



భారతీయ సాంకేతిక విజ్ఞాన సంస్థ హైదరాబాద్
भारतीय प्रौद्योगिकी संस्थान हैदराबाद
Indian Institute of Technology Hyderabad

Mathematics and Computing

2024-25

Placement Brochure



About the Department

- The Department aims to foster eclecticism and excellence in mathematical education striking a balance between abstraction and application.
- It is renowned for its commitment to providing students with a strong foundation in both mathematics and computer science. This prepares graduates for success in academia and the tech industry from the start of their academic journey.
- The statistical and computational courses are tailored to groom students for success in fintech and finance roles. These courses develop skills in data analysis, algorithmic trading, risk management and ML positioning graduates to excel in the rapidly changing fintech and finance industries.

Programmes offered by the Department

B.Tech MnC (4 years): The B.Tech programme in Mathematics and Computing provides opportunities to students in the field of mathematics, computer science, artificial intelligence, data science, finance and quantitative research.

M.Sc. (2 years): The M.Sc. programme in mathematics aims to produce students with a good-firm background in theoretical and applied mathematics, supplemented with the required computational skills.

Ph.D (Doctoral Programme): The department has a lively research environment with an active and spirited group of researchers.

Minor: The Mathematics department provides a Minor in Mathematics and Computing for B.Tech students who fulfill specific credit requirements from courses at level 3 or higher.



Message from Founder Director

“The B.Tech in Math and Computing at IITH gives a unique opportunity to JEE entrants who want to pursue a career in mathematics. It also injects a strong mathematics component in the technological ecosystem of IITH.”

- Prof. U.B Desai, Founder Director, IIT Hyderabad



Message from Head Of Department

“Students from Maths and Computing, integrate principles from mathematics, computer science, and engineering, fostering a holistic problem-solving mindset.”

-Dr G.Ramesh

Head of Mathematics Department, IIT Hyderabad



JEE Advanced Cutoff for MnC Branch(IIT-H) in the Previous years

Year	Opening Rank	Closing Rank
2023	660	1030
2022	658	1135
2021	642	1075
2020	601	925
2019	661	694

Cutoff for MnC 2021: Opening rank- 642 Closing rank- 1075

Why Recruit Us

- The institute is among the early pioneers in introducing the B.Tech MnC program.
- The program encompasses a comprehensive curriculum aimed at providing a strong foundation in Mathematics, Computer Science, Artificial Intelligence, Statistics, and Electrical Engineering courses.
- Students undergo extensive training in emerging areas, including Computational Intelligence, Coding, Cryptography, and Statistical Data Analysis, to prepare them for the challenges of the industry.
- The institute emphasizes the development of multi-skilled professionals capable of excelling in both industry and academia, making them highly sought-after assets for the workforce.
- The students are trained to tackle variety of problems in industries like Tech, Finance, AI and Analytics.
- Students are actively engaged in competitive coding, leveraging their strong mathematical skills to achieve excellence.

Curriculum

Mathematics

- **Combinatorics**
- **Probability Theory**
- **Number Theory**
- **Linear Algebra**
- **Bayesian Statistics**
- **Groups and Rings**
- **Real Analysis**
- **Numerical Analysis**
- **Functional Analysis**
- **Topology**

Computer Science

- **Data Structures and Applications**
- **Algorithms**
- **Theory of Computation**
- **Computer Networks**
- **DBMS**
- **Operating Systems**
- **Compilers**

AI, Statistics, EE & Finance

- **Intro to AI**
- **Convex Optimization**
- **Applied Statistics**
- **Regression Analysis**
- **Time Series**
- **Probability in Finance**
- **Economic Forecasting**
- **Digital Circuits**
- **Linear Systems and Signal Processing**

Keeping up with Industry trends

QUANT & FINANCE

- Courses like Probability, Stochastic Calculus, and Time series analysis build a strong backbone for Quantitative Analysis and Trading roles
- Students from MnC comprised of 50% of the Inter-IIT quant problem statement team.
- Minor in Economics, provide strong fundamentals of Economics to help with Finance roles.
- Students from MnC are an active part of the institute's finance clubs.

DATA SCIENCE & ML

- Courses like Intro to Artificial Intelligence, Convex Optimization, Applied Statistics, Regression Analysis, and Bayesian Statistics form a strong foundation for data science and ML Roles
- Apart from mathematical rigour most courses have a strong technical/industrial component to them
- Students can also do a minor in Artificial Intelligence or take cross-department research projects.
- A good number of students are active in the AI club, Epoch.

Projects taken up by MnC students

Core ML

- Extrapolations in Adaptive Bayesian Optimization.
- Effect of High Dimensions on Kernels.
- User Return Time Prediction in Recommendation Systems.

Statistics and Finance

- Cluster Randomized Designs for Binary Responses
- Gaussian Mixture models in survival data analysis.
- Time Series Analysis of NSE Stock Prices
- Risk Return Relationship : Linear or Non Linear Trade off?
- BTC-USD Algorithmic trading bot.

Deep Learning

- Human Path Prediction using Social LSTMs
- Sparse Adversarial Attacks in Machine Learning
- Attacking the Intelligence of Neural Nets By pruning vulnerable filters

CS

- LVM and SHM Mapping Kernel Driver
- Concurrency Based Chat Server
- Crypto-primitives using Multivariate Ideal Lattices.
- Image segmentation through graph Min-Cut.



Past Recruiters



Contact Us

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Please reach out to the Office of Career Services at IITH for any further queries <https://ocs.iith.ac.in/>

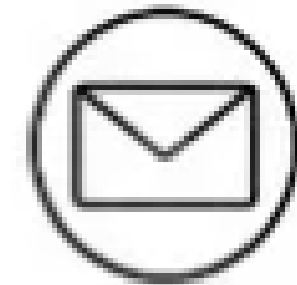
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Thank You



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