

Offered by

Department of Mathematics

## At a Glance

Indian Institute of Information Technology, Lucknow (IIIT Lucknow) is one of the 20 IIITs being set up by the Central Government in Public Private Partnership (PPP) mode. The mission of IIIT Lucknow is to be a unique and world class nucleating "Apex Center of Excellence" in the area of Information Technology so as to enhance India's technological strength in Information Technology. It currently offers all the amenities, academic and non-academic to its students that can help them flourish and serve the nation with all their apprehension in the various fields of technology.

The Indian Institute of Information Technology's Mathematics faculty functioned under the Department of Information Technology since 2015. The Department of Mathematics officially came into existence in the year 2020. It gives students the mathematical grounding needed to comprehend all engineering and applied science courses. In addition, it offers core and elective courses that teach students how to create, analyse, and solve engineering and management problems using mathematical approaches.

The department provides M.Sc. and Ph.D. programmes in Mathematics. By the year 2023, the department is planning to launch a 2-year M.Sc. Data Science programme. The programme aims to develop skilled professional workforce that is prepared to address the increasing needs in the rapidly expanding area of big data analysis.





### Eligibility & Selection

# JAM Joint Admission Test for Masters

Bachelor's degree (B.A./ B.Sc./ B.Stat. / B.Math./ B.Tech/ B.E. or equivalent) with a background in Mathematics, Statistics or Computer Science. Those in the final year of their undergraduate program are also eligible to apply. Selection for the programme will be through Joint Admission Test for Masters (JAM).

### **How to Apply**

**CCMN 2023** 

https://ccmn.admissions.nic.in/

CCMN-2023 is a common platform for candidates to apply for M.Sc. programmes, based on their JAM score of year 2023, in NITs, IIITs and some GFTIs (for details, please refer to the list of participating Institutes on the CCMN website). This centralized system provides a common and convenient platform for online counselling wherein the candidates can fill in a single online application from their homes and apply to all programmes in all the participating institutions to which they are eligible.

## **Course Structure**



#### **Second Semester**

- Big Data Analysis
- Deep Learning
- Linear Algebra & Its Applications for Data Science
- Regression & Classification
- Competitive Coding
- Thesis I



#### **Fourth Semester**

- Reinforcement Learning
- Elective II
- Thesis III

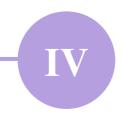
#### **First Semester**

- Computational Thinking through Programming
- AI & ML with Python
- Mathematical Methods for Data Science
- Probability and Statistics
- Professional Communication
- Competitive Coding
- Yoga & Fitness



#### **Third Semester**

- Design and Analysis of Algorithms
- Bayesian Data Analysis
- Mathematical Finance
- Elective I
- Thesis II



#### **Pool of Electives**

- Algorithmic Graph Theory
- Natural Lanuage Processing
- Data Mining and Warehousing
- Data Engineering

- Topological Data Analysis
- Numerical Optimization
- Algorithmic Trading
- Financial Data Analysis



## **Fee Structure**

	Semester I	Semester II	Semester III	Semester IV
Total Fees (Without Hostel)	72000	51500	53500	51500
Total Fees (Single Occupancy*)	95000	74500	76500	74500
Total Fees (Two Seated Occupancy*)	85000	64500	66500	64500
Total Fees (Three Seated Occupancy*)	81000	60500	62500	60500
Total Fees (More than Three Occupancy*	78000	57500	59500	57500
Mess Fees	17500	15000	15000	15000

## **Seat Matrix**

Open	Open-PwD	EWS	SC	ST	OBC-NCL	Total
11	1	3	5	2	8	30



## **NEP 2020 Implementation**

### **Multiple Entry Multiple Exit**

According to 11.5 of NEP 2020 (pp 37), we have implemented multiple entry and exit point for our M.Sc. 2023 batch onwards in the following manner:

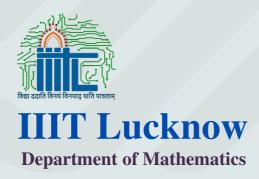
- Any student can leave the course after FIRST year of M.Sc.; such students will be granted **Post Graduate Diploma in Data Science**.
- Cooling Period: The student who wants to leave his/her study after FIRST year can leave, however to complete the M.Sc. Degree, (s)he has to come back and join the course directly in SECOND year within the block period of two years. (S)He will get at most four years to complete M.Sc. degree.

### **Multidisciplinary Education**

According to 11.7 of NEP 2020 (pp 37), a course in Professional Communication and Sports have been included in the course structure.

### **Multi-Mode and Digital Education**

According to the point 24 of NEP 2020 (pp 58), the subjects which are running in online mode, will be evaluated through proctored online examination.



The global demand for data scientist talent continues to grow, as a result, our course qualification will provide a strong boost to your employability. Our goal is to help you develop into an agile, skilled data scientist, adept at working in a variety of settings and be able to meet the challenges and rewards of interdisciplinary teamwork.

### Contact:



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