

College of Humanities and Sciences



### **Bachelor of Science** (Honours) in Mathematics

Department of Mathematics Faculty of Science College of Humanities and Sciences

# NUS Mathematics

Mathematics is everywhere. Search engines, rational drug design, earthquake prediction – these are all underpinned by mathematical disciplines such as linear algebra, differential equations and probabilities. In sum – if you are interested in solving problems in science, engineering and technology, a strong grounding in mathematics is essential.

At NUS Mathematics, you will work with numbers, discrete and continuous quantities, geometric figures and images in all their generalities. Ranging from the most abstract and fundamental theories in pure mathematics – to the most concrete methods and practical algorithms in applied mathematics. The mathematical fundamentals you learn also count towards your pursuit of quantitative disciplines at the postgraduate level, including statistics, economics and management science.

### Under the new College of Humanities and Sciences

**(CHS)**, majoring in mathematics is not a one-size-fits-all formula. You can choose to augment your degree with a second major or minor of your choice – from any of the courses offered by CHS. And with CHS' distinctive Common Curriculum, you are on your way to becoming a systematic and analytical thinker and problem-solver.



# Why NUS Mathematics?



### **Established faculty**

We are the largest department in the Faculty of Science – and the **top ranked Mathematics department in Asia**. Our professors have expertise in contemporary mathematical research, plus a passion for sharing their knowledge with you.

QS World University Rankings by Subject 2021: Mathematics



### Versatile skill set

With mathematics underpinning many science, technology, engineering and mathematics (STEM) fields – such as physics, computer science and technology – you have **numerous and diverse options**. A strong knowledge of mathematical fundamentals enables you to branch out into diverse fields of learning and industry, wherever your interest takes you.



#### Academic depth

For those with strong aptitude and passion, the **Special Programme in Mathematics (SPM)** offers courses in foundational mathematics taught at greater depth and sophistication. Through SPM, you will build a firm foundation for graduate studies in mathematics, and careers in mathematical science.



#### **Career opportunities**

Mathematics graduates are highly sought after for their **analytical/logical reasoning skills and numerical literacy** – skills essential to identifying and solving challenging problems in any field. Mathematicians are ideal for positions in accountancy, financial services and insurance, but also areas like technology, business, education, government and operations research.

## Academic Programmes



Primary Major in Mathematics

#### Specialisation in

- Data Modelling and Analytics
- Operations Research and Analytics
- Pure Mathematics

Second Major in Mathematics



Minor in Mathematics



**Special Programme** in Mathematics



**Double Degree Programme** in Mathematics and Computer Science

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### Research Opportunities

If you are keen to explore mathematical areas and topics of personal interest, you can participate in the **Undergraduate Research Opportunities Programme in Science (UROPS)**, or pursue independent research in your **Final Year Project (FYP)**. Our research areas include:

- algebra and number theory
- dynamical systems
- geometry and topology
- mathematical logic and theoretical computer science
- real, functional and harmonic analysis
- representation theory and automorphic forms



"My science training equipped me with useful life skills such as resilience, adaptability, effective stakeholder communications and business acumen."

- Dr Zenton Goh, CEO, Cadi Scientific Pte Ltd BSc (Hons) in Mathematics (1992) "The rigour of mathematics training has fresh relevance in a time when Internetenabled social communities are growing – as it can be applied to solve problems and optimise solutions."

 Leonard Loo, Speech Algorithm Architect, BIGO Technology Pte Ltd
 BSc (Hons) in Applied Mathematics (2016); MSc in Applied Mathematics (2017)

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## Admission Requirements

Programme	Admission Requirements
Primary Major in Mathematics	A good H2 pass (or equivalent) in Mathematics/Further Mathematics
<ul> <li>Primary Major in Mathematics with</li> <li>Specialisation in Data Modelling and Analytics</li> <li>Specialisation in Operations Research and Analytics</li> <li>Specialisation in Pure Mathematics</li> </ul>	
Second Major in Mathematics	
Minor in Mathematics	

For applicants without H2 Mathematics/Further Mathematics, simply read the bridging course MA1301/MA1301X Introductory Mathematics.

#### **Department of Mathematics**

National University of Singapore

- Blk S17 Level 4, 10 Lower Kent Ridge Road, Singapore 119076
- (65) 6516 2738
- 🖂 AskMathUG@nus.edu.sg
- math.nus.edu.sg