

Shape the Future with Mathematics: BSc (Applied Mathematical Computing) at NMIMS

Where Mathematics Meets Tomorrow's Technology

In an era where **Artificial Intelligence**, **Quantum Computing**, and **Financial Technology** are reshaping every industry, the ability to understand and apply advanced mathematics isn't just valuable—it's essential. NMIMS presents India's most forward-thinking undergraduate program that bridges pure mathematics with cutting-edge computational applications.

Why This Program is Unique

The Only Program That Combines:

- ✓ **Advanced Mathematics** - From Calculus to Complex Analysis
- ✓ **Machine Learning & Deep Learning** - Build intelligent systems
- ✓ **Quantum Computing** - Master the technology of tomorrow
- ✓ **Financial Mathematics** - Power the fintech revolution
- ✓ **Data Science** - Turn data into decisions
- ✓ **Computational Modeling** - Solve real-world problems

This isn't just another mathematics degree. It's a **comprehensive training ground** for the mathematicians, data scientists, and technology leaders that industries are desperately seeking.

Career Opportunities That Await You

Quantum Computing Specialist

As quantum computers move from research labs to commercial applications, companies like IBM, Google, and Microsoft are racing to hire professionals who understand both the mathematics and programming behind quantum algorithms.

AI/ML Engineer

With deep mathematical foundations in optimization, linear algebra, and statistical methods, you'll build the AI systems that power everything from self-driving cars to medical diagnosis.

Quantitative Analyst (Quant)

Financial institutions pay premium salaries to mathematicians who can model markets, price derivatives, and manage risk using stochastic calculus and optimization techniques.

Data Scientist

Companies across healthcare, e-commerce, finance, and technology need professionals who can extract insights from data using advanced statistical and computational methods.

Research & Academia

Your strong mathematical foundation opens doors to PhD programs at top universities worldwide and research positions in premier institutions.

What Makes NMIMS Different?

1. Integrated Curriculum Design

Unlike traditional mathematics programs that focus solely on theory, or computer science programs that skip mathematical rigor, this program perfectly balances both. You'll understand **why** algorithms work, not just **how** to use them.

2. Future-Ready Skills

- **Year 1:** Build strong foundations in calculus, Algebra, programming, and data analysis
- **Year 2:** Master optimization, differential equations, and statistical techniques
- **Year 3:** Dive into quantum computing, financial modeling, and advanced algorithms
- **Year 4:** Apply everything through real-world capstone projects and internships

3. Hands-On Learning

Every theoretical course is paired with **practical lab sessions**. You'll work with:

- Python, R, and functional programming languages
- Machine learning frameworks and data visualization tools
- Quantum computing simulators
- Financial modeling software
- Real industry datasets

4. Industry-Relevant Electives

Choose specializations that align with your passion:

- **Mathematical Computing Track:** Graph Theory, Mathematical Biology, Quantum Computation
- **Financial Computing Track:** Stochastic Finance, Financial Engineering, Financial Modeling
- **Open Electives:** Cryptography, Network Science, Applied Linear Algebra

5. Research & Innovation Focus

With dedicated **Research Discourse** courses throughout your program and a comprehensive **Capstone Project/Internship** in your final year, you'll graduate with real research experience and industry exposure.

Beyond the Classroom

NMIMS Advantage

- **Premier Institution:** Part of SVKM's NMIMS, consistently ranked among India's top universities
- **Industry Connections:** Access to internships and placements with leading companies
- **Research Opportunities:** Work with faculty on cutting-edge research projects
- **State-of-the-Art Labs:** Modern computing facilities and software tools
- **Global Exposure:** Opportunities for international collaborations and conferences

Holistic Development

The program includes courses in:

- Communication and Professional Skills
- Leadership and Personality Development
- Economics and Management Principles
- Research Methodology

You'll graduate not just as a mathematician, but as a **well-rounded professional** ready for leadership roles.

Who Should Apply?

You're the Perfect Fit If You:

- Love solving complex problems and thinking analytically
- Are curious about how mathematics powers modern technology
- Want to be at the forefront of AI, quantum computing, and fintech
- Aspire to work with cutting-edge technology companies
- Dream of pursuing research in mathematics or computer science
- Seek a career with unlimited growth potential

Previous Students Who Excel:

Students with strong performance in Mathematics and Science in Class XII, particularly those who enjoyed:

- Calculus, Algebra, and Probability
- Computer Science or Programming

The Investment That Pays Off

While many graduates struggle to find relevant employment, **BSc (Applied Mathematical Computing)** students are positioned at the intersection of the most in-demand skills in the job market:

- **100+ companies** across IT, Finance, Analytics, and Consulting actively recruit mathematics and data science graduates
- **Growing demand:** LinkedIn reports 40% year-on-year growth in data science and AI roles
- **Future-proof career:** Mathematical and analytical skills remain relevant regardless of technological changes
- **Global opportunities:** Strong mathematical foundation opens doors worldwide

Parent's Perspective: A Smart Investment

Why This Program Makes Sense:

- 1. Multiple Career Paths:** Your child won't be limited to a single career trajectory. This degree opens doors to technology, finance, research, consulting, and entrepreneurship.
- 2. Strong Fundamentals:** Unlike narrow technical programs that may become obsolete, mathematical foundations remain eternally valuable and transferable.
- 3. Premium Placement Opportunities:** Top recruiters specifically seek candidates with strong mathematical and computational skills for their most challenging and well-compensated roles.
- 4. Higher Studies Advantage:** Graduates are well-prepared for MS, MBA, or PhD programs at top universities worldwide, with many securing scholarships and assistantships.
- 5. Recession-Proof Skills:** Mathematical and analytical expertise remains in demand regardless of economic conditions.

Success Stories

Our graduates are already making their mark in:

- Tech Giants
- Financial Institutions
- Consulting Firms
- Startups
- Research

The Time is Now

The world is experiencing a **quantum leap in technology**. Companies are investing billions in AI, quantum computing, and advanced analytics. But they face a critical shortage: **mathematically trained professionals** who can actually build and optimize these systems.

This is your moment.

In four years, you could be:

- Developing quantum algorithms that revolutionize cryptography
- Building AI systems that save lives through medical diagnosis
- Creating financial models that guide billion-dollar investment decisions
- Publishing research that advances human knowledge
- Leading teams that solve humanity's biggest challenges

Join the Revolution

BSc (Applied Mathematical Computing) at NMIMS isn't just an education—it's a **transformation**. You'll enter as a student passionate about mathematics and graduate as a professional equipped to shape the future.

Program Highlights at a Glance:

- **Duration:** 4 Years (8 Semesters)
- **Total Credits:** 168
- **Total Subjects:** 67
- **Practical Labs:** Integrated with every major course
- **Internship/Project:** Comprehensive final year experience
- **Specializations:** Mathematical Computing & Financial Computing tracks

Take the First Step

The future belongs to those who can think mathematically, code efficiently, and solve creatively.

Don't just study mathematics. Apply it. Shape it. Live it.

Ready to Transform Your Future?

Contact:

Nilkamal School of Mathematics, Applied Statistics & Analytics

SVKM's NMIMS University,
Ground Floor, SBMP Phase I,
Irla, N. R. G Marg,
Opposite Cooper Hospital,
Vile-Parle (West), Mumbai – 400 056

Visit:  <https://mathematics.nmims.edu/>

"Mathematics is not about numbers, equations, computations, or algorithms: it is about understanding."

- William Paul Thurston

Your journey to understanding—and creating—the future begins here.