



Student testimonials

DOROTHY CHEUNG

BACHELOR OF SCIENCE (ADVANCED MATHEMATICS)/ COMMERCE – HONS PURE MATHEMATICS

I chose to study mathematics at UNSW because it has a wide range of applications and I was keen to learn more at a higher level in university. I also felt that studying mathematics could lead to diverse career paths, from research to the financial industry to climate science.

Studying maths at UNSW was a great experience – not only did I gain knowledge on broad areas of mathematics, I met people who share similar interests. Higher level courses were especially interesting, with a wider range of courses available. I was also able to pick and choose courses according to my own interests. Classes were smaller and became more interactive, which allowed ideas to be bounced around.

I'm currently working as an Actuarial Analyst at Suncorp. Mathematical concepts that I learnt at university appear unexpectedly at work, and having a solid understanding of them from my time at UNSW is invaluable. Although not everything you learn in university will come in use directly at work, the ways I learnt to approach issues and tackle problems methodically are the most important skills I have gained.



MIRIAM GREENBAUM

BACHELOR OF SCIENCE (ADVANCED MATHEMATICS)/ COMMERCE – HONS APPLIED MATHEMATICS

Maths was my favourite subject at school, and had been my entire life, so I decided to study mathematics and combine it in a double degree with commerce. It is by far the best decision I have made to date!

In the earlier years of my degree, I was exposed to a broad range of mathematical concepts. In the upper years, I was then able to choose which part of maths really interested me and hone in on my skills by completing focused subjects in the area. The small classes and dedicated time with the academics meant that I was always able to achieve a deeper level of understanding, even with the trickier concepts.

Completing Honours in maths gave me the opportunity to really delve deep into a topic that I was passionate about. After reaching out to an industry contact, I was able to obtain a data set and choose my own Honours topic. Throughout the thesis year, I received amazing support from my supervisor, who always had time to sit with me and nut out any tricky problems along the way. The logic and problem-solving skills I acquired throughout my degree gave me the ability to start whatever role I wanted after graduating, and I chose to begin as a Management Consultant at Ernst & Young.



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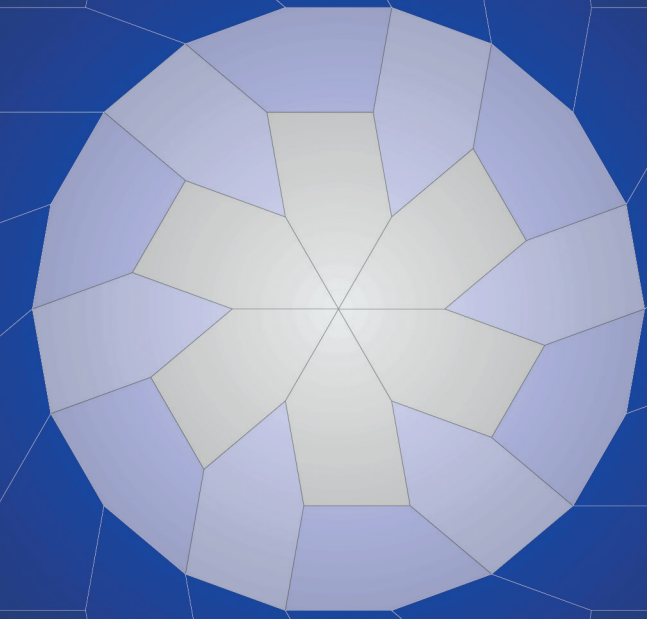
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UNSW Science
Mathematics and Statistics



Mathematics and Statistics

The School of Mathematics and Statistics empowers discovery through creative human thought, ranging from pure abstractions to real-world applications.

As Australia's largest and highest ranked school of mathematics and statistics, we provide comprehensive coverage of modern mathematics, underpinned by leading teaching and research. Our connections with industry provide students with experience of important practical applications of their learning, and benefits industry with the mathematical insights of our talented students. We have links with many leading organisations such as Roads and Maritime Services, Commonwealth Bank and the Securities Industry Research Centre of Asia-Pacific (SIRCA).

We are proud to be the home of many leading mathematicians including Fellow of the Royal Society, Trevor McDougall, and former president of the International Council for Industrial and Applied Mathematics, Ian Sloan.

Undergraduate studies in Mathematics and Statistics

BACHELOR OF SCIENCE (ADVANCED MATHEMATICS) (HONOURS)

UAC Code: 429300 / UNSW Program Code: 3956 / 2020 Guaranteed Entry Rank: 95.00

The Advanced Mathematics degree is aimed at high-achieving students who wish to specialise in mathematics as a basis for the increasing range of quantitative careers in areas such as finance, environmental modelling and research. This four-year degree combines advanced coursework with an Honours-level research project in one of the available plans of study. UNSW offers Mathematics students advanced facilities combined with innovative teaching. This program has been designed to cater for the specific abilities and interests of talented students with a superior ATAR.

APPROVED MAJORS IN THE BACHELOR OF SCIENCE (ADVANCED MATHEMATICS) (HONOURS) PROGRAM ARE:

APPLIED MATHEMATICS

The development and implementation of methods to understand and predict real-world problems and improve their outcomes. Mathematical methods and models are employed to find solutions not only for technical and industrial problems, but also for social, biomedical and economic problems.

PURE MATHEMATICS

The foundation of all mathematics. It is concerned with discovering the patterns and structures that underlie wide areas of mathematics. Although motivated more by a search for beauty and symmetry, this area of mathematics has led to major advances in many areas of science and technology.

ADVANCED STATISTICS

The methodology for drawing conclusions from data – estimating the present, predicting the future and making decisions in the face of uncertainty. Modern statistics is a rapidly evolving science in which revolutions in technology present exciting new opportunities for collection and analysis of huge and complex data sets.

MATHEMATICS AND STATISTICS CAN ALSO BE STUDIED WITHIN THE FOLLOWING DEGREE PROGRAMS, AMONG OTHERS:

Program	UAC Code	UNSW Program Code	Length of Study	Entry Requirements
Bachelor of Science	429000	3970	3 years full time	2020 Guaranteed Entry Rank: 85.00
Bachelor of Advanced Science (Honours)	429350	3962	4 years full time	2020 Guaranteed Entry Rank: 95.00
Bachelor of Science (Advanced Mathematics)/ (Co-op Program)	429300	3956	5 years full time	2020 Guaranteed Entry Rank: 95.00 Application: coop.unsw.edu.au
Bachelor of Data Science & Decisions	429150	3959	3 years full time	2020 Guaranteed Entry Rank: 95.00
Bachelor of Advanced Mathematics (Honours)/Actuarial Studies	424350	3589	5 years full time	2020 Guaranteed Entry Rank: 97.50
Bachelor of Science (International)	429420	3987	4 years full time	2020 Guaranteed Entry Rank: 88.00
Bachelor of Science & Business	429100	3925	3 years full time	2020 Guaranteed Entry Rank: 90.00
Bachelor of Science/Engineering	425850	3767	5 years full time	2020 Guaranteed Entry Rank: 93.00
Bachelor of Science/Computer Science	425800	3789	4 years full time	2020 Guaranteed Entry Rank: 93.00



Career opportunities

Mathematics and Statistics graduates work in a huge variety of areas, wherever logical skill and analysis of quantitative data is needed to provide accurate and timely answers.

Data forensics/ fraud detection
– analysing patterns in large data sets to find the 'needles in the haystack' of fraudulent or terrorist activity.

Environmental modelling
– understanding massive computer models that predict changes in weather, climate and ocean currents.

Biostatistics
– securing public health, and testing drugs and new procedures for safety and efficacy, using statistical inference.

Cryptography
– encoding and decoding signals within financial markets, the internet and the military, as well as numerous other applications.

Quantitative risk
– monitoring the risk positions of banks in light of changing market conditions as well as credit and operational profiles.

Game design
– designing complex games to ensure correct probabilities and accurate simulations.

Data management
– ensuring accuracy and accessibility of organisations' data warehouses.

Teaching
– inspiring the new generation with an understanding of the power of mathematics.

Research
– answering the many abstract questions raised by other sciences and mathematics itself.

Graduates of Mathematics and Statistics are employed by a wide range of companies and organisations including Google, CSIRO, the Reserve Bank of Australia, the Australian Bureau of Statistics, Weatherzone, Goldman Sachs, Commonwealth Bank, Telstra, and universities throughout the world.

For further information on careers in mathematics and statistics, visit our careers page at maths.unsw.edu.au/futurestudents/careers