viva voce & highly difficult projects keep us on our toes throughout the year. Eventually those who succeed in them are polished into diamonds and those who fail inculcate the habit of perseverance in them. However what remains the same for everyone is the perpetual state of learning. We all learn out of people and the spirit of people around is just unbeatable.

Amidst a plethora of projects & assignments we have celebrations, festivals, dance nights, jamming sessions and many other fun-filled activities-

1. Skit - The entering event of the session finds out the actor within each one of us. Short, funny performances by freshers fill the air with humour, excitement and fun.

All seniors and alumni are cordially invited for the event to welcome juniors in the DUCS family.

2. Fresher's Party- What follows the informal introduction of our juniors through the skit is the formal event of welcoming them-The Fresher's Party. A theme is adorned by freshers for the party, performances are lined up by them, and food and beverage are served throughout the day to keep the energy going.
3. Festivals of India are celebrated with full zeal and vigour in the department.
 - Diwali Party- Diwali marks the beginning of the celebrations. Seniors and juniors gather to make Rangoli, followed by Laxmi Pooja and lightning of lamps and candles in the department. DJ session is organized in the evening to complete the Diwali celebrations.
 - Holi- The festival of colours is celebrated with vigour & smiles. Department is painted with colours and students & teachers gather to celebrate this festival together.
4. Sankalan – This is the annual tech fest of DUCS which has been our pride for more than a decade now. Since its inception in 2005, it has been a part & parcel of lives at DUCS. Students from universities across India come and participate enthusiastically in this two day event. This is the time when everyone works together as a team and is dedicated towards a common goal – to bring pride and honour to the Department. “Division of labour” is followed here at every step. This keeps the students mentally prepared to perform well in the companies and prepares them to take responsibilities and live up to the expectations.

Renowned people from the IT industry and our alumni placed in various tech giant companies judge and review all the technical events held during the fest. After the two days long grilling experience, students are awarded and appreciated for winning and participating in the fest. A large number of sponsors who financially aid this event form the backbone of the fest.



The technical fest boasts of events like:

- 1) Alcoholics – The event focuses on testing the proficiency of participants in developing algorithms for new problems.
- 2) Java Juggling - For the Java Ninja who is not bogged by classes, keywords, threads, interfaces.
- 3) Code-A-Thon - A coding marathon to test participants programming prowess.
- 4) Spin-A-Web - Participants are asked to curate a website with their own vision but following a particular theme.
- 5) Debug++ - The event tests the expertise of participants in spotting and fixing the errors.
- 6) TexPert - This event consists of question-answer round between participants and judges that tests their clarity of concepts related to computer science fields.
- 7) BrainSpark -The participating teams needed to survive a set of aptitude, reasoning and logical questions.
- 8) TechnoSpeak - The debate competition because for good ideas and true innovation you need human interaction, conflict, argument and debate.

In continuation of efforts to strive for excellence in every field, this year DUCSS successfully organised SANKALAN 2016 which witnessed participation from eminent institutes all over India. The

Society also conducted INTRA-SANKALAN, where the students of the Department competed among themselves in many technical and non-technical events.

5. Farewell Party- We bid adieu to all the final year seniors with great ostentation at this party. Performances, good-bye speeches, power point presentations made by juniors showcasing their journey at DUCS, farewell titles & souvenirs all form the perfect ingredients for a nostalgic yet memorable recipe of lives at DUCS.

Regular Seminars are conducted in the department by people renowned both at national and international level, so as to keep the students updated with the latest trends in the IT sector. This in turn makes DUCS-ites more confident to enter any reputed company.



Diwali Celebration at the Department

So undoubtedly, the tradition and culture of DUCS makes its students identifiable among thousands of IT aspirants. Fulfilling all requirements, we offer the companies, some of the most amazing brains with well-rounded and matured personalities for the most dynamic industry of today's world.

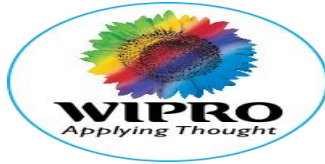
Our Past Recruiters

This further goes on to show the confidence the industry has in us and the relationship we share with them. Companies where our alumni are placed reads like a who's who of the IT industry. Some of the companies and institutions where our alumni are placed are:





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The Magic Blog



The Current Batch



DUCS Alumni

Today, the alumni of Department of Computer Science have distinguished themselves in the industry through sheer talent, commitment and hard work.

We are proud of our talented and successful DUCS alumni who have made a mark in India and abroad and we wish to follow in their footprints. A few amongst them are:

Dr. VASUDHA BHATNAGAR
Associate Professor
Delhi University, India
1985 M.C.A. batch

GULSHAN KUMAR
Director,
Alcatel-Lucent, India
1988 M.C.A. batch

KIRAN SETHI
Vice President
Deutsche Bank, USA
1985 M.C.A. batch

VANDANA AGGARWAL
Senior Business Analyst
SGI, USA
1988 M.C.A. batch

MEENAKSHI KHANNA
Senior Program Manager
Cadence, India
1985 M.C.A. batch

RANJAN DHAR
Director,
Silicon Graphics, India
1989 M.C.A. batch

PRADEEP MATHUR
Vice President
Capgemini, UK
1987 M.C.A. batch

ABHRAJIT GHOSH
Director,
Telcordia Technologies, USA
1993 M.C.A. batch

RAJIV MITTAL
Vice President,
Corporate Strategy and Finance
JK Technosoft Ltd., India
1987 M.C.A. batch

SANJAY GUPTA
CEO,
Mobisolv, India
1996 M.C.A. batch

S KUMARAN
Director,
Simplogic Technologies, India
1998 M.C.A. batch

MANISH MADAN
Vice President,
Perot Systems, TSI, India
2001 M.C.A. batch

<p>VIJAY KRISHNAN Program Manager, Microsoft, India 2002 M.C.A. batch</p>	<p>HIMANSHU SAWHNEY Senior Computer Scientist, Adobe, India 2006 M.C.A. batch</p>
<p>ABHINAV SHARMA Amazon.in (Former: Senior Manager, Morgan Stanley) 2007 M.Sc. batch</p>	<p>TATHAGAT MISHRA Morgan Stanley 2012 M.C.A. batch</p>
<p>SACHIN VERMA LMTS, Salesforce.com 2006 M.Sc. batch</p>	<p>SANDEEP JAIN Computer Scientist, Adobe 2009 M.C.A. batch</p>
<p>TOTA RAM VERMA Assistant Vice President, Citi Group 2007 M.C.A. batch</p>	<p>MONIKA BISLA Software Developer, Microsoft 2013 M.Sc. batch</p>
<p>PREETI SINGH Associate Goldman Sachs, U.K. 2008 M.C.A. batch</p>	<p>PRAMOD NEGI Senior Software Engineer BloomReach, U.S. 2007 M.C.A. batch</p>
<p>DHARAM DEO PRASAD SDE-I Flipkart.com 2014 M.C.A. batch</p>	<p>SAURABH GARG Software Developer Adobe 2015 M.C.A. batch</p>
<p>SUMIT SHARMA Business Intelligence Consultant Thorogood Associates 2012 M.Sc. batch</p>	<p>SWATANTRA VERMA Software Developer Amazon 2015 M.C.A. batch</p>
<p>SAMARTH GUPTA Member of Technical Staff Adobe 2013 M.C.A. batch</p>	<p>ASHISH MANN Lead Technology, Snapdeal 2010 M.Sc. batch</p>



DEPARTMENT OF COMPUTER SCIENCE
UNIVERSITY OF DELHI

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