

## NILKAMAL SCHOOL OF MATHEMATICS, APPLIED STATISTICS & ANALYTICS

# Ph.D. Admission 2025-26



"Inspiring Excellence, Shaping the Future with Data and Innovation"

# Doctor of Philosophy (Ph.D.) Programmes

Mathematics | Statistics | Data Science



## **About the School**

The NMIMS Nilkamal School of Mathematics, Applied Statistics, & Analytics (NSoMASA) is committed to advancing research and innovation across mathematical sciences, statistics, and data analytics. Our dynamic academic environment supports undergraduate, postgraduate, and doctoral programs, fostering interdisciplinary exploration, theoretical advancements, and practical applications that equip students and researchers with the skills to contribute meaningfully to academia, industry, and society.

Research at NSoMASA spans diverse areas, including mathematical modeling, statistical analysis, artificial intelligence, machine learning, and data science. Our faculty and scholars engage in solving complex challenges across multiple domains, ensuring that emerging methodologies contribute to real-world solutions. Whether in quantitative finance, healthcare analytics, computational intelligence, or risk modeling, our research endeavors aim to push the boundaries of knowledge while maintaining relevance to industry needs.

In addition to research excellence, NSoMASA offers robust undergraduate and postgraduate programs designed to provide students with a strong foundation in mathematics, statistics, and data analytics. These programs integrate hands-on learning, industry-driven courses, and research opportunities, allowing students to develop expertise in cutting-edge technologies and methodologies that prepare them for both academic and professional success.

NSoMASA provides state-of-the-art research facilities, including high-performance computing resources, advanced statistical software, and Al-driven analytics platforms. We support a culture of critical thinking, problem-solving, and knowledge creation, ensuring our researchers and students have the tools and mentorship necessary to make significant contributions in their fields.

Our vision is to establish NSoMASA as a hub for pioneering research and academic excellence that not only advances theoretical foundations but also creates practical, data-driven solutions for modern challenges. We invite prospective students and researchers to be part of our thriving academic community, where innovation, collaboration, and discovery drive the future of mathematics, statistics, and data science.

## **Message from Dean**

Welcome to the NMIMS Nilkamal School of Mathematics, Applied Statistics, and Analytics (NSoMASA)—a leading institution dedicated to research, innovation, and academic excellence in the fields of Mathematics, Statistics, and Data Science. Our commitment to fostering cutting-edge research in pure and interdisciplinary domains positions NSoMASA as a premier hub for aspiring scholars and researchers.

Research plays a pivotal role in shaping modern advancements across industries. At NSoMASA, we empower our PhD scholars with a strong theoretical foundation, computational expertise, and problem-solving skills to drive impactful discoveries in mathematical modeling, statistical inference, artificial intelligence, and data-driven decision-making. Our research programs are designed to challenge conventional thinking and push the boundaries of knowledge through scientific inquiry, advanced analytics, and emerging technologies.

Our **distinguished faculty and research mentors** bring deep expertise across diverse domains, ensuring that PhD scholars receive **high-quality mentorship and access to state-of-the-art research infrastructure**. We provide a platform where theory meets practice, enabling researchers to work on real-world challenges in finance, healthcare, technology, and beyond.

As you embark on your **doctoral research journey** with us, I encourage you to explore, innovate, and contribute to the ever-evolving landscape of **mathematical sciences**, **statistical methodologies**, and **Al-driven analytics**. NSoMASA is committed to **nurturing intellectual curiosity**, **fostering a culture of excellence**, **and producing thought leaders** who will shape the future of research and industry applications. We invite passionate scholars to join our vibrant research community and become a part of this transformative journey.

Professor & Dean NSoMASA

## Ph.D. in Mathematics

The **Ph.D.** in **Mathematics** focuses on **theoretical and applied research** in core and interdisciplinary mathematical areas. This program prepares researchers to work in Analysis, Computational Mathematics, Numerical Analysis, Mathematical Modelling using Differential Equations, Mathematical Biology, Wavelet Analysis, Approximation Theory.

**Duration of the Programme:** Minimum 3 years & Maximum 6 Years (including course work)

Intake: 10 Seats

**Duration of the Programme: Minimum 3 years & Maximum 6 Years** (including course work)

**Eligibility Criteria:** The basic qualification criteria for admission to the Ph. D. in Mathematics Programme shall be as under:

- Candidates seeking admission to the Ph.D. programme in Mathematics shall have a Master's degree with Mathematics as a major subject from a recognized university with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assuring quality and standards of educational institutions.
- Qualified in NMIMS entrance test/ NET / SET / GATE / JRF examination is mandatory.
- Candidates those who have qualified (with valid period & valid score) in NET / SET / GATE /
  JRF examination of the apex bodies in higher education such as UGC, CSIR or other equivalent
  examinations mentioned on the score card, such candidates are exempted from NMIMS
  entrance test. However, they have to appear for Personal Interview.
- A candidate who already has a Master of Philosophy Degree in the same research area shall
  be admitted directly into the Ph.D. program after due consideration of the application
  documents, which shall include a clear statement of additional work to be conducted for the
  award of the Ph.D. as well as a work-plan evaluated by the intended thesis guide and the Thesis
  Advisory Committee.

## Ph.D. in Statistics

The **Ph.D. in Statistics at NSoMASA** is designed for scholars interested in theoretical and applied statistical research. This program prepares researchers to work in quantitative modeling, data-driven decision-making, and statistical computing.

Duration of the Programme: Minimum 3 years & Maximum 6 Years (including course work)

Intake: 10 Seats

Duration of the Programme: Minimum 3 years & Maximum 6 Years (including course work)

**Eligibility Criteria:** The basic qualification criteria for admission to the Ph. D. in Statistics Programme shall be as under:

- Candidates seeking admission to the Ph.D. programme in Statistics shall have a Master's degree in Statistics/ Applied Statistics or a professional degree declared equivalent to the Master's degree in Statistics by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assuring quality and standards of educational institutions.
- Qualified in NMIMS entrance test/ NET / SET / GATE / JRF examination is mandatory.
- Candidates those who have qualified (with valid period & valid score) in NET / SET / GATE /
  JRF examination of the apex bodies in higher education such as UGC, CSIR or other equivalent
  examinations mentioned on the score card, such candidates are exempted from NMIMS
  entrance test. However, they have to appear for Personal Interview.
- A candidate who already has a Master of Philosophy Degree in the same research area shall be admitted directly into the Ph.D. program after due consideration of the application documents, which shall include a clear statement of additional work to be conducted for the award of the Ph.D. as well as a work-plan evaluated by the intended thesis guide and the Thesis Advisory Committee.

## Ph.D. in Data Science

The Ph.D. in Data Science at NSoMASA is designed for researchers looking to advance knowledge in artificial intelligence, machine learning, big data analytics, and computational intelligence. The program covers advanced research in topics for solving real world problems through recent developments including in those in deep learning, reinforcement learning, natural language processing, and predictive modeling.

**Duration of the Programme:** Minimum 3 years & Maximum 6 Years (including course work)

Intake: 10 Seats

Duration of the Programme: Minimum 3 years & Maximum 6 Years (including course work)

**Eligibility Criteria:** The basic qualification criteria for admission to the Ph. D. in Data Science Programme shall be as under:

- Candidates seeking admission to the Ph.D. program in Data Science shall have a Master's degree in Computer Science, Information Technology, Data Science and Artificial Intelligence or equivalent programs from a recognized university with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country to assess, accredit or assuring quality and standards of educational institutions.
- Qualified in NMIMS entrance test/ NET / SET / GATE / JRF examination is mandatory.
- Candidates those who have qualified (with valid period & valid score) in NET / SET / GATE /
  JRF examination of the apex bodies in higher education such as UGC, CSIR or other equivalent
  examinations mentioned on the score card, such candidates are exempted from NMIMS
  entrance test. However, they have to appear for Personal Interview.
- A candidate who already has a Master of Philosophy Degree in the same research area shall be admitted directly into the Ph.D. program after due consideration of the application documents, which shall include a clear statement of additional work to be conducted for the award of the Ph.D. as well as a work-plan evaluated by the intended thesis guide and the Thesis Advisory Committee.

# **Important Instructions**

#### **Eligibility Related:**

- Candidates appearing or waiting for the final year result are eligible to apply. The candidate must have appeared for
  all his subject(s) / exams before the commencement of the program. However, their admission would be considered
  provisional, subject to their meeting the minimum eligibility criteria after their final examination results are
  announced.
- Candidates whose final mark sheet of the qualified examination is not available at the time of their provisional admission, is required to submit their final marksheet copy as soon as the result is declared. In such case, if the candidate fails to meet the required eligibility criteria, then his/her admission will be cancelled and the fees will be refunded as per NMIMS refund rules.
- Candidates are required to submit all mark sheets of a program with degree certificates and AIU certificate (by the candidate who has completed their studies at foreign country) at the time of admission.
- Candidates who have obtained their degree by doing a part-time course or through distance learning, correspondence courses, externally, open school from recognized University are eligible to apply and register as per UGC quidelines.
- All admitted students will have to complete Ph. D. course work of related subjects prescribed by the SVKM's NMIMS
  (Deemed to be University). On successful completion of Ph.D. course work student will be eligible for registration for Ph.D. programme.

#### **Admission related:**

- Candidate has to check website for all details. Please check the important dates. All announcements from the SVKM's NMIMS (Deemed to be University) will be through its website www.nmims.edu
- For cancellation/ withdrawal of admission: Withdrawal/ cancellation means voluntary withdrawal/ cancellation by a candidate for any reason. Candidate has to upload cancellation form duly filled and signed, fees paid receipt copy & cancelled cheque (personal account) to mentioned link: <a href="https://upload.nmims.edu/admission/cancellation/">https://upload.nmims.edu/admission/cancellation/</a>
- The candidate who is pursuing PhD at SVKM's NMIMS (Deemed to be University), should not take PG / PhD admission in any other University.
- If at any stage, it is found that a candidate does not satisfy the eligibility criteria or the information furnished by him/ her in the application form is incorrect, his/her application for admission to the program, even if selected, will stand cancelled and fees will be refunded as per SVKM's NMIMS (Deemed to be University) refund rules.
- Candidate's document/s will be verified at the time of admission (if selected) and if found not eligible, admission will be cancelled and fees will be refunded as per SVKM's NMIMS (Deemed to be University) refund policy.
- It is the sole responsibility of the candidate to ascertain whether they possess the necessary and requisite qualifications for admission at SVKM's NMIMS (Deemed to be University), as verification of the documents is done at the time of final admission.
- SVKM's NMIMS (Deemed to be University) has full right to disqualify a candidate at any stage of the admission process if found ineligible.
- Candidates whose final mark sheet of the qualified examination is not available at the time of their provisional admission, is required to submit their final mark sheet copy as soon as the result declared. In such case, if the candidate fails to meet the required eligibility criteria then his/her admission will be cancelled and the fees will be refunded as per SVKM's NMIMS (Deemed to be University) refund rules.
- Admission to program is considered as "Provisional Admission" till all required and mandatory documents are submitted by the candidate and the same are verified and approved. If it is found that the candidate is not eligible at any stage (even after the course commencement), admission will be cancelled and fees will be refunded as per refund rule clauses even if selected/ admitted to the program.
- Canvassing in any form will disqualify the candidate.
- All matters of dispute will be subject to the legal jurisdiction of Mumbai only.

## **Admission and Selection Process**

At NSoMASA, we welcome aspiring researchers who are passionate about mathematics, statistics, and data science. Those who wish to join our programs must meet the following eligibility criteria and adhere to the admission process outlined below.

Ph.D. in Mathematics/Statistics/Data Science				
Step 1	Step 3	Step 3	Step 4	
Initial Registration, Pay the application fees and complete the process	Download call letter & Upload required documents for Entrance Test & PI	To appear for Entrance Test and Personal Interview	To complete admission formalities	
Visit www.nmims.edu  For registration click on "Apply Now" and create an account.  Candidate will get the registration number on their registered email ID to fill and complete the application form.  Before filling the online form, please read all the instructions carefully mentioned in the instruction handout, important dates and Terms & Condition given in the online application form.	Candidates, who register successfully, only will be confirmed for Entrance Test & Personal Interview.  Candidates are required to download the call letter from login dashboard. No separate call letter will be mailed or posted.  Upload mentioned documents for Entrance Test and personal Interview.	The Entrance Test and Personal Interview will be held at Mumbai Campus only.	Selected Candidate has to confirm his / her provisional admission by filling up e-admission form, uploading required document and paying fees within given timeline.      Only those candidates who complete the process by paying fees will be provisionally admitted to the program.	

#### Online registration and Payment of registration fee (step 1)

- Visit www.nmims.edu for online registration
- Online Registration Fee of Rs. 2,500/- plus GST if applicable (Please refer online registration for payment details)
- Before filling the online registration form, please read all the instructions carefully mentioned in instruction sheet, important dates and Terms & Conditions given in online application form.
- Registration Fees is NON-REFUNDABLE / NON-TRANSFERABLE.

#### Call letter (Step 2)

- List of Documents to be uploaded for to appear Entrance Test & Personal Interview:
  - Copy of duly filled online application form
  - 10th mark sheet & passing certificate
  - o 10+2 or equivalent mark sheet and passing certificate
  - Degree mark sheet (all semesters) & Degree certificate
  - Post-Graduation marksheet (all available semesters) & certificate
  - Statement of Purpose (SOP) should describe the "Area of Research" (format available on website)
- Candidate's application form will not be considered, if they fail to upload the abovementioned documents till last date of registration.
- The Interview will be scheduled as per the important dates mentioned on the website.
- The candidate must be available in person as per the mentioned time given in the call letter.

## **Admission and Selection Process**

Selection Process: Qualification in Entrance Test/NET/SET/JRF & Personal Interview

A] Entrance Test: (100 marks, 90 minutes), will be conducted at Mumbai campus only				
Section A (Common to all) (50 marks)	Aptitude based MCQ (Logical reasoning, Quantitative Aptitude, English Language)			
Section B (Domain Specific) (50 marks)	Ph.D. Mathematics	Algebra, Calculus, Analysis, Topology, Numerical analysis and Differential Equations		
	Ph.D. Statistics	Linear Algebra, Probability Theory, Distribution Theory, Statistical Inference, Estimation Theory.		
	Ph.D. Data Science	Python Programming, SQL, Machine Learning, Deep Learning, Natural Language Processing, Big Data Analysis & Cloud Computing		

#### **B]** Personal Interview:

- Presentation based on Statement of Purpose will be followed by Personal Interview.
- During interviews, candidates are expected to discuss their research interest/area.
- Final merit list will be based on entrance test & personal interview marks.

#### Weightage

- Entrance Test: 100 marks (70%)
- Personal Interview: 50 marks (30%)

#### Note:

- The candidate must have qualified written test with qualifying marks as 50% conducted by the SVKM's NMIMS Deemed to be University. Only entrance test qualified candidate will be called for Personal Interview.
- Candidates those who have qualified (with valid period & valid score) in NET / SET / GATE /
  JRF examination of the apex bodies in higher education such as UGC, CSIR or other equivalent
  examinations mentioned on the score card, such candidates are exempted from NMIMS entrance
  test. However, they have to appear for Personal Interview.

## Ph.D. Program Fee

#### **Program Fees:**

- Effective fees for all Ph.D. students will be Rs. 50,000/- p.a.
- Annual fees: Rs. 2,50,000/- Annual Scholarship: Rs. 2,00,000/-
- Scholarship form is available on <a href="https://mathematics.nmims.edu/academics/programs/phd-statistics/">https://mathematics.nmims.edu/academics/programs/phd-statistics/</a>
- The duly filled scholarship form (hardcopy) should be submitted at following address along with the copy of registration form, copy of SOP, complete resume, admission form and the admission offer letter copy (which is available on student's dashboard):

Address: Nilkamal School of Mathematics, Applied Statistics & Analytics, SVKM's Narsee Monjee Institute of Management Studies, V. L. Mehta Road, Vile Parle (W), Mumbai – 400 056, India.

#### Note:

- Scholarship will be provided for up to 05 years or completion of Ph.D. program, whichever is earlier.
- If a student is found indulging in any unlawful activity, the scholarship will stand cancelled with immediate effect.
- Ph.D. student will not be entitled to avail of the scholarship if he/she re-registers for Ph.D. or take readmission for the Ph.D. program.

#### Fellowship:

• Fellowship will be provided to full-time Ph.D. students in line with UGC.

## **Research Areas**

The field of **research at NSoMASA spans various domains** critical to modern technological advancements and innovation. Some of the key areas include, but are **not limited to**:

Subject	Area of Research		
Mathematics	Pure Mathematics, Number Theory, Algebraic Structures, Functional Analysis, Computational Mathematics, Mathematical Modeling, Numerical Analysis, Optimization Techniques, Graph Theory, Network Science, Combinatorial Mathematics, Topological Data Analysis		
Statistics	Statistical Inference, Advanced Statistical Analysis, Reliability Theory, Applied Probability, Time Series Data Analysis, Multivariate Data Analysis, Operations Research, Actuarial Science, Stochastic Processes, Business Analytics, Decision Science, Quantitative Techniques, Parametric and Non-parametric Inference		
Data Science	Machine Learning, Deep Learning, Supply Chain Analytics, Healthcare Management, Data Visualization, Natural Language Processing (NLP), Big Data Analytics, Explainable AI, Reinforcement Learning & Agentic AI, Geospatial Computing, Vision Intelligence & Spatial Analytics, Information Security & Cyber Threats		

# Infrastructure

At NMIMS NSoMASA, we take pride in providing a state-of-the-art learning environment that enhances academic excellence, research, and professional development. Our modern infrastructure is designed to foster collaborative learning, innovation, and hands-on practical training in a technology-driven ecosystem.

#### **Advanced Laboratories**

Our high-tech laboratories provide students with hands-on training in data science, artificial intelligence, deep learning, statistical modeling, and computational mathematics. Equipped with the latest hardware, high-performance computing, and industry-standard software tools, our labs support practical learning, research, and project development.



#### **Smart Classrooms & Digital Learning Spaces**

All classrooms at NSoMASA are equipped with smartboards, digital projectors, and interactive learning tools, enabling dynamic teaching and enhanced student engagement. Our technology-enabled pedagogy ensures that students experience an immersive and interactive academic environment.



✓ Virtual Learning & Online Resource Access – Integration of e-learning platforms for seamless learning.



### Wi-Fi Enabled Campus & Digital Resources

Our fully Wi-Fi-enabled campus provides students with uninterrupted internet access, facilitating online research, virtual collaborations, and real-time data analysis. The digital infrastructure supports cloud computing, Al experiments, and statistical simulations, ensuring students have the tools they need for academic success.

 $\checkmark$  24/7 High-Speed Wi-Fi Access – Available across campus for seamless connectivity.



### Library & Digital Knowledge Hub

The NSoMASA Library is a treasure trove of knowledge, housing a vast collection of books, research papers, academic journals, and digital resources. The library provides access to global databases, online journals, and e-books, supporting students in their academic and research pursuits.

✓ Extensive Collection - Books, periodicals, and research materials across mathematics, statistics, and data science.

✓ E-Library & Digital Archives – Access to online journals, conference papers, and scholarly databases.



## **Contact Information**

### For NMIMS Admission / Application / Technical related queries

We look forward to helping you with your queries and guiding you through the admission process at NSoMASA. Reach out to us today!

We are here to assist you with any queries related to admissions, programs, eligibility, placements, and other academic information at NSoMASA. Feel free to reach out to us through any of the following channels:

#### **Toll-Free Helpline**

\$\square\$ 1800 1025 138 | \leftarrow Available Monday to Saturday (Except public holidays)

Online Support & Query Resolution: For quick support and assistance, kindly log in to the dashboard and raise a query in the "My Query" section.

Email Support: admission.nsomasa@nmims.edu

**Direct Contact: Q** 022 42335184

Address: Bhagubai, Mafatlal Complex, Ground Floor, SBMP Phase – I, Swami Bhaktivedant Marg, opp-Cooper Hospital, Vile Parle West, Mumbai, Maharashtra 400056

