

— A Quick Overview —

# Mathematics Undergraduate Programmes

**YES! I want to study Mathematics @ NUS !**

**You should first apply for admission to the Faculty of Science.** After admission, you can read any of the open major programmes within the Faculty, including mathematics and applied mathematics.

To read the first year core modules in Mathematics, at least a pass in A-level H2 Mathematics (or its equivalent) is required. Students without the necessary background can read the bridging module MA1301 first .

## Career Prospects for our Graduates

Mathematics graduates are much in demand wherever quantitative analysis is needed and/or rigorous, objective, critical analysis is valued. Possible careers include :

- financial analyst, actuary, financial engineer
- data analyst, cryptanalyst
- operations research analyst
- university lecturer, researcher
- teacher, curriculum developer
- software engineer, computer programmer
- IT, administration

## B.Sc. & B.Sc. (Hons) with Major in Mathematics or Applied Mathematics

**Major in Mathematics:** Students will be exposed to important areas of mathematical knowledge including algebra, logic, number theory and combinatorics, real and complex analysis, differential equations, geometry and topology with focus on mathematical foundations and fundamental techniques.

**Major in Applied Mathematics:** Students focus on mathematics that deals with algorithms, problem-solving techniques and applications to other areas of human concern. Topics offered include financial mathematics, optimization & operations research, mathematical modelling, scientific computing & simulations, coding & cryptography, computational biology. Students who would like an additional focus of study may choose to specialize in either *Mathematical Modelling and Data Analytics* or *Operations Research and Financial Mathematics* during their third and fourth years of study.

## B.Sc. & B.Sc. (Hons) with Major in Quantitative Finance

A multi-disciplinary programme that combines mathematics, finance and computing with a practical orientation that is designed for high-calibre students who wish to become professionals in the finance industry. To apply for this programme, students must first be admitted to the Faculty of Science and obtained a good pass for H2 Mathematics at A-level or equivalent. Important Dates for AY 2020/2021 admission exercise:

Round 1: *Application Deadline:* 5pm, 14 May 2020 | *Interview:* 19 May 2020 | *Results:* 22 May 2020

Round 2: *Application Deadline:* 5pm, 9 July 2020 | *Interview:* 14 July 2020 | *Results:* 17 July 2020

Details at <http://www1.math.nus.edu.sg/undergraduates.aspx?f=UP-QF#scrolltop>

## B.Sc. (Hons) in Data Science and Analytics

Data science is a newly emerging field of study that involves computational principles, methods and systems for extracting and structuring knowledge from data. The four-year direct Honours programme in Data Science and Analytics (DSA) is designed to prepare graduates who are ready to acquire, manage and explore data that will inspire changes around the world.

Students will read modules in mathematics, statistics and computer science and will be exposed to the interplay of these three areas in the practice of data science. Students will also undertake an industry-driven capstone project module to work on real-life data. Graduates will acquire skills for careers in diverse industries, where they will derive insights from massive datasets to improve decision-making.

**\*Direct admission\* \*Direct Honours\***

**\*Opportunities for experiential learning and consulting projects\***