Placement Brochure 2012

Dept. of Computer Science and Engineering

IIT Kanpur
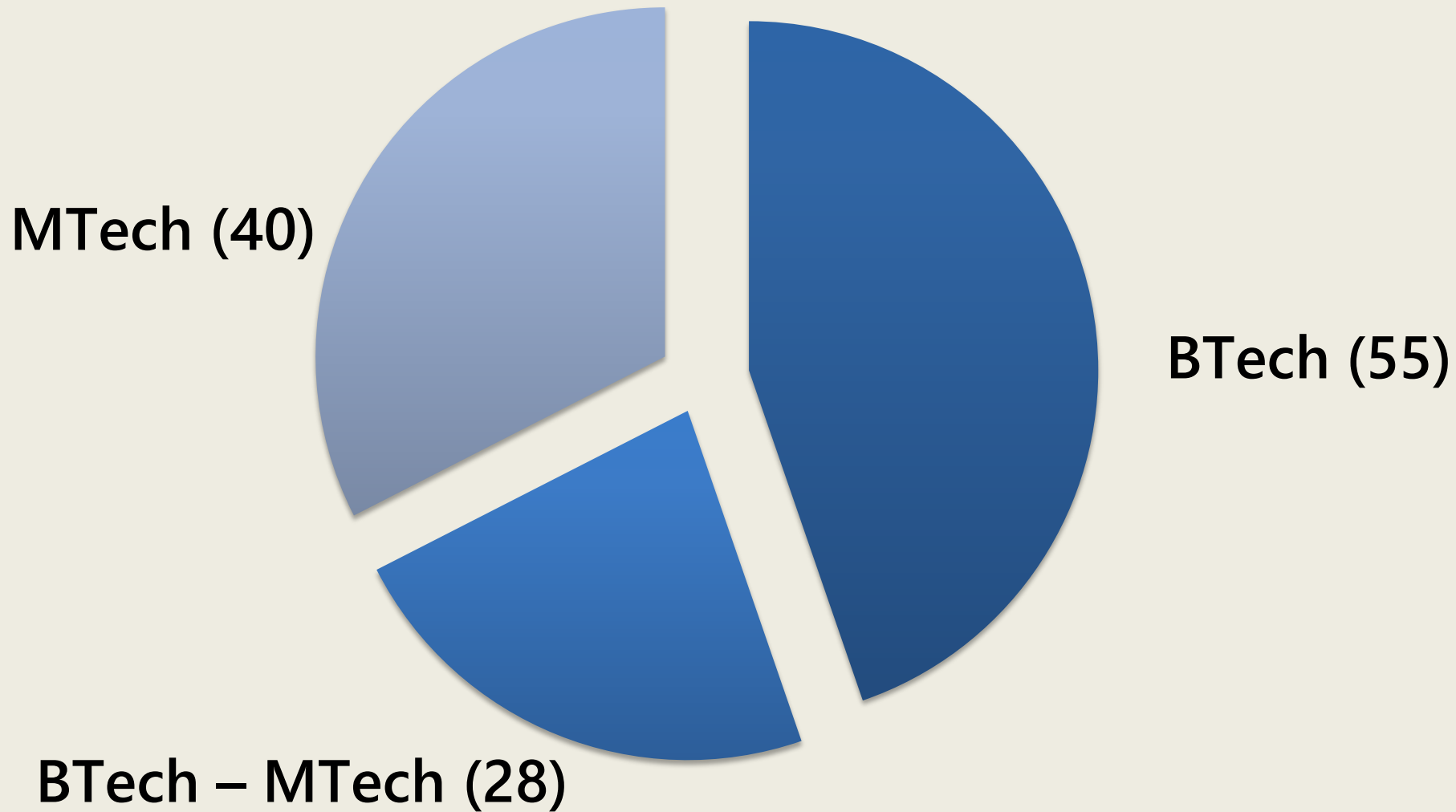
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ABOUT

- First Indian institute to start Computer Science education (1971)
- Alumni includes nation's leading experts, educationists and consultant in the field of Computer Science
- Faculty Strength of 23 with research experience in diverse areas from theory to systems to applications.
- Every year, the department admits students in 4 year B.Tech Program, 5 year Dual Degree Integrated Program and 2 year M.Tech Program.

Student Intake

PROJECT & INTERNSHIP

BTech & BTech-MTech

Admission happen through Joint Entrance Examination (JEE) , with about 0.1 % qualifying.

MTech

Admission happen through Graduate Aptitude Test in Engineering (GATE)

Internship

BTech students at the end of their third year, undergo internship at industries or academic institutes for a practical knowledge of their field.

BTech Project

BTech culminates in a year long individual project, of significant research aptitude.

MTech Thesis

A dedicated one year research thesis, during which the student does not take any courses.

Involves a very thorough study of the field

Student works closely with their supervisors, for quality research work in their field of study.

Courses - Core

- Introduction to Computer Organization
- Computer Architecture
- Operating Systems
- Compiler Design
- Principles of Database Systems
- Principles of Programming Language

- Programming Tools and Techniques
- Discrete Mathematics
- Data Structures and Algorithms
- Theory of Computation
- Computer Networks
- Software Engineering

COURSES - SPECIALIZED

- Randomized Algorithms
- Parallel Algorithms
- Computational Complexity
- Computational Geometry
- Cryptography
- Information Theory
- Automaton Theory
- Functional Programming
- Artificial Intelligence
- Machine Learning
- Multimodal Biometrics
- Data Streaming
- Compiler Optimization
- Data Mining
- Database Indexing and Searching
- Distributed Systems

RESEARCH AREAS

- High Performance Computing
- Algorithms, Graph Theory and Theoretical Computer Science
- Embedded Computing
- Computer Security
- Machine Learning and Data Mining
- Natural Language Processing

- Internet and Web Ontology
- Wireless/Mobile and Computer Networks
- VLSI Testing and Fault Tolerance
- Biometrics
- Compilers and Programming Languages
- Cloud Computing
- Image Processing and Computer Vision

EVENTS

- **Yahoo! HackU** a 24 hour hackathon was held in August 2011.

- **ACM Inter Collegiate Programming Contest** Regional finals were held in December 2011.

- **5th India Software Engineering Conference** was organised by SIGSE under CSI in February 2012.

ACHIEVEMENTS

- **Dr. Manindra Agrawal** was awarded the H K Firodia award for the year 2011.

- **Dr. Rajat Moona** joined CDAC as its Director General.

- **Anurag Awasthi and Avani Nandini** won the Popular Choice award at the Intel Embedded Challenge 2011 for their project "Embedded Eyes for the Blind".

- **Shouvik Sachdeva and Akash Goel** were awarded the Aditya Birla scholarship for the year 2011.

- **Ankit Kumar and Ashish Gupta** were awarded the World Quant Award for the year 2011.

- **Ashish Agrawal, Rohit Gurjar and Shubhadip Mitra** were awarded the TCS PhD Fellowship

ACHIEVEMENTS

- **Parul Agarwal, Avani Nandini and Kritika Singh** won the Google India Anita Borg Memorial Scholarship Award for 2012.

- **Shashwat Mishra and Varun Kumar Modi** won second prize at the Aspiring Minds Machine Learning Competition 2012.

- **Abhimanyu M A, Pratik Moona and Raziman T V** qualified for ACM ICPC World Finals 2012.

- **Shashwat Mishra and Ankit Gupta** won the MLSP 2012 Amazon Data Science Competition

- **Akhil Arora, Ankit Gupta, Nitesh Bagmar, and Shashwat Mishra** won the 2nd prize in Plant Identification Challenge under ImageCLEF in 2012.

Academic Activities

- **SIGTACS –** Special Interest Group in Theoretical Aspects of Computer Science

- **SIGDATA –** Special Interest Group in Data Mining and Indexing.

- Seminars and talks are regularly organised with both external and in-house experts.

INTERNSHIPS & INDUSTRIAL EXPOSURE

- At the end of 3rd year, the UG students undergo summer internship for a period of 8-10 weeks, in software development and research, at various companies and universities, around the globe.

- The internship is instrumental in the development of professionalism in students, and providing them a closer look at current industry needs and ongoing areas of research.

THE EXTRA EDGE

- Extracurricular activities help students explore their passions.
- A wide variety of clubs encompassing literary, cultural, technical and adventure fields.
- Large number of activities are completely managed by students including
  - **Techkriti** - Global Technical and Entrepreneurship Festival
  - **Antaragni -** Global Cultural Festival
  - **Udghosh -** Inter-College Sports Meet
  - **Hall Executive Committee**
  - **Counselling Service for students**
  - **Students Placement Office(SPO)**

RELEVANT STUDENT ASSOCIATIONS

- **Programming Club (Pclub)**
  - Conducts algorithmic and specialized programming contests
  - Organizes Hackathons
  - Mentors summer projects over a period of 8 weeks
  - Conducts lecture series on various topics

- **Association of Computing Activities (ACA)**
  - Is in charge of various departmental special interest groups.
  - Trains students for ACM ICPC contests.
  - Conducts summer school on introductory topics in CS
  - Mentors theoretical projects over a period of 2 semesters

INFRASTRUCTURE

- 3 Gbps network
- 15 wireless access points (100 Mbps) placed in the building to serve wireless needs
- One 24-core and two 16-core machines procured for multi-core research
- Mirrored major OS distributions with network installation service. Students are deeply involved in Lab Activities.
- Two Xeon linux servers provide NFS service for all CSE Lab users.
- Internet website & personal home pages are hosted on Linux (Debian) based xeon server.
- Departmental Library (besides the Central Library)

CONTACT

- **Students' Placement Office**

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- **Departmental Placement Co-ordinators**

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