

11. FACULTY OF COMPUTING SCIENCES

11.1 DEPARTMENT OF COMPUTER SCIENCE

FACULTY

Professors

1. Gurpreet Singh Lehal, Ph.D.
2. Jyotsna Sengupta, Ph.D.
3. Rajesh Kumar Bawa, Ph.D.
4. Neeraj Sharma, Ph.D.
5. Chandan Singh, Ph.D.

Head

Re-employed

Associate Professors

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|------------------------|-----------------------------|
| 1. Sukhjot Kaur, Ph.D. | 2. Dharamveer Sharma, Ph.D. |
| 3. Gagandeep, Ph.D. | 4. Vishal Goyal, Ph.D. |

Assistant Professors

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|--------------------------------|----------------------------------|
| 1. Maninder Singh, Ph.D. | 2. Gurpreet Singh Josan, Ph.D. |
| 3. Rajneesh Randhawa, Ph.D. | 4. Amarveer Singh, M.Tech. (CSE) |
| 5. Jagpuneet Kaur Bajwa, Ph.D. | |

System Administrator Programmer

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| 1. Arun Bansal, MCA | 1. Arun Sharma, B.E. |
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COURSES

1. **M. Tech. (CSE - Computer Science and Engineering) (2 years) Student Intake : 45

Eligibility: B.E./B.Tech. in Computer Science and Engineering/Computer Engineering/Information Technology/Information Communication Technology/Software Engineering or equivalent degree in Engineering with 60% (55% for SC/ST and physically handicapped persons with atleast 40% disability) Marks or equivalent Grade points or Master of Science degree in Computer Science/ information Technology/Mathematics/ Physics/ Operations Research/ Statistics/ Electronics or Computer Applications (MCA) with minimum 55% (50% for SC/ST and physically handicapped with atleast 40% disability) marks or equivalent grade points. Admission will be made purely on the merit of M. Tech. Entrance Test to be conducted by Punjabi University, Patiala. GATE Qualified candidates need not appear in the entrance test and will be given preference over the candidates qualify the entrance test. GATE qualified candidates must attach the valid score card alongwith the application. In case seats remain vacant after allotment of seats to eligible entrance test qualified candidates, these will be offered on the basis of merit in qualifying examination.

Career Options: Teaching, Research, Industry

2. M. C.A. (3 years) Students Intake : 140

Eligibility: Candidate who have passed the Bachelor's degree (10+2+3) in any discipline of the statutory University with 50% marks for in aggregate 45% marks for SC/ST and Physically handicapped with at least 40% disability). The candidates must have passed the senior secondary (10+2) or equivalent examination or higher degree examination with Mathematics/Statistics/Business Mathematics/Business Statistics/Quantitative Techniques or equivalent as compulsory/ optional/additional subject or paper.

Career Options: Industry, Teaching, Government.

3. M. C.A. Second Year Lateral Entry Scheme (2 years)

Eligibility: Candidate who have completed Bachelor's Degree of Minimum 3 years duration in BCA, B.Sc. (Computer Science/Information Technology) with 50% marks (45% Marks for SC/ST and differently abled persons with atleast 40% disability) shall be eligible for admission to second year of MCA course.

Student Intake: Total seats in MCA Second Year Lateral Entry= 20% of sanctioned intake + unfilled vacancies in 1st year which shall be over and above supernumerary of the sanctioned intake.

Career Options: Industry, Teaching, Government.

3. *M. Phil. (1½ years)

Students Intake : 15

Eligibility: Master's degree in Computer Science/Computer Engineering/IT or equivalent.

Thrust Areas: Gurmukhi-OCR, Punjabi Speech Synthesis, Pattern Recognition, Digital Image Processing, Natural Language Processing, Parallel Computing and Information Systems, Mobile Networks, Machine Learning.

Career Options: Industry, Teaching, Government.

*Admission to M.Phil and Ph.D. Programme at Punjabi University are based on the Entrance Test to be conducted by Punjabi University. The important instructions and syllabus for Entrance Test is given in a separate Hand Book of Information for M. Phil. & Ph.D.

**Admission to M.Tech Programme at Punjabi University is based on the Entrance Test to be conducted by Punjabi University. The important instructions and syllabus for Entrance Test is given in a separate section of this Hand Book of Information.

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Founded in July 1987, the Department of Computer Science is a centre for research and education at the post-graduate level and one of the top Computer Science departments in North India. The Department was one of the first departments in the region to start the Four-year B.Tech. course in Computer Science in 1987. From the year 1991, the Department introduced three-year Master of Computer Applications (MCA) programme. The Department has started M.Tech. in Computer Science & Engineering course in the year 1995 with the aim to develop core competence in Computer Science and prepare the students to carry out development work as well as take up challenges in research. The other course is M.Phil. in Computer Science, started in the year 2011, to give a boost to research in the domain. In order to accommodate working professionals, a three-year M.Tech. programme in Computer Science & Engineering in Part-time mode (weekend classes) was started in the same year.

The mission of the Department of Computer Science is to prepare post-graduate students for productive careers in industry, academia, and government by providing an outstanding environment for teaching, learning, and research in the theory and applications of computing. There is active involvement of students in research-oriented development and education along with the more traditional development of problem-solving capabilities through classes and laboratory experiences. All the classrooms and laboratories of the Department are Wi-Fi enabled and well equipped with LCD projectors. The department is also actively contributing in the placement of students by arranging special classes for aptitude and soft skills.

The faculty of the Department is actively involved in various research projects and has bagged Rs. 4.28 crore of research grants from various international and national agencies. The faculty members are also involved in high valued and highly technical software development in the areas of Computer Graphics, Digital Image processing, OCR, Punjabi word Processing, Parallel Computing and Information Systems. Our distinguished faculty and their students publish their research in top journals and present their results at leading conferences. The Department's faculty has international recognition as evidenced by their invitations for doing collaborative research work and nominations to the editorial board of prestigious journals. In recognition of its academic and research activities, UGC has brought the Department under its Special Assistance Programme (SAP-DRS) for three consecutive periods of five years each. Under this programme, UGC has sanctioned a grant of Rs. 40.5 lakh for strengthening its research and academic activities in the year 2004 under SAP-DRS-I. The Department has been extended to DRS-II for a period of five years w.e.f. 01-04-2009 to 31-03-2014 and sanctioned a grant of Rs. 51 lakh. From April 1, 2015 the UGC has brought the Department under SAP-DRS-III and sanctioned a grant of Rs. 1.10 crore. The Department has also been sponsored by Department of Science and Technology (DST) for FIST (Level 1) program in 2006 and a grant of Rs. 25 lakh has been sanctioned for strengthening the infrastructure of the Department for teaching and research purposes. DST also sanctioned a grant of Rs. 51 lakh for a period of five years from the year 2014. The Department takes pride in the fact that it is the only Computer Science Department in the northern region to be covered under both SAP and FIST programmes in recognition of its research and academic activities.