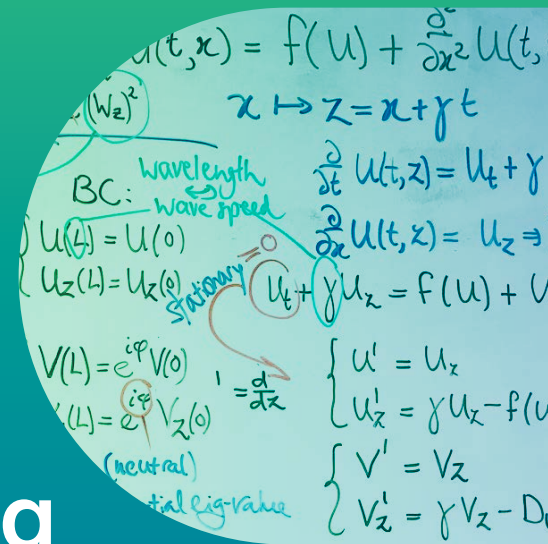


Tohu Paerua Whakatauirā Pāngarau Postgraduate Mathematical Modelling



Mathematical models use the language of mathematics to describe, understand and evaluate systems. They are used in the natural sciences, social sciences and engineering disciplines.

This programme will deepen your theoretical understanding of mathematical models and their implementation, providing you with the expertise to transform a multidimensional real-world problem into a set of equations you can analyse with advanced theoretical and computational tools. You will learn to construct and use mathematical models to help solve questions ranging from the effects of global climate change to planning infrastructure, predicting financial fluctuations, managing disease epidemics, or designing better systems of healthcare and health equity.

Courses available in this subject include:

- › ENGSCI 711 Advanced Mathematical Modelling
- › ENGSCI 721 Data-centric Engineering for Physical Systems
- › MATHS 765 Mathematical Modelling
- › MATHS 767 Stochastic Differential Equations and Inverse Problems

Choosing your supervisor

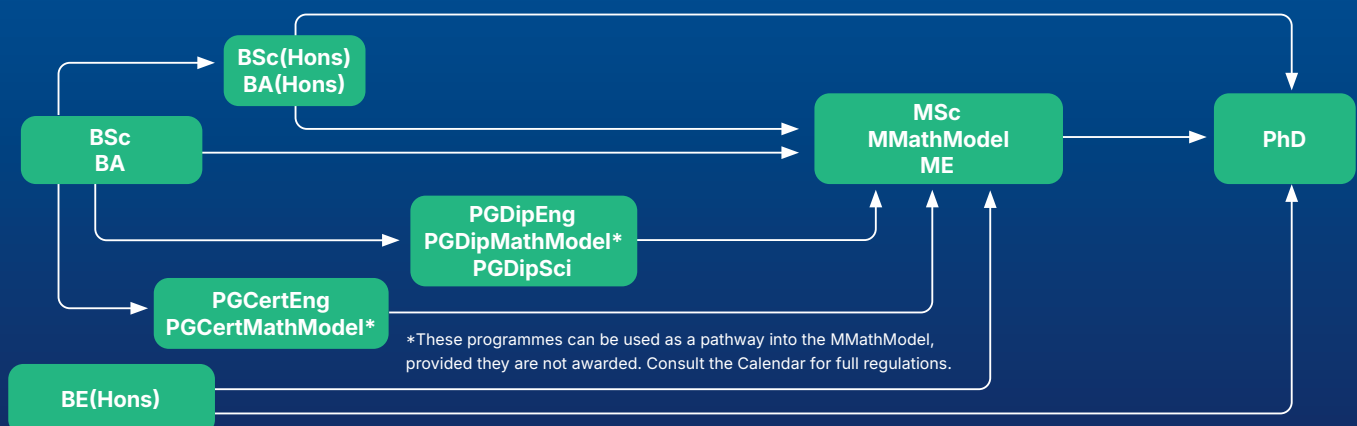
Supervisors can usually only take a small number of students, so make sure you talk to them sooner rather than later.

Choose an area you feel passionate about. Undertaking research involves successes as well as challenges, so choosing a topic you are genuinely interested in will help you overcome challenges and get through the tough times. Ensure you're compatible with your supervisor. Ask questions, seek advice and share your ideas with academic staff to find out their research interests, and whether you would be a good fit with their current projects.

Scholarships

You can apply for a range of scholarships when you apply for postgraduate study in Science.

auckland.ac.nz/science-scholarships



Career opportunities

An advanced skill set of mathematical modelling will equip you to take advantage of a diverse range of career opportunities.

A Master of Mathematical Modelling will qualify you for positions as consultants and analysts in finance and professional services, provide critical direction to operations and policy through local and central government, or work on transformational research within research institutes. Equally, some students may wish to pursue an entrepreneurial route building on their university research towards commercialisation and spinout.

Jobs related to Mathematical Modelling:

- › Consultant
- › R&D Scientist
- › Modelling Specialist
- › Meteorologist
- › Data Scientist
- › Entrepreneur

This subject is available in:

- › Bachelor of Engineering (Honours)
- › Master of Mathematical Modelling
- › Postgraduate Diploma in Mathematical Modelling
- › Postgraduate Certificate in Mathematical Modelling



Find out more about how your degree will be structured and what courses you need to take at

auckland.ac.nz/science/master-of-mathematical-modelling

Applications close on 8 December.



"My advice to anyone considering this programme is to be brave and curious. Take opportunities when they are presented to you, and they will often land you in a very interesting place."

Ruisong Xue
Master of Mathematical Modelling (MMathModel) – 2022.

Kuhua ki tō mātou hāpori, ā, Kimihia tōu Pūtaiao.
Join our community and find your Science.



Disclaimer: The information in this document is a general guide only for students and subject to alteration. All students enrolling at the University of Auckland must consult its official Calendar, to ensure that they are aware of and comply with all regulations, requirements and policies. [2026]

Have any questions?
Contact the Student Hub

auckland.ac.nz/student-hubs