



PLACEMENT BROCHURE (2014-2015)

**DEPARTMENT OF MATHEMATICS
B.Tech. (MATHEMATICS AND COMPUTING)**



Message from the Head

It is my immense pleasure to introduce the sixth batch of students graduating in B.Tech. (Mathematics and Computing) from our department in 2015.

The 4-year programme, B.Tech. in Mathematics and Computing, is a unique programme and the first of its kind in the country. The curriculum for this program is designed to meet the need of sophisticated mathematics in modern scientific investigations and technological innovations. The programme has three components: mathematics, computing and financial engineering which are perfectly blended so that the strong mathematical and analytical components that are in-built in the curriculum form the basis on which the technological aspects of computing and finance are developed. 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.

Though the programme is relatively new, its success has already been manifested through internships and job placements, and admissions for higher studies at premier institutions in the last four years. Further, I am happy to state that many of the students of current batch have completed internship in industry, academia and financial institutions, both within India and abroad.

On behalf of the department, I take great pleasure in inviting you to participate in the placement process at the campus. I am sure that our rigorous training has prepared our students to meet the professional requirements of their potential employers. I look forward to a bright future of our students with your continued support.

Prof. Bhaba K. Sarma
Head, Department of Mathematics



About the Department

The Department of Mathematics, since its inception in 1995, has emerged as a national centre for excellence in mathematics and allied areas, in terms of research, teaching and mentoring of students. It is the nodal point of mathematical sciences in the north-eastern part of the country, contributing to research and training in this region. The department has churned out batches of motivated and dedicated students with the commitment and competence to pursue careers both in academia and industry in the areas of mathematics, computer science and finance.

IIT Guwahati has played a pioneering role by being the first mathematics department in an Indian institute to offer a B.Tech. degree in Mathematics and Computing, providing a fusion of mathematics, computer science and financial engineering.

FACULTY

The department is home to 32 dedicated mathematicians as faculty members. A good number of distinguished mathematicians from various reputed universities and organizations visit the department every year.

STUDENTS

The graduates of the department imbibe the analytical skill that comes from training in mathematics. They effectively can use this training and background in mathematics to work on challenging problems whether they are pursuing higher studies or working in the industry.



About the Programme

Being first of its kind among the IITs in the country, the main objective of the programme is to create tailor-made technocrats who can immediately deliver the know-how in developmental activities of the financial or software industries.

The curriculum focuses on providing in-depth knowledge in theoretical and mathematical aspects of Finance, Computer Science and Mathematics.

The duration of the course is eight semesters spanning over four years which includes a final year project. Admission to the program is based strictly on IIT-JEE rank.

Number of Students :- 46

Competencies

Algorithm Design & Programming
Operating Systems
Database Design and Architecture
Network Design and Analysis
Information Technology
Web Design and Development

Financial Mathematics
Business Analysis
Market Research
Data Analysis and Statistics
Quantitative and Financial Analysis
Portfolio Management & Risk Analysis

Analytics
Cryptography
Pure Mathematics
Scientific Computing
Operations Research
Research and Development



Course Structure

COMPUTER SCIENCE

Data Structure and Algorithms - Theory & Lab
Digital Design
Computer Organization and Architecture
Formal Languages and Automata Theory
Theory of Computation
Operating Systems - Theory & Lab
Data Communications
Computer Networks - Theory & Lab
Databases - Theory & Lab
Functional and Logic Programming*

FINANCE

Monte Carlo Simulation - Theory & Lab
Financial Engineering - I
Financial Engineering - II - Theory & Lab
Stochastic Calculus for Finance
Statistical Analysis of Financial Data - Theory & Lab
Computational Finance - Theory & Lab
Portfolio Theory and Performance Analysis*
Financial Risk Management and Modelling*

MATHEMATICS

Discrete Mathematics
Probability Theory and Random Processes
Real Analysis
Modern Algebra
Scientific Computing - Theory & Lab
Optimization
Matrix Computations - Theory & Lab
Number Theory and Cryptography *
Mathematical Modelling and Numerical Simulation*

MINOR IN MATHEMATICS

Real Analysis
Mathematical Statistics
Modern Algebra
Differential Geometry
Scientific Computing

*Elective courses



Summer Internships

The students of the graduating batch of 2015 have successfully completed their internships in the following companies and universities :-

COMPANIES:

Amazon
Adobe Advanced Technologies Lab
Google
Futures First
Samsung -SIRB
Capital IQ
Microsoft
TCS Quantitative Finance
Wipro Limited
Siemens
Reserve Bank of India

UNIVERSITIES:

JAIST, Japan
Verimag Lab, France
Ecole Centrale Paris, France
KAIST, South Korea
Universite de Montreal, Canada
Institute of Computational Science, Lugano, Switzerland
Imperial College Business School, London, UK
Eindhoven University of Technology, Netherlands
Institute of Statistical Mathematics, Tokyo, Japan
University of Stralsund, Germany
Victoria University of Wellington, New Zealand
Indian Institute of Science, Bangalore
Indian Institute of Foreign Trade, Kolkata
Indian Institute of Management (IIM), Calcutta
ULM University



Past Recruiters

Altair Engg
Adobe
Amazon
Amadeus
Bank of America
Capital IQ
CA Technologies
Cisco Systems
Cognizant Engg.
Credit Suisse
Deloitte
Directi
Edelweiss
Ericsson Global
Evalueserve
EXL Service - DA
Facebook
FICO
Flipkart - GT
Flipkart - SDE/MT

Futures First
Google- Mountainview US
Global Analytics
Goldman Sachs -Strategies Group
Goldman Sachs - Tech Division
HP R&D
IBM - GBS
ICICI
Infosys
InMobii
iRunway
Microsoft
Microsoft IDC
Myntra
Oracle
Oracle - AD
Oracle - OFSS
Oracle - IPE
Oracle - System
Paypal/e-Bay

PWC
Samsung - SIRB
SCA Tech
Schlumberger Asia
TCS
TCS-CTO (Quantitative Finance)
Verizon
Virtusa
Wipro
Xerox Research
Yahoo
YMedia Labs
ZS Associates
3D Solid Compression



Contacts

Prof. Natesan Srinivasan
Faculty-In-Charge,
Training & Placement
Tel: +91-361-2582171, 2692173

Postal Address:
Training and Placement Cell
IIT Guwahati
Guwahati-781039
Assam, India

Web:
www.iitg.ernet.in/placement
www.iitg.ernet.in/math

Email:
placement@iitg.ernet.in

Dr. Gautam K Das
Faculty-In-Charge (Placement)
Department of Mathematics
Tel: +91-361-2582626
Email: gkd@iitg.ernet.in

Aditya Mittal
Student Placement Representative
Mobile: +91-8876073873
Email: aditya.m@iitg.ernet.in

Manan Bhutani
Student Placement Representative
Mobile: +91-8011201661
Email: manan@iitg.ernet.in