

# **RECRUITMENT GUIDE**

## **2015-2016**



**DEPARTMENT OF COMPUTER SCIENCE  
UNIVERSITY OF DELHI**

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## From the Vice-Chancellor's Desk

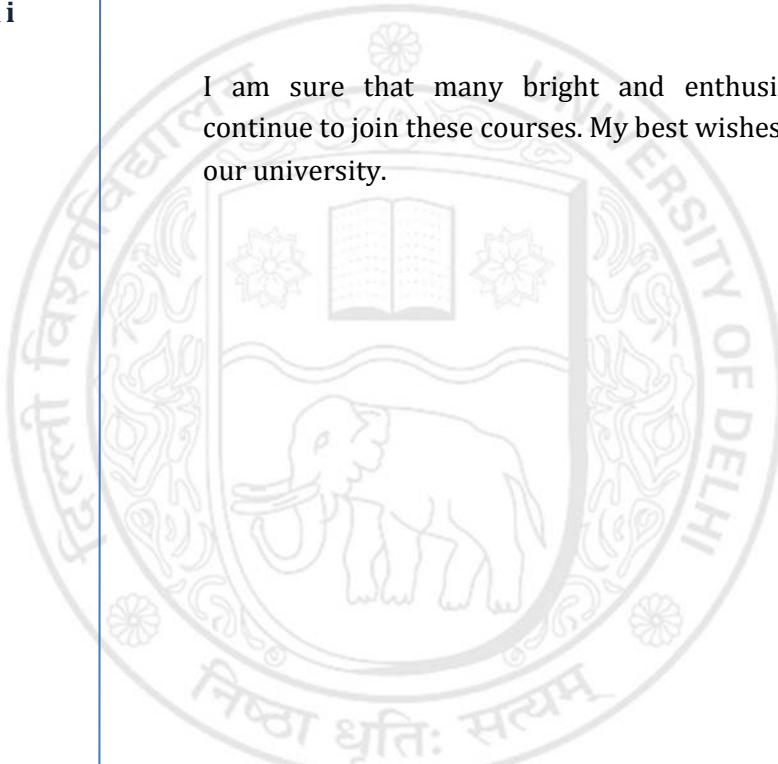


**Prof. Dinesh Singh  
Vice - Chancellor  
University of Delhi**

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.

A faint watermark of the University of Delhi seal is visible in the background. The seal is circular with intricate designs, featuring an elephant in the center, an open book above it, and a lotus flower at the top. The text "UNIVERSITY OF DELHI" is written around the top edge, and "निष्ठा धृतिः सत्यम्" is written along the bottom edge.

D.S./  
Dinesh Singh

## **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**



**Dr. Punam Bedi  
Placement Advisor**

The three years Master of Computer Applications (M.C.A.) and two years M.Sc. Computer Science programmes at the Department of Computer Science, University of Delhi are immensely popular in India. Both these programmes focus on imparting relevant theoretical knowledge and practical skills in the global context. The courses aim to equip the students to meet practical challenges and situations, make them technically competent and aware, to develop strong theoretical foundations required for developing sound understanding, analysis and futuristic vision.

The M.Sc. students are required to do a Minor project in third semester and a Major project in the fourth semester. Project areas include Databases, Operating Systems, Algorithms, Parallel Computing, Semantic Web, Graphics, Artificial Intelligence, Computer Networks, Data mining, Bioinformatics and many more. 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 courses are updated from time to time to meet the demand and expectations of the software industry.

The success of our M.C.A students is well known in the industry. The Department is proud to have more than 900 alumni holding important positions in Information Technology industry and academic at national and international level in India.

I am delighted to invite you to visit our department and be a part of DUCS - Placements 2015-2016

## 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.



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. Muttoo, Dr. Naveen Kumar,  
Dr. Neelima Gupta, Dr. Punam Bedi, Dr. Vasudha Bhatnagar)

### DEPARTMENT'S FACULTY

#### ❖ Dr. S.K. Muttoo

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.VasudhaBhatnagar**

Associate Professor

M.C.A. (DU), PhD JamiaMiliaIslamia

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

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### THE GUEST FACULTY

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Dr. Sameer Anand  
Shri Sukhdev College  
Of Business Studies,  
University of Delhi

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

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

Ms. Sapna Grover  
Assistant Professor,  
B-19, Ramesh Nagar,  
New Delhi-110015

Dr. Sambuddha Roy  
Research Scientist,  
IBM India Research Lab

Dr. Yogish Sabharwal  
Research Scientist,  
IBM India Research Lab

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



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### Academic Programmes

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#### The M.C.A. Course

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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.

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#### **THE ADMISSION PROCEDURE FOR M.C.A.**

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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.

- ❖ 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 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.

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#### **COURSE STRUCTURE OF M.C.A.**

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❖ 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

❖ Semester V

**Electives:**

- Fundamentals of Accounting and Finance
- Outside Department Elective (Mathematics, Statistics and Operational Research)

**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 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

❖ Semester VI

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

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

## The M.Sc. Computer Science course

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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.

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### THE ADMISSION PROCEDURE FOR M.Sc.CS

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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.

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### COURSE STRUCTURE OF M.Sc. COMPUTER SCIENCE

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#### ❖ Semester I

- Design and Analysis of Algorithms
- Artificial Intelligence
- Information Security
- Database Systems and Implementations
- Computational Intelligence

#### ❖ Semester II

- Compiler Design
- Advanced Operating Systems
- Data Mining
- Advanced Computer Networks

#### **Electives:**

- Electronic Commerce

- Numerical Computing
- Combinatorial Optimization

❖ Semester III

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

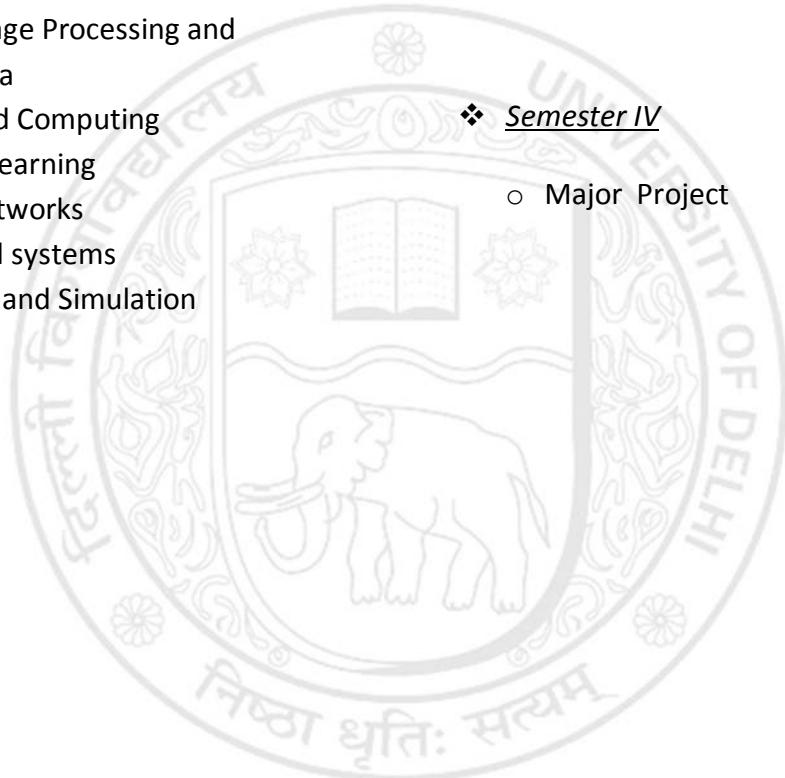
**Electives:**

- 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



## Awards and Achievements of Placement Batch

### THE DEPARTMENT IN THE NEWS

# Get admission help on your smartphone app



Malica Joshi  
[malica.joshi@hindustantimes.com](mailto:malica.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 Gang, 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 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 5<sup>th</sup> 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 31<sup>st</sup> 2014.

Students also developed **Android App "SANKALAN"** 2015 for our department's technical fest SANKALAN.

## **LIST OF AWARDS AND ACHIEVEMENTS**

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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:

22<sup>nd</sup> Feb 2015: 1<sup>st</sup> prize-JNU Technophilia: Inquisitive.

22<sup>nd</sup> Feb 2015: 2<sup>nd</sup> prize-JNU Technophilia: Beat the Beast.

22<sup>nd</sup> Feb 2015: 3<sup>rd</sup> prize-JNU Technophilia: Code Insomnia

22<sup>nd</sup> Feb 2015: 3<sup>rd</sup> prize-JNU Technophilia: Java Juggling

27<sup>th</sup> March 2015: 2<sup>nd</sup> prize-IGIT/IGTU (Technical fest): C your luck

27<sup>th</sup> March 2015: 1<sup>st</sup> prize-IGIT/IGTU (Technical fest): Break the Code

27<sup>th</sup> March 2015: 1<sup>ST</sup> prize-IGIT/IGTU (Technical fest): Speed Programming

14<sup>th</sup> March 2015: 2<sup>nd</sup> prize in Spin -A-Web (Website Designing)-BVP University Technical Fest

Fluxus2015 IIT Indore: 11<sup>th</sup> rank in Surprise Language Event conducted online at Hacker attack

9<sup>th</sup> Feb 2014: Won Team Trophy at JNU

9<sup>th</sup> Feb 2014: 1<sup>st</sup> Prize JNU Technophilia: Java Juggling

9<sup>th</sup> Feb 2014: 1<sup>st</sup> Prize JNU Technophilia: Logiks

9<sup>th</sup> Feb 2014: 1<sup>st</sup> Prize JNU Technophilia: Code Insomnia

9<sup>th</sup> Feb 2014: 1<sup>st</sup> Prize JNU Technophilia: Bug-Hunt

9<sup>th</sup> Feb 2014: 1<sup>st</sup> Prize JNU Technophilia: Query-Fury

9<sup>th</sup> Feb 2014: 2<sup>nd</sup> Prize JNU Technophilia: Specialist

9<sup>th</sup> Feb 2014: 2<sup>nd</sup> Prize JNU Technophilia: Algorythms

9<sup>th</sup> Feb 2014: 2<sup>nd</sup> Prize JNU Technophilia: Java Juggling

9<sup>th</sup> Feb 2014: 3<sup>rd</sup> Prize JNU Technophilia: Specialist

9<sup>th</sup> Feb 2014: 3<sup>rd</sup> Prize JNU Technophilia: Logiks

5<sup>th</sup> June 2013: Details regarding Info@Du published in Hindustan Times pg2.

7<sup>th</sup> April 2013: 1<sup>st</sup> prize-ACM Delhi-NCR Chapter, on 'eWitness' concept as best software presented.

7<sup>th</sup> April 2013: 2<sup>nd</sup> prize- ACM Delhi-NCR Chapter, on 'easyWay' concept as hardware concept.

22<sup>nd</sup>March 2013: 1<sup>st</sup> prize- IIT Roorkee, "Samavesh" on 'eWitness' concept as best social innovation.

22<sup>nd</sup>March 2013: 1<sup>st</sup> prize- IIT Roorkee, "Blogomania" as the most popular blog.

21<sup>st</sup>March 2013: 2<sup>nd</sup> Prize - MSIT IP, on 'eWitness' prototype as best software presented.

20<sup>th</sup>March 2013: 2<sup>nd</sup> Prize - MSI IP, "Hacking" as first team to make phising page.

17<sup>th</sup>March 2013: 1<sup>st</sup> Prize - IGIT IP, "Master Programmer" as highest score in C,C++ programming.

17<sup>th</sup>March 2013: 1<sup>st</sup> Prize - IGIT IP, "Aakraman" as 1st team to reverse engineer a software.

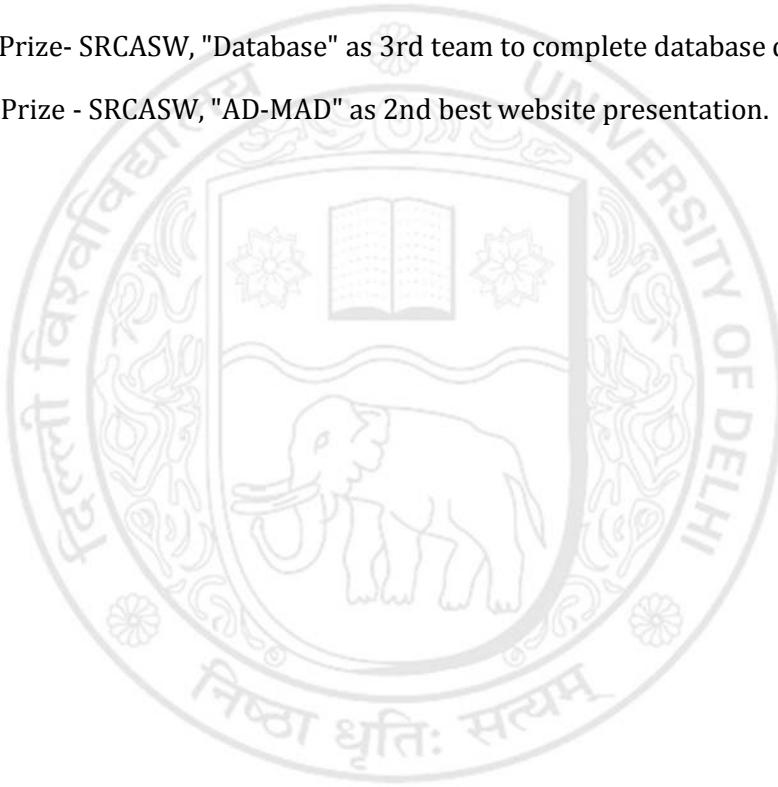
17<sup>th</sup>March 2013: 1<sup>st</sup> Prize - IGIT IP, "Cryptography" as highest scoring team on decrypting a paper.

17<sup>th</sup>March 2013: 1<sup>st</sup> Prize - IGIT IP, "8 bit Game Programming" as best game made.

17<sup>th</sup>March 2013: 1<sup>st</sup> Prize - IGIT IP, "App Challenge" as best app made on android.

9<sup>th</sup>March 2013: 3<sup>rd</sup> Prize- SRCASW, "Database" as 3rd team to complete database queries correctly.

9<sup>th</sup>March 2013: 2<sup>nd</sup> Prize - SRCASW, "AD-MAD" as 2nd best website presentation.



## A Few Classroom Projects

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### M.C.A.

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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:

- ❖ 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 Analyzer and Parser of SQL commands
- ❖ Implementation of Selective Repeat Protocol
- ❖ Student Record Management using Java
- ❖ Implementation of Cryptographic Algorithms

## M.Sc. COMPUTER SCIENCE

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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 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.
- ❖ Implementation of Pipes in Shared Memory.
- ❖ Website Development using JSP (Electronic Commerce students).
- ❖ Implementation of Simplex Method in MATLAB (Combinatorial Optimization students).
- ❖ Lexical Analyzer and Parser for arithmetic expressions evaluated when terminated by newline using Lex and Yacc.
- ❖ Generation of pixmap of images using MATLAB / Octave.
- ❖ Classification of images using OneR and Naive Bayes classifier in Weka.



## 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 XP / Vista / 7
- Red Hat Enterprise Edition, Linux Mint, Kali Linux

### Security Tools

- Symantec Antivirus Corp. Bd. 10.2

### Hardware Resources

- 8 Dell, 2 IBM and 2 HP Laptops.
- 45 Pentium IVs with 1.5GB RAM, 80 GB Hard disk,
- 34 Acer Core 2 Quad with 2 GB RAM, 300 GB HDD
- 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

### *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

### *Database Management Systems*

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

### *Programming Platforms*

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

### *Mathematical and Statistical Packages*

- MATLAB
- Mathematica

### *Graphical Packages*

- Adobe Creative Suite 5/6

### *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.

*Services provided by centre to all university staff and students:*

- Website, E-mail services, Online Applications, Co-location server hosting for departments, Security Services.
- Internet Access
- Antivirus and spam protection
- Hosting infrastructure & content management for the university website [www.du.ac.in](http://www.du.ac.in)



## Beyond the text books

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### DELHI UNIVERSITY COMPUTER SCIENCE SOCIETY

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At the Department of Computer Science, education stretches beyond classroom sessions. The emphasis is on creating an environment for students to explore experiment, discover and realize their potential. In order to achieve this, a number of activities are organized for the students to help them build the traits of teamwork, trustworthiness and synchronization.

Delhi University Computer Science Society (DUCSS) was established in 2005 with the purpose of conducting events such as seminars, conferences, competitions and technical festivals, as well as other cultural and academic events. These events are conducted to enrich student life at the department. The Society also provides a common meeting ground for students pursuing different courses within the department. As its first endeavour, DUCSS organized SANKALAN 2005, a two-day technical festival which was a huge success, and since then it has been a part of the annual tradition. SANKALAN is a congregation of IT students from all over the country, who compete in various technical and non-technical events. It aims at honing technical and management skills of the students at the department. In continuation of effort to strive for excellence in every field, this year DUCSS successfully organized SANKALAN 2015 with many teams participating from various colleges 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.

### ALUMNI WORKING CLUB

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One of the biggest assets of an institute is its alumni. The Society conducts alumni-meet periodically which includes several interactive events and the social views exchanged promote personality development which helps the alumni share their industrial experience with the students.

### WORKSHOPS

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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 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**

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- ❖ A magazine “SRIJAN” was published by the department. It gave the students a chance to express their technical as well as non-technical innovative views.

## **TECHNICAL SEMINARS**

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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. Václav Snášel and Prof. Pavel Brandstetter, 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. Vikas Sahni, Softedge Systems, 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**

At Delhi University Computer Science Society (DUCSS) we learn to do not only hardwork but smartwork, which is the mantra for success in today's world.

Students at DUCS have come from the prestigious colleges and universities from all over India, having diverse backgrounds, through a rigorous selection procedure. Each of us brings variety of thoughts and new approaches to the way problems can be dealt with, which in turn prepares us to work in a diverse life culture at the companies.

Studies, periodic tests, rigorous assignments and high standard projects polish the brains of the selected few into Diamonds. Winning competitions organized by other reputed institutions and displaying our talent beyond the academic curriculum has become our tradition. DUCSites undertake competitive projects like Microsoft's IMAGINE CUP and IBM's THE GREAT MIND CHALLENGE where young minds get a chance to explore the unimagined world of IT. Also DUCSiites have reached the pinnacle by working at an international level and ensuring success of their projects in other countries as well.

Apart from all this, another pride of our department is SANKALAN-an event that is eagerly awaited by all the leading institutes across the country every year. This is the annual Computer Science Technical festival, which is organized by students at a very large scale in association with several brand names. 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. Teamwork and group dynamics get instilled in them helping tremendously at their work place.



**SANKALAN 2015**

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 DUCSites more confident to enter any reputed company.

Apart from regular activities, various get-togethers, outings and tours are organized by DUCSites. This makes them socially active and it also acts as a stress buster for them. Moreover, a different culture is being followed at DUCS on weekends. When all other colleges are closed in search of a break after their hectic week, we DUCSites get involved in innovative and creative activities. A chunk of people from recent alumni of our department visit the campus and share their experiences with the current batch. They help us in understanding the current scenario of the industry and guide us towards a better future. Various games are played, small skits are arranged and a sense of togetherness is celebrated every weekend.



Lohri 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:



## The Current Batch

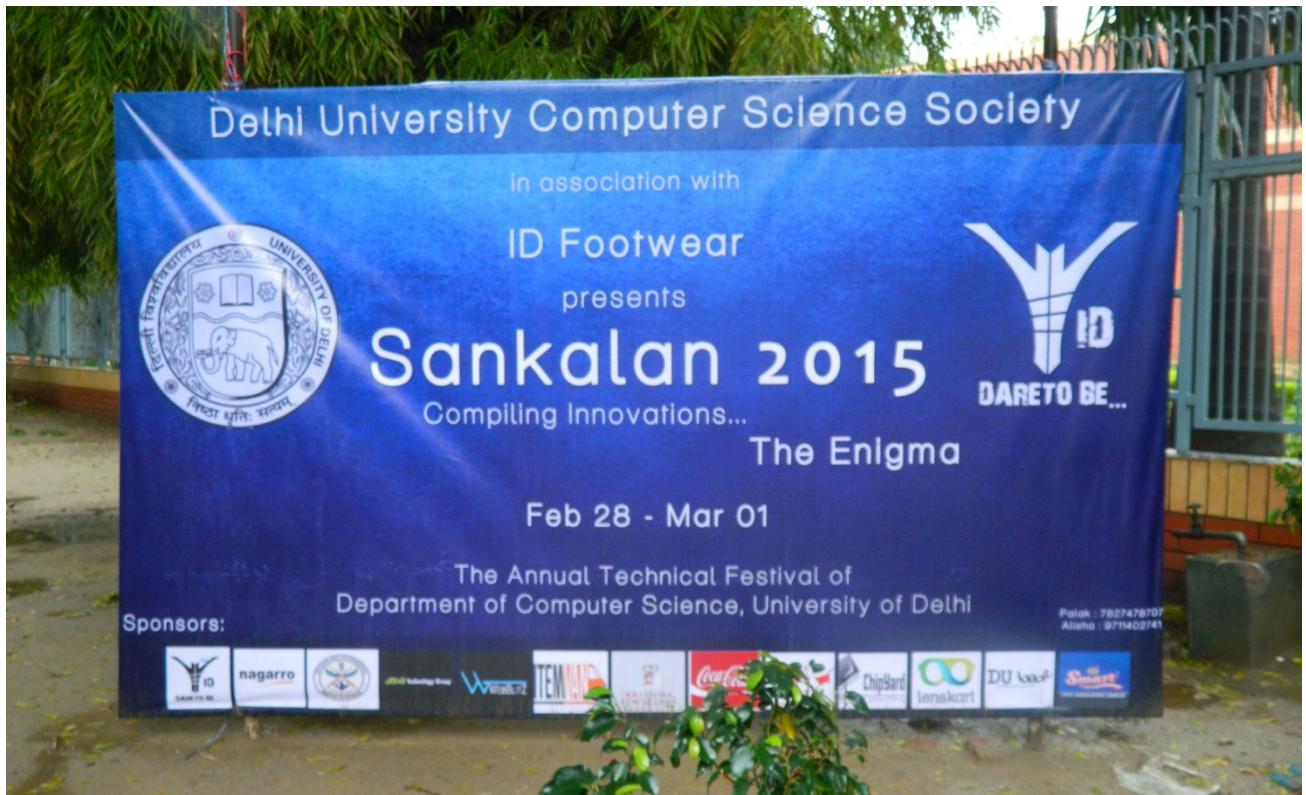


## D U C S A l u m n i

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
VIJAY KRISHNAN Program Manager, Microsoft, India 2002 M.C.A. batch	HIMANSHU SAWHNEY Computer Scientist, Adobe, India 2006 M.C.A. batch



Winners of INTRA-SANKALAN

## **Placement Coordinating Team**

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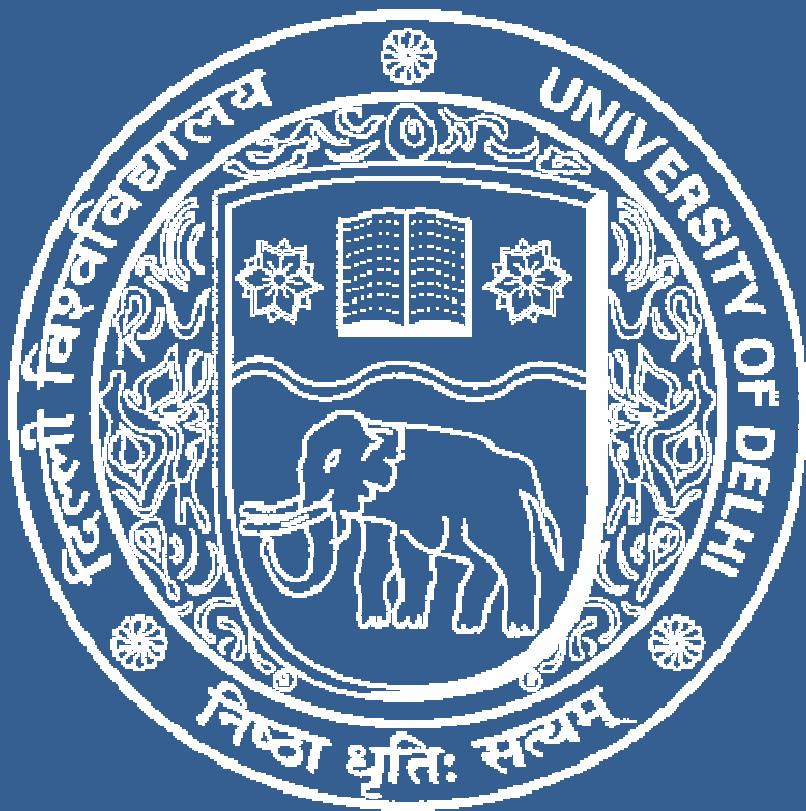
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