



Centre for Career Development
Indian Institute of Technology Guwahati

**Placement
Brochure**

Class of 2024

B.Tech Mathematics and Computing
M.Sc. Mathematics and Computing

**Department
of Mathematics**



About The Institute

Indian Institute of Technology Guwahati

Established in 1994 as an Institute of National Importance, IIT Guwahati has become a preferred destination for people passionate about learning and innovation. IIT Guwahati has been ranked among the Top 100 Young Universities in the world by the Times Higher Education, one of the two Universities from BRICS nations. IIT Guwahati has several factors contributing to how, in a short time, it has established itself as one of the country's best institutes of its kind. The programmes and courses offered at IIT Guwahati are perpetually evolving to adapt to the ever-changing global requirements. The diversity of the fields of study has helped the institute become one of the nation's nerve centres for research, development, and technical education. The faculties ensure that the students are ready to face the challenges of the professional world by providing them with a sound conceptual understanding of their respective disciplines. The institute also offers a plethora of opportunities to students for their holistic development through the excellent facilities that it has for sports and general extracurricular activities.

About The

Department of Mathematics

The Department of Mathematics, IIT Guwahati, was formed in 1995. The department offers B.Tech. (Maths & Computing), M.Sc. (Mathematics; Maths & Computing) and Ph.D. programs. The current total enrolment in these programs is 227, 117 and 118, respectively. The academic and research activities are supported by 40 faculty members.

Faculty

The department comprises encouraging and energetic faculty members guiding students through every phase of their career. Over the years, the department has strengthened its research activities, introduced new academic programs, and contributed to society by participating in various activities.

Students

The final-year students from the Department have completed internships in companies and research labs in India and abroad and have worked in national and international sponsored projects as part of the curriculum. The Department has an excellent placement record over the past years, with students working in leading companies. Since its inception, the Department has consistently been recognized worldwide for its research, teaching, and training excellence. The Department has churned out batches of motivated and dedicated students with a commitment and competence to pursue careers, both in academia and industry, in Mathematics, Computer Science, Probability, Statistics, and Finance.



Message from Head of the Department

PROF. NATESAN SRINIVASAN

Dear Recruiter,

I am pleased to introduce the 23 batch of students graduating with an M.Sc and/or B.Tech in Mathematics & Computing from the Department of Mathematics. The program has core components of Mathematics, Numerical Computing, and Computer Science, which provide a sound foundation for the skills needed in industrial practice. A dedicated team of faculty members with expertise in diverse domains trains the students.

The curriculum includes compulsory courses on Algorithms, Numerical Analysis and electives on Databases, Finance and Advanced Mathematics. Our department is equipped with state-of-the-art computing facilities that are accessible to all students at any time without restriction.

The graduates of the previous batches have joined prestigious academic institutes and taken up positions in finance, software, and other industries. I firmly believe our current batch of students is also well prepared to undertake industrial assignments and add value to your organization.



About The Program

B.Tech Mathematics and Computing

The 4-year programme, B.Tech. in Mathematics and Computing, is a unique programme and the first of its kind in the country. The students are admitted through JEE (Advanced). The curriculum for this program is designed to meet the need for sophisticated mathematics in modern scientific investigations and technological innovations.

The program has three components: mathematics, computing, and financial engineering. These strong mathematical and analytical components form the basis for the introduction of technological aspects of computing and finance. Consequently, the programme, which is run by a team of committed faculty as instructors, produces a group of students with multiple skills in mathematics, computer science, and financial engineering.

Since its inception in 2006, this program's success has been manifested through internships, job placements, and admissions for higher studies at premier institutions, both in India and abroad.



About The Program

M.Sc. Mathematics and Computing

The program started in 2000 and has encouraged several other institutes and universities nationwide to initiate similar interdisciplinary programs. The main objective of the program is to create academicians and tailor-made technocrats who can immediately deliver the know-how in Academic and Developmental activities of the Software and Financial industries.

The course spans four semesters over two years and includes a seminar course and a final semester project. The curriculum focuses on providing in-depth knowledge of theoretical and computational aspects of Mathematics and Computer Science.

This program attracts not only undergraduate students with a background in Mathematics but also students from various engineering disciplines. The program admits the students based on the scores obtained in IIT JAM conducted by different IITs and IISC.



Course Structure

COMPUTER SCIENCE

- Data Structures and Algorithms (Theory & Lab)
- Database Management System (Theory & Lab) *
- Network Flow Algorithms *
- Parallel Computing *
- Theory of Computation

MATHEMATICS

- Complex Analysis
- Differential Equations
- Discrete Mathematics
- Functional Analysis
- Graph Theory *
- Linear Algebra
- Modern Algebra
- Number Theory and Cryptography *
- Numerical Analysis
- Numerical Linear Algebra
- Numerics of PDE
- Optimization
- Real Analysis
- Topology *

PROBABILITY, STATISTICS AND FINANCE

- Advanced Statistical Algorithms *
- Mathematical Finance *
- Mathematics of Financial Derivatives *
- Probability Theory
- Statistical Methods and Time Series Analysis *
- Stochastic Calculus for Finance *

***Elective Courses**

Groupwise Research Areas

COMPUTER SCIENCE

- Complexity Theory
- Computer Networks and Network Security
- Distributed Computing
- Formal Languages and automata theory
- Wireless Sensor Networks

MATHEMATICS

- Algebraic Geometry
- Combinatorics
- Complex Dynamics and Fractals
- Computational Fluid Dynamics
- Fractional Differential Equations
- Graph Theory
- Stochastic Models for Chronic Leukemia

PROBABILITY, STATISTICS AND FINANCE

- Clinical Trial
- Health Data Science
- Life Time Data Analysis
- Mathematical Finance
- Probability Theory
- Q-learning (Reinforcement Learning)
- Statistical Theory

Sponsored Projects

| Investigator | Name of Project | Sponsor | Amount | Duration |
|-----------------------|--|-----------|-------------|----------|
| Rupam Barman | Distributions of certain partitions functions | SERB | 27.30 Lakhs | 3 years |
| Natesan Srinivasan | Teachers Associateship for Research Excellence (TARE) scheme | SERB | 18.30 Lakhs | 3 years |
| Swaroop Nandan Bora | Analytical and Inverse Modelling for Estimating Aquifer Parameters of a Confined Aquifer | DST | 7.92 Lakhs | 2 years |
| Partha Sarathi Mandal | Fault-tolerance in Priority Evacuation and Mutual Visibility of Mobile Robots | SERB | 6.60 Lakhs | 3 years |
| Rajesh Srivastava | Generalization of Cartwright's Theorem | SERB | 6.60 Lakhs | 3 years |
| S.P. Chakrabarty | Stochastic Models for Chronic Myeloid Leukemia | SERB | 6.60 Lakhs | 3 years |
| Chandal Pal | Risk-sensitive stochastic games for continuous-time stochastic processes. | DST, SERB | 6.60 Lakhs | 3 years |
| Arup Chattopadhyay | Trace Formulae and Multivariable Operator Theory | DST | 6.60 Lakhs | 3 years |

Previous Recruiters

 **accenture**

Deloitte.

 **Quadeye**

 **BCG** BOSTON
CONSULTING
GROUP

 **Rakuten**

BANK OF AMERICA 

 **rubrik**

 **amazon**

 **Google**  **ORACLE**

 **Microsoft**

 **sprinklr**

 **DE Shaw & Co**

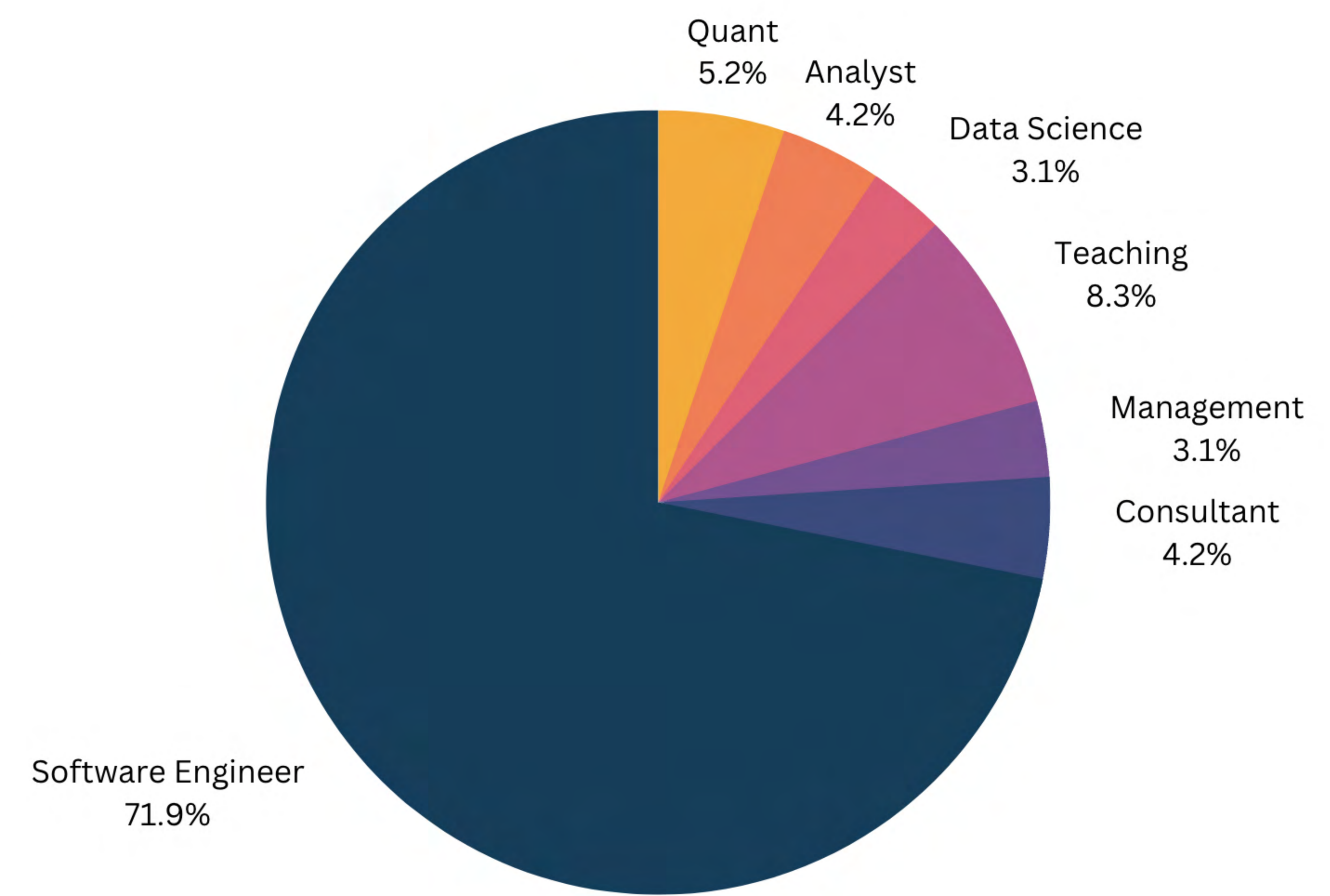
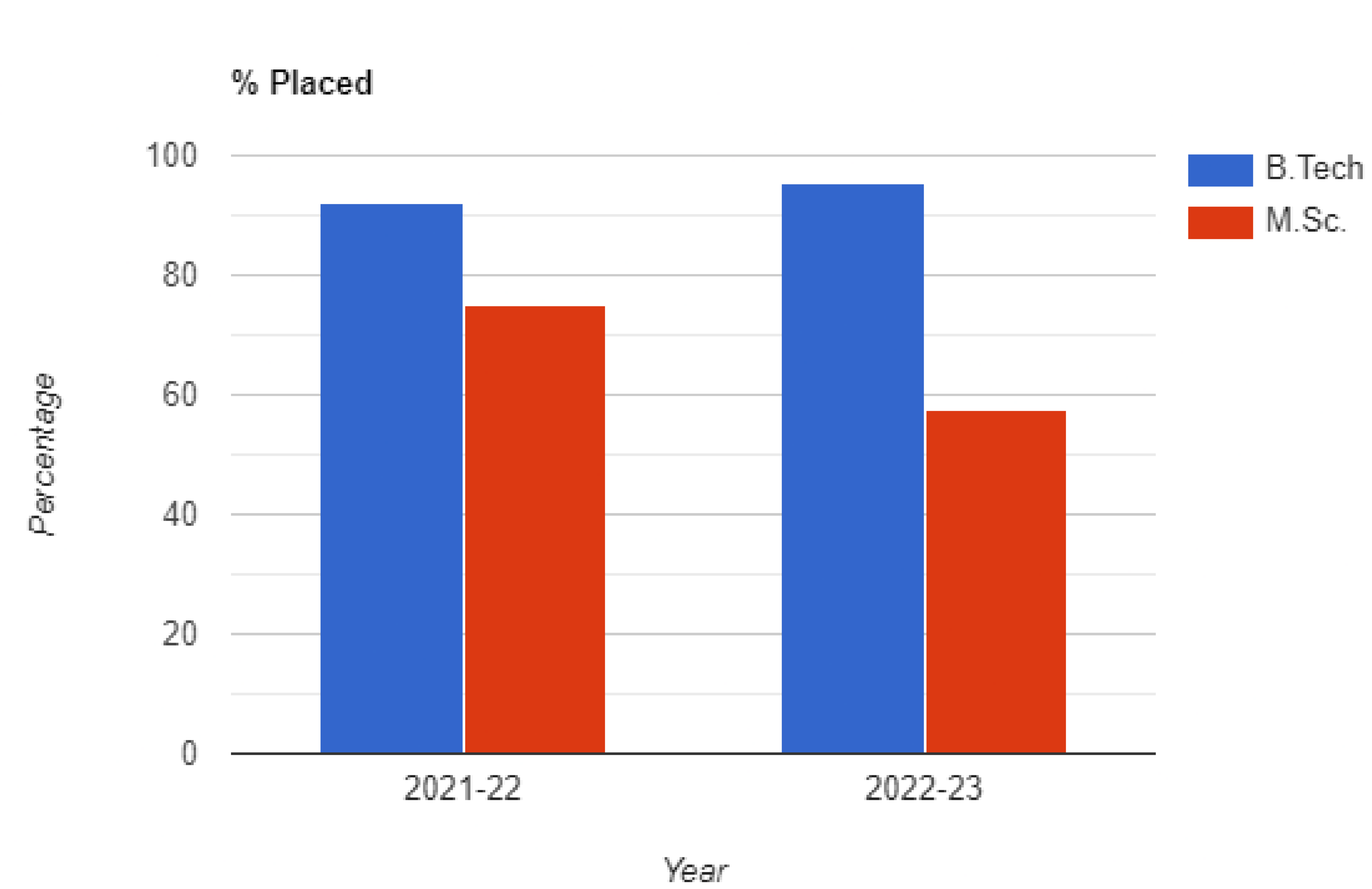
 **JPMORGAN
CHASE & CO.**

 **SQUARE POINT**

 **Goldman
Sachs**

AND MANY MORE

Past year Placement Statistics



Alumni Insights



SHUBHAM AGARWAL

SQUAREPOINT CAPITAL, LONDON

As a Mathematics and Computing student, my education provided me with a broad range of technical skills that were highly relevant to the finance industry.

Mathematics and Computer Science are both fields that emphasize logical thinking, analytical reasoning, and problem-solving. These skills are highly valued in the finance industry, where individuals are often called upon to solve complex problems and make data-driven decisions.



RAUNAK TIWARI

SOFTWARE ENGINEER, GOOGLE

Throughout my coursework, I gained a strong understanding of the fundamentals of operating systems and networks, as well as specialized topics like probability, statistics, and stochastic calculus. In addition to technical skills,

Mathematics and Computer Science are both fields that emphasize logical thinking, analytical reasoning, and problem-solving. These skills would be invaluable to me in my career, as it would help me solve complex problems and make data-driven decisions.

Alumni Insights



PRIYANSHU GUPTA

SOFTWARE ENGINEER, RAKUTEN (JAPAN)

The MSc in Mathematics and Computing program at IIT Guwahati provides a strong foundation in mathematical and computational concepts, which are essential for developing complex software applications.

The program covers a wide range of topics such as algorithms, data structures, machine learning, and cryptography, among others. The diverse curriculum helps students develop a broad understanding of computer science concepts and their applications, which is highly valued in the software development industry.



ETISHA GARG

DEVELOPER ADVOCATE, ARCANA NETWORK

The MSc in Mathematics and Computing program at IIT Guwahati equips students with a strong foundation in theoretical and practical computer science concepts, along with industry exposure, which helps them excel in the software development industry.

The exposure to real-world problems and the opportunity to work on projects with industry experts helps students develop critical thinking, problem-solving, and collaboration skills, which are essential for success in the software development industry.

Contact Us



DR. LALIT MOHAN PANDEY
HEAD OF CENTRE FOR CAREER DEVELOPMENT
+91-361-258-2171/3201
lalitpandey@iitg.ac.in



DR. PALASH GHOSH
FACULTY PLACEMENT COORDINATOR
+91-361-258-3729
palash.ghosh@iitg.ac.in



MR. ANKUSH PATANWAL
OVERALL PLACEMENT COORDINATOR
+91-88260-31449
a.patanwal@iitg.ac.in



MR. KUNAL KARTIK
DEPARTMENT PLACEMENT COORDINATOR
+91-76000-65167
kunal.kartik@iitg.ac.in



MR. DIBYENDU DEY
DEPARTMENT PLACEMENT COORDINATOR
+91-85978-90618
d.dibyendu@iitg.ac.in