

UTS: SCIENCE

BACHELOR OF SCIENCE

WHY THE BACHELOR OF SCIENCE?

We have restructured our Bachelor of Science (BSc) to provide greater flexibility, allowing you to choose your major field of study after first year, when you have experienced a range of disciplines. You will have to choose your general area of interest by choosing one of three Foundation streams, namely Mathematical, Physical, or Life and Environmental Sciences in first year.

However at the end of first year you will have a range of possible major study areas to choose from (shown below) depending on which Foundation you chose. If you take a specified major you will graduate with an award identified by that major (shown below). However if you choose not to select a specific major, but instead select a range of second and third year subjects to tailor your study according to your interests you will graduate with a BSc award.

Foundation Stream	Award
Mathematical Sciences	Bachelor of Science in Mathematics Bachelor of Science in Statistics
Physical Sciences	Bachelor of Science in Applied Chemistry Bachelor of Science in Applied Physics Bachelor of Science in Nanotechnology
Life and Environmental Sciences	Bachelor of Science in Marine Biology Bachelor of Science in Environmental Forensics Bachelor of Science in Environmental Biology Bachelor of Science in Urban Ecology Bachelor of Science in Biotechnology Bachelor of Science in Biomedical Science Bachelor of Science in Medical Science

All study programs contain 24 credit points (typically 4 subjects) of free electives, which can be Science subjects or submajors in your area of science specialised study, or in a related science area (e.g. a Nanotechnology submajor in your Applied Physics degree). Alternatively, you could take subjects or a submajor from another faculty, for example a business or communication submajor.

HOW TO APPLY

If you think you know already which area you want to focus in you can select the UAC code for the relevant BSc major - you can still change your mind at the end of first year within the choices available from your foundation stream.

However if you are unclear of your preferred specialization you can select the code for the BSc (Flexible). Some major programs within the BSc are identical to those of separate named degrees (eg BSc in Medical Science and B Medical Science) however the entry cutoffs may be quite different and you may wish to consider preferencing both courses.

The entry cutoffs for different majors within the BSc may also be different and you may also wish to preference both the BSc (Flexible) and your preferred BSc specialization.

UAC Code	Course
607001	BSc (Flexible)
607003	BSc (Mathematics)
607003	BSc (Statistics)
607005	BSc (Chemistry)
607007	BSc (Nanotechnology)
607009	BSc (Physics)
607011	BSc (Environmental Biology)
607011	BSc (Environmental Forensics)
607011	BSc (Marine Biology)
607013	BSc (Urban Ecology)
607015	BSc (Biotechnology)
607015	BSc (Biomedical Science)
607015	BSc (Medical Science)

What you will learn and your career options will depend on the major or subject choices you make. An outline of one of the major programs are provided overpage.

HONOURS

The Bachelor of Science (Honours) is available to eligible students with an additional one year of full time study.

DIPLOMA IN SCIENTIFIC PRACTICE

The Diploma in Scientific Practice, a period of industrial training is available with an additional year of full-time study. It is not offered to international students.

COMBINED DEGREES

There are also combined degree programs in all specialisations (except Urban Ecology) with:

- Laws
- Business
- Engineering
- International Studies

UTS: MATHEMATICS

BACHELOR OF SCIENCE IN MATHEMATICS

WHAT WILL I LEARN?

The Mathematics major degree is designed to give you a good understanding of mathematics and operations research (quantitative science management) and to enable you to specialise in at least one of these fields. Quantitative management science develops skills in financial modelling, simulation and optimisation. By focusing on mathematics, you will develop high level analytical skills and learn to use them in complex real world problems. An extensive choice of mathematics subjects are available for you to tailor your degree according to your interests. Other electives allow you to learn the basic concepts, vocabulary and patterns of thought in a second discipline.

CAREER OPTIONS

Mathematics graduates are in demand in a wide range of fields: business, health, economics, engineering, market research, physical sciences and social sciences. Graduates could be employed to analyse traffic flow at Sydney's International and Domestic airports, calculate the optimum distribution of branches for a major bank, or set the rates of insurance premiums. Others might be part of a medical team working on ground breaking research; modelling industrial inventory control, teaching or providing advice on the stock market. Wherever decisions have to be made, there is a need for graduates who have the skills to work with numerical information.

FULL TIME PROGRAM

YEAR 1

AUTUMN SEMESTER

Intro Linear Dynamical Systems	6cp
Intro Quantitative Management	6cp
Intro to Statistics	6cp
Elective Choice Block A	6cp

SPRING SEMESTER

Intro to Sample Surveys	6cp
Intro to Analysis and Multivariable Calculus	6cp
Applications Discrete Maths	6cp
Elective Choice Block A	6cp

YEAR 2

AUTUMN SEMESTER

Computational Linear Algebra	6cp
Optimisation in Quantitative Management	6cp
Stochastic Models	6cp
Elective Choice Block B	6cp

SPRING SEMESTER

Differential Equations	6cp
Regression Analysis	6cp
Maths Extension Choice	6cp
Elective Choice Block B	6cp

YEAR 3

AUTUMN SEMESTER

Advanced Calculus	6cp
Maths Extension Choice	6cp
Elective	12cp

SPRING SEMESTER

Maths Extension Choice	12cp
Electives	12cp

MATHS EXTENSION CHOICES

AUTUMN SEMESTER

Mathematical Statistics
High Performance Computing
Design & Analysis Experiments

SPRING SEMESTER

Nonlinear Methods in Quantitative Management
Network and Combinatorial Optimisation
Advanced Analysis
Mathematical Methods
Stochastic Processes
Seminar (Mathematics)
Quantitative Management Practice
Quality Control
Seminar (Statistics)

HONOURS

The Bachelor of Science (Honours) in Mathematics is available to eligible students with an additional one year of full time study.

COURSE CODES ...

UTS course code: C10242
UAC code: 607003
Duration: 3 years Full-Time
Location: City campus
Assumed Knowledge: HSC English and Mathematics, preferably Mathematics Ext 1.

NEED TO KNOW MORE??

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