Science and Mathematics

Postgraduate Courses 2020

Faculty of Science
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*  Majors available are Biomedical Engineering, Marine Science and Management, Mathematical and Statistical Modelling or No Specific Major.
**  No Specific Major not available for Master of Philosophy in Science.

Faculty snapshot

Students
4,318  total*
302  postgraduate by coursework*
408  postgraduate by research*

UTS at a glance#

Students
45,852  total
10,094  postgraduate by coursework
2,184  postgraduate by research
33,574  undergraduate

UTS student diversity#

49%  are female students
50%  are born outside Australia
29%  are 25 or older

*  In 2018
*  As of October 2019

Acknowledgement of Country

UTS acknowledges the Gadigal People of the Eora Nation, the Boorooberongal People of the Dharug Nation, the Bidiagal people and the Gamaygal people upon whose ancestral lands our university stands. We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these lands.
Why postgraduate study?

There are as many reasons to undertake postgraduate study as there are students in our courses … but we reckon these are the top 3

MOVE TO THE FRONT
A postgraduate degree doesn’t just signify a high level of expertise in a specific discipline. It also tells potential employers that you have professional skills such as time management, critical thinking and communication. In fact, many international organisations now expect candidates to have completed postgraduate study.

LIFT YOUR INCOME POTENTIAL
Domestic graduates from UTS postgraduate degrees have above-average median starting salaries. In 2019 the number for a coursework degree was $85,000, and for a research-based degree $100,400*. Of course, your actual salary will depend on the field and industry you work in, but a UTS degree is a great start.

INVEST IN YOURSELF
A good job and a good salary – tick. But a UTS postgraduate degree gives you even more. Signing up for postgrad study is also a great opportunity to reassess where you’re going. It’s about getting to know yourself, pursuing your passions and building personal and professional networks.

HAVE WE MET BEFORE?
If you’ve previously graduated from UTS you can save 10 per cent on postgraduate coursework fees when you return to study with us. That’s thanks to the UTS Alumni Advantage program. Find out more at alumni.uts.edu.au/advantage

So, what are you waiting for?

*Graduate Outcome Survey, 2019
MICHAEL WIDJAJA
Doctor of Philosophy (PhD)

“I’ve always been interested in little things and biology. The way microorganisms are able to exist fascinates me. So, after completing a Bachelor of Medical Science (Honours) at UTS, I decided to pursue a PhD in microbiology.

My research involved looking at the tools (proteins) involved in the interaction between the bacteria Mycoplasma pneumoniae (MPN) and the site where it causes infection – our lungs. This bacteria is one of the main causes of pneumonia in highly dense communities, and once it’s in you it’s difficult to remove.

What I found is that MPN compensates for its limited arsenal by a process known as cleavage. This hasn’t been seen in MPN before and it opens new avenues. By completing a research degree, I’ve been able to contribute to society’s knowledge on how microorganisms work and live.”

NATALIE SALEMINK
Graduate Certificate in Mathematics

“I chose to study at UTS because it had the best ranked course in my field in the country. Mathematics is fascinating because it can reduce the impossible paradoxes of the universe down to manageable human terms. This course also helped me to refine my hard skills and see the world through another lens.

What I enjoyed most was meeting amazing professors who infect their students with their enthusiasm. UTS Science is also a very accommodating and nurturing environment where students can ask questions, flourish, explore and grow. My advice is to give 100 per cent and make use of the Mathematics Study Centre on campus.”
Why science at UTS?

World-class facilities.
A dynamic approach to learning.
Research culture that’s second to none.

ADVANCED, SPECIALISED FACILITIES
The UTS Campus has been utterly transformed in recent years. As a postgraduate science student you’ll have access to world-class laboratories, specialist facilities and the latest technologies. Here are a just a few:

**Hive Super Lab**
[uts.ac/Hive](uts.ac/Hive)
This is our very latest facility, open to students in 2020 (Medical Science, Biomedical Science, Biotechnology, Biomedical Engineering, Environmental and Forensics). The Hive is PC2 certified for biological materials and, in there, you’ll get to know equipment and procedures you’ll encounter in the workplace.

**UTS Super Lab**
[uts.ac/SuperLabSymphony](uts.ac/SuperLabSymphony)
As long as an Olympic swimming pool, the Super Lab can hold 12 different classes, with 220 students learning simultaneously.

**Biologics Innovation Facility**
[uts.ac/Biologics](uts.ac/Biologics)
This facility opened in 2019 and houses a series of clean rooms and containment laboratories containing state-of-the-art biomanufacturing equipment for biopharma and biotech.

**Microstructural Analysis Unit**
[uts.ac/MAU](uts.ac/MAU)
This highly specialised unit includes the Beam Chemistry Lab for fabricating nanostructured materials.

**Microbial Imaging Facility**
[uts.ac/MIF](uts.ac/MIF)
This facility is all about high-resolution imaging and houses, among other things, the DeltaVision OMX Blaze super resolution microscope.

And there’s so much more. Check out our advanced, specialised teaching and research facilities at [uts.ac/ScienceFacilities](uts.ac/ScienceFacilities)
YOU'RE IN THE DRIVERS SEAT
Our approach to learning puts you at the centre. You’ll identify issues, investigate problems and scenarios, and put theory into action through workshops, live case studies and masterclasses.

RESEARCH THAT SHAPES THE WORLD
You’ll learn from academics actively engaged in current research, often in partnership with leading industry organisations. Whether you’re a research or coursework student, everything you learn will be informed by the latest findings from our own experts and from around the world.

REAL-WORLD SKILLS
Beyond the scientific expertise you’ll gain, our courses also provide professional skills such as proposal writing and advanced communication. In our innovation, Entrepreneurship and Commercialisation subject you can learn to generate ideas, develop products and pitch to investors.

A FLEXIBLE APPROACH
Our courses are designed to fit into busy lives. We take a ‘blended’ approach to learning that mixes the best of face-to-face and online content – and we’ve built an evening class option into every compulsory subject.

INDUSTRY CONNECTIONS
Be in the same room as employers thanks to UTS’s extensive industry and public sector connections. Network with industry leaders from GE and the CSIRO, for instance, or work on research projects with partners like Sydney Water or the Australian Federal Police.

Our graduates have the practical skills, professional expertise and innovation mindset they need to succeed in the changing world of work.
What can I study?

Find the postgraduate pathway that’s right for you.

There are lots of options when it comes to postgraduate courses at UTS Science. Depending on your Bachelor’s degree, you could be eligible to study for either a coursework qualification or a research degree.

In coursework, a shorter program like a graduate certificate or a graduate diploma might suit your circumstances, or you could build a full Master’s degree. In research, you can choose between a doctoral program that leads to a PhD or a Master’s by research.

**COURSEWORK OR RESEARCH, WHAT’S THE DIFFERENCE?**

With a coursework degree, you’ll work your way through a structured series of subjects to build advanced knowledge in your chosen field. You’ll attend classes, write assessments and sit exams.

With a research degree, you’ll undertake study and research under the guidance of an academic supervisor. You’ll work on your chosen project with the aim of submitting a thesis that makes a distinct and significant contribution to knowledge in your field.

You don’t have to be in a dedicated research degree to build research skills, of course. All our coursework majors introduce you to the fundamental concepts of research. You can also enrol in specific research project subjects – depending on your academic record and the availability of suitable projects.
Available Postgraduate coursework degrees

A Master’s degree involves one to two years of study, while a graduate diploma requires two sessions full-time and a graduate certificate one session.

Here are your options:

- Master of Forensic Science
- Master of Forensic Science (Extension)
- Master of Philosophy in Forensic Science
- Master of Medical Biotechnology
- Master of Medical Biotechnology (Extension)
- Master of Philosophy in Medical Biotechnology
- Master of Science
- Master of Science (Extension)
- Master of Philosophy in Science
- Master of Quantitative Finance
- Graduate Diploma in Forensic Science
- Graduate Diploma in Medical Biotechnology
- Graduate Certificate in Science
- Graduate Certificate in Mathematics
- Graduate Certificate in Medical Biotechnology
- Graduate Certificate in Forensic Science

Available Postgraduate research degrees

A PhD is an internationally recognised qualification awarded to students who successfully undertake an intensive research program lasting four years (full-time) to eight years (part-time). A PhD is the first step in an academic career. It’s also highly valued in industry, with graduates recognised as experts in their field.

Your research degree options include:

- Doctor of Philosophy (Science)
- Master of Science (Research)
- Master of Science (Research) in Mathematical Sciences

Become part of our vibrant postgraduate community, supported by world-leading academics who want to see you succeed.
Find yourself inside complex and challenging criminal cases with the Master of Forensic Science. You’ll start with an overview of forensic science practice before diving deeper into forensic methods and techniques such as inference and interpretation, chemical criminalistics, toxicology and drug analysis, and crime scene investigation.

You won’t just build skills for the lab. You’ll also study a range of professional subjects, such as communication, workplace health and safety, and statistical design. In your second year you’ll have the option of a forensic science research internship.

### Course structure

#### YEAR 1
- Advanced Communication Skills in Science (6cp)
- Foundations of Forensic Science (8cp)
- Forensic Inference & Interpretation (8cp)

**Select 10 credit points from the following:**
- Leadership in Science (8cp)
- Innovation, Entrepreneurship and Commercialisation (8cp)
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Laboratory Management (4cp)
- Risk Assessment and Management for Science (4cp)
- Research Proposal Writing (2cp)
- Work Health and Safety for Science (8cp)
- Professional Science Writing (2cp)
- Science Business Models and Intellectual Property (4cp)

**Select 16 credit points from the following:**
- Crime Scene Investigation & Management (8cp)
- Forensic Toxicology and Drug Analysis (8cp)
- Advanced Chemical Criminalistics (8cp)
- Biometrics & Identification Sciences (8cp)
- Forensic Science Research Internship Project A (8cp)
- Forensic Science Research Internship Project B (8cp)
- Forensic Science Research Internship Project C (16cp)
- Forensic Science Research Internship Project D (16cp)

#### YEAR 2
- Understanding Data and Statistical Design (6cp)

**Select 2 credit points from the following:**
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Risk Assessment and Management for Science (2cp)
- Research Proposal Writing (2cp)
- Professional Science Writing (2cp)

**Select 16 credit points from the following:**
- Crime Scene Investigation & Management (8cp)
- Forensic Toxicology and Drug Analysis (8cp)
- Advanced Chemical Criminalistics (8cp)
- Biometrics & Identification Sciences (8cp)
- Forensic Science Research Internship Project A (8cp)
- Forensic Science Research Internship Project B (8cp)
- Forensic Science Research Internship Project C (16cp)
- Forensic Science Research Internship Project D (16cp)

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**Learn from the best**

**XANTHE SPINDLER**  
Senior Lecturer, Centre for Forensic Science

If a criminal leaves a fingerprint at the scene, they’d better hope Dr Xanthe Spindler isn’t around. Xanthe is a world-recognised expert in the science of fingerprints (or fingermarks) and a member of the International Fingerprint Research Group. Her work focuses on the different factors that affect successful detection of fingerprints and the development of biomolecular and chemical methods to capture fingermarks that might be missed now. Xanthe’s research isn’t confined to the lab. She works with the Australian Federal Police, NSW Police, Victoria Police and a number of international universities.
Master of Forensic Science (Extension)

Extend your Master’s degree by six months by adding electives that build to the Master of Forensic Science (Extension). You’ll expand your knowledge and skills by choosing from a broad range of electives such as finance management, environmental policy, psychology, and technology and innovation management.

YEAR 1
- Advanced Communication Skills in Science (6cp)
- Foundations of Forensic Science (8cp)
- Forensic Inference & Interpretation (8cp)

Select 10 credit points from the following:
- Leadership in Science (8cp)
- Innovation, Entrepreneurship and Commercialisation (8cp)
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Laboratory Management (4cp)
- Risk Assessment and Management for Science (4cp)
- Research Proposal Writing (2cp)
- Work Health and Safety for Science (8cp)
- Professional Science Writing (2cp)
- Science Business Models and Intellectual Property (4cp)

Select 16 credit points from the following:
- Crime Scene Investigation & Management (8cp)
- Forensic Toxicology and Drug Analysis (8cp)
- Advanced Chemical Criminalistics (8cp)
- Biometrics & Identification Sciences (8cp)
- Forensic Science Research Internship Project A (8cp)
- Forensic Science Research Internship Project B (8cp)
- Forensic Science Research Internship Project C (16cp)
- Forensic Science Research Internship Project D (16cp)

YEAR 2
- Understanding Data and Statistical Design (6cp)
- Electives (Science PG) (24cp)

Select 2 credit points from the following:
- Crime Scene Investigation & Management (8cp)
- Forensic Toxicology and Drug Analysis (8cp)
- Advanced Chemical Criminalistics (8cp)
- Biometrics & Identification Sciences (8cp)
- Forensic Science Research Internship Project A (8cp)
- Forensic Science Research Internship Project B (8cp)
- Forensic Science Research Internship Project C (16cp)
- Forensic Science Research Internship Project D (16cp)

Course structure

SERGIO JOSHUA
Master of Science in Forensic Science

“Having studied a Bachelor of Forensic Biology in Biomedical Science, I really wanted to take what I’d learned from the biology subjects and complement that with the forensic chemistry subjects in the Master’s program. I really enjoy the specialist subjects that UTS offers for forensics. It’s very practical and has real-life scenarios to work with. The academic staff and teaching associates really work hard to give you the best experiences.

Studying at UTS was an obvious choice for me, since it’s among the leading universities in the field. Its strong connections with law enforcement and related industry partners means the coursework continually evolves.”
Interested in both coursework and research? The Master of Philosophy in Forensic Science could be for you. You’ll build in-depth theoretical knowledge and gain business and managerial skills in your first year, then in your second year conduct an experimental, analytical or theoretical investigation into a topic you’re passionate about.

For entry, you’ll need to first complete 48 credit points of the Master of Forensic Science or Master of Forensic Science (Extension), then apply for an internal course transfer. You’ll need a Credit average and be able to demonstrate research skills.

This course is a potential pathway to a PhD, especially if you didn’t complete an Honours year in your undergraduate degree. Head to page 30 for more information on research degrees at UTS.

Course structure

**YEAR 1**
- Advanced Communication Skills in Science (6cp)
- Foundations of Forensic Science (8cp)
- Forensic Inference & Interpretation (8cp)
- Understanding Data and Statistical Design (6cp)

Select 12 credit points from the following:
- Leadership in Science (8cp)
- Innovation, Entrepreneurship and Commercialisation (8cp)
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Laboratory Management (4cp)
- Risk Assessment and Management for Science (4cp)
- Research Proposal Writing (2cp)
- Work Health and Safety for Science (8cp)
- Professional Science Writing (2cp)
- Science Business Models and Intellectual Property (4cp)

Select 8 credit points from the following:
- Crime Scene Investigation & Management (8cp)
- Forensic Toxicology and Drug Analysis (8cp)
- Advanced Chemical Criminalistics (8cp)
- Biometrics & Identification Sciences (8cp)
- Forensic Science Research Internship Project A (8cp)

**YEAR 2**
- Forensic Science Thesis 1 (24cp)
- Forensic Science Thesis 2 (24cp)
Graduate Diploma in Forensic Science

You can complete a postgraduate qualification in forensic science in one year of full-time study (or two years part-time) via the Graduate Diploma in Forensic Science. You’ll complete three compulsory subjects – two forensic science and professional. Then you’ll make your degree your own by choosing from a range of forensic science and professional subjects that include things like chemical criminalistics and intellectual property. This course is a great way to see if postgraduate study is for you. You can apply to transfer to the Master of Forensic Science, carrying over credit points from your diploma studies.

Course structure

YEAR 1
- Foundations of Forensic Science (8cp)
- Forensic Inference & Interpretation (8cp)
- Understanding Data and Statistical Design (6cp)
- Select 16 credit points of forensic science subjects
- Select 10 credit points of professional subjects

Graduate Certificate in Forensic Science

Dip your toe into postgraduate study with a Graduate Certificate in Forensic Science. You’ll complete 24 credit points – 16 in core forensic science subjects and 8 in professional electives. Knock over the graduate certificate in six months or stretch it out over a year to suit your life circumstances.

A graduate certificate is a great way to check out whether postgraduate study in forensic science is for you. You can apply to transfer to the Graduate Diploma or Master of Forensic Science, carrying over credit points from your certificate studies.

Course structure

YEAR 1
- Foundations of Forensic Science (8cp)
- Forensic Inference & Interpretation (8cp)
- Select 8 credit points of professional subjects
Build expertise in the rapidly expanding field of medical biotech with this Master’s degree. You’ll develop skills in microscopy, flow cytometry, proteomics and biotechnology as they relate to infectious diseases and medical devices. You’ll gain insights into the technologies and methods used to produce next-generation pharmaceuticals and vaccines.

We pride ourselves on producing graduates with an innovation mindset, so you’ll be pushed to think outside the box when it comes to tackling real-world biotechnology and medical challenges. You’ll also develop your professional skills with subjects such as communication, work health and safety, and research proposal writing.

There are six compulsory medical biotech and professional subjects in this degree. You can then tailor it by choosing from a mix of medical biotech, professional and elective subjects. You have the option of a research internship in your second year.

**Course structure**

**YEAR 1**
- Advanced Communication Skills in Science (6cp)
- Advanced Microscopy and Imaging (8cp)
- Experimental and Diagnostic Flow Cytometry (8cp)
- Understanding Data and Statistical Design (6cp)
- Proteomics (8cp)
- Biotechnology Solutions to Infectious Diseases (8cp)

**Select 4 credit points from the following:**
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Risk Assessment and Management for Science (2cp)
- Research Proposal Writing (2cp)
- Professional Science Writing (2cp)

**YEAR 2**
- Electives (Science PG) (16cp)
  You can also choose to complete a Medical Biotechnology Research Internship worth 8 or 16cp.

**Select 8 credit points from the following:**
- Leadership in Science (8cp)
- Innovation, Entrepreneurship and Commercialisation (8cp)
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Laboratory Management (4cp)
- Risk Assessment and Management for Science (2cp)
- Research Proposal Writing (2cp)
- Work Health and Safety for Science (8cp)
- Professional Science Writing (2cp)
- Science Business Models and Intellectual Property (4cp)

**SUMIT BORHADE**
*Master of Science (Honours) in Medical Biotechnology*

“Before coming to UTS, I completed a Bachelor of Pharmacy. My interest in research and development motivated me to study medical biotechnology, as it covers more of the components necessary to be a successful research scientist. Choosing to study at UTS was pretty obvious for me, given it’s the #1 young university in Australia.

I’ve always found science fascinating and UTS Science has nurtured my passion. My goal is to gain work in a pharmaceutical or biotechnology company as a research scientist or to work for a research organisation. If you’re passionate about research and small things that make a bigger difference, this degree is for you.”
Extend your Master’s degree by six months by adding electives that build to the Master of Medical Biotechnology (Extension). You’ll expand your knowledge and skills by choosing from a broad range of electives, such as finance management, environmental policy, psychology, and technology and innovation management.

**Course structure**

**YEAR 1**
- Advanced Communication Skills in Science (6cp)
- Advanced Microscopy and Imaging (8cp)
- Experimental and Diagnostic Flow Cytometry (8cp)

Select 4 credit points from the following:
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Risk Assessment and Management for Science (2cp)
- Research Proposal Writing (2cp)
- Professional Science Writing (2cp)

Understanding Data and Statistical Design (6cp)
Proteomics (8cp)
Biotechnology Solutions to Infectious Diseases (8cp)

**YEAR 2**

Electives (Science PG) (40cp)
You can also choose to complete a Medical Biotechnology Research Internship worth 8 or 16cp.

Select 8 credit points from the following:
- Leadership in Science (8cp)
- Innovation, Entrepreneurship and Commercialisation (8cp)
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Laboratory Management (4cp)
- Risk Assessment and Management for Science (2cp)
- Research Proposal Writing (2cp)
- Work Health and Safety for Science (8cp)
- Professional Science Writing (2cp)
- Science Business Models and Intellectual Property (4cp)

**Learn from the best**

**WILLA HUSTON**
Associate Professor, Medical Biotechnology

Dr Willa Huston is a dynamic academic known as a passionate teacher and a champion of equity and diversity in science. As a molecular microbiologist, Willa focuses on chlamydial diseases – how they work and persist, and the impact on women’s fertility. Willa’s research team also has ongoing projects in pelvic inflammatory disease and the treatment of chlamydia in koalas.

Willa makes a significant contribution to diversity in science at UTS. She’s co-convener of the UTS Academic Women in Science group, Chair of the Faculty of Science Equity and Diversity Committee, and a member of the UTS Athena SWAN Communications Committee.
Interested in both coursework and research? The Master of Philosophy in Medical Biotechnology could be for you. You’ll build in-depth theoretical knowledge and gain business and managerial skills in your first year, then complete a 48 credit point research project in your second year.

In year one you’ll complete 48 credit points in the Master of Medical Biotechnology or Master of Medical Biotechnology (Extension), then you’ll apply for an internal course transfer for year two. You’ll need a Credit average and be able to demonstrate research skills.

This course is a potential pathway to a PhD, especially if you didn’t complete an Honours year in your undergraduate degree. Head to page 30 for more information on research degrees at UTS.

**Course structure**

**YEAR 1**
- Advanced Communication Skills in Science (6cp)
- Advanced Microscopy and Imaging (8cp)
- Experimental and Diagnostic Flow Cytometry (8cp)
- Understanding Data and Statistical Design (6cp)
- Proteomics (8cp)
- Biotechnology Solutions to Infectious Diseases (8cp)

**Select 4 credit points from the following:**
- Ethics in Human Research (2cp)
- Ethics in Animal Research (2cp)
- Risk Assessment and Management for Science (2cp)
- Research Proposal Writing (2cp)
- Professional Science Writing (2cp)

**YEAR 2**
- Medical Biotechnology Thesis 1 (24cp)
- Medical Biotechnology Thesis 2 (24cp)
Graduate Diploma in Medical Biotechnology

You can complete a postgraduate qualification in medical biotechnology in one year of full-time study (or two years part-time) with the Graduate Diploma in Medical Biotechnology. You'll study a mix of core medical biotechnology and professional subjects – from biotechnology solutions for infectious diseases to science business models and intellectual property. This is a great way to see if postgraduate study is for you. You can apply to transfer to the Master of Medical Biotechnology, carrying over credit points from your diploma studies.

Course structure

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<th>YEAR 1</th>
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<td>Advanced Microscopy and Imaging (8cp)</td>
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<tr>
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<tr>
<td>Proteomics (8cp)</td>
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<tr>
<td>Biotechnology Solutions to Infectious Diseases (8cp)</td>
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<tr>
<td>Select 10 credit points of professional subjects</td>
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Graduate Certificate in Medical Biotechnology

Dip your toe into postgraduate study with a Graduate Certificate in Medical Biotechnology. Choose from a broad range of medical biotechnology and professional subjects to suit your interests, from proteomics to leadership in science or grant writing. Knock over the graduate certificate in six months or stretch it out over a year to suit your circumstances.

A graduate certificate a great way to find out if postgrad study in medical biotechnology is for you. You can apply to transfer to the Master of Medical Biotechnology or the Graduate Diploma in Medical Biotechnology, carrying over credit points from your certificate studies.

Course structure

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<td>Select 16 credit points from the following:</td>
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<td>– Proteomics (8cp)</td>
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<tr>
<td>Select 8 credit points of professional subjects</td>
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Combine your passion for financial economics, maths and computational methods.

The Master of Quantitative Finance focuses on derivative security pricing, financial engineering and risk management and has been structured to prepare you for work in the modern finance industry. You’ll learn how to critically analyse financial data for effective decision-making and gain confidence in addressing complex financial trading and risk management issues using innovative financial models. You’ll graduate with specialised knowledge, professional competency and high-level technical skills in quantitative finance, ready to excel in a range of financial careers.

CAREER OPTIONS
Our graduates are quantitative analysts, risk management analysts, pricing analysts, quantitative developers, forecasters, traders, investment analysts and financial engineers.

EMPLOYERS
Employers include banks, regulators like the Reserve Bank of Australia and the Australian Prudential Regulation Authority, hedge funds, insurance companies, consulting firms such as Deloitte and PWC, energy companies and big retailers like Woolworths and Coles, to name a few.

ADMISSION REQUIREMENTS
The minimum admission requirement is a related degree with a strong quantitative component. Students accepted into the Master of Quantitative Finance typically have a Bachelor’s degree in mathematics, statistics, science, physics, engineering, actuarial studies, econometrics, mathematical finance or computer science.

See page 36 for more info on how to apply.

Course structure

YEAR 1

Autumn Session:
- Fundamentals of Derivative Security Pricing (8cp)
- Financial Market Instruments (8cp)
- Statistics and Financial Econometrics (8cp)

Spring Session:
- Interest Rates and Credit Risk Models (8cp)
- Probability Theory and Stochastic Analysis (8cp)
- Risk Management (8cp)

Summer session:
- Quantitative Portfolio Analysis (8cp)
- Numerical Methods in Finance (8cp)
- Computational Methods and Model Implementation (8cp)
MINH LE  
Master of Quantitative Finance  

“I completed a Bachelor of Business at UTS and decided to pursue postgraduate studies to enhance my technical knowledge in the investment industry. I know mathematics and programming are now essential in almost every corner of this field. Large firms are hiring science and engineering graduates, rather than traditional business students, and to be well ahead of this game you need a high-quality degree like this.

UTS Science has a great and diversified culture, career oriented programs and advanced technology that students can apply in their workplaces. UTS courses also have a really strong focus on the practical side of things. I’m learning programming from scratch and applying that straight away into the assignment.”
Already a science or maths graduate and looking for more? The Master of Science will give you advanced scientific knowledge and an in-depth understanding of how science interacts with a range of opportunities in business, industry, research or government.

This degree will help build analytical skills, disciplinary knowledge, creative and logical problem-solving skills and fundamental management expertise. We can also set you on the path towards a research degree (subject to faculty approval).

The 72 credit points in this degree are divided between 48cp of subjects from your chosen major and 24 credit points of professional subjects.

WHICH MAJOR IS FOR ME?
The best bit about this degree? Choosing a major that aligns with your professional goals. Whether you’re a budding biomed specialist, a marine science fanatic or a mathematician at heart, our majors help you build theoretical knowledge and technical skills in the field you care about most. More of a generalist? Choose our ‘No Specific Major’ option and gain expertise across a range of scientific disciplines.

Majors to choose from are:
- Biomedical Engineering
- Mathematical and Statistical Modelling
- Marine Science and Management
- No specified major

ADMISSION REQUIREMENTS
You’ll need to have completed a UTS-recognised Bachelor’s degree, or an equivalent or higher qualification, or be able to submit other evidence of general and professional qualifications that demonstrate your potential to pursue graduate studies. Entry into any of the majors requires a minimum of a Bachelor’s degree in a related discipline.

See page 36 for more info on how to apply.
Master of Science (Extension)

Extend your Master’s degree a further six months, exploring elective subjects that give you the freedom to follow your passions and broaden your area of expertise. The upshot? You’ll graduate with a degree that makes you more than a scientist – you’ll be a discipline expert with the skills to lead new and exciting developments in your field, ready to take on new business and industry challenges.

The 96 credit points in this degree are divided among 48 credit points of subjects from your chosen Master’s major, 24 credit points of professional subjects and 24 credit points of electives.
Graduate Certificate in Mathematics

Are you a business, engineering or science graduate? The Graduate Certificate in Mathematics is for non-maths grads who want to add maths expertise to their skill set, or who are preparing for further studies where maths knowledge is required. Retrain your brain with subjects in statistics, modelling and linear dynamics. Choose from elective subjects like forensic statistics, economics and decision making.

This course is designed to give you a foot in the door to more advanced maths programs, such as the Mathematical and Statistical Modelling major in the Master of Science.

ADMISSION REQUIREMENTS
You need to have completed a UTS-recognised Bachelor’s degree, or an equivalent or higher qualification, or be able to submit other evidence of general and professional qualifications that demonstrate your potential to pursue graduate studies.

Course structure

YEAR 1
- Linear Dynamical Systems (6cp)
- Modelling Change (6cp)
- Statistical Methods (6cp)
- Elective (6cp)
Are you a non-scientist hoping to move into the field? Perhaps you’re already employed in a science or related role and want to enhance your skills. This course will refresh or extend your scientific knowledge and give you a taste of the postgraduate life at the same time.

Use your elective choices to pursue your interests in specific scientific disciplines, and build broad professional skills such as communication, project management, innovation and entrepreneurship. You’ll do two science and two professional subjects. If you want to do more, you can apply to move on to the graduate diploma or Master’s with UTS Science, carrying over credit points from your certificate studies.

**ADMISSION REQUIREMENTS**

You need to have completed a UTS-recognised Bachelor’s degree, or an equivalent or higher qualification, or be able to submit other evidence of general and professional qualifications that demonstrate your potential to pursue graduate studies.

**Course structure**

**YEAR 1**

Select 12cp from the following:

- Advanced Communication Skills in Science (6cp)
- Project Management in Science (6cp)
- Innovation, Entrepreneurship and Commercialisation (6cp)
- Understanding Data and Statistical Design (6cp)
- Linear Algebra (6cp)

Electives (12cp)
Which major is for me?

Biomedical Engineering

Biomedical engineering is about using science and engineering principles to solve medical and biological problems. The knowledge you’ll gain in this major has extensive application in a range of growth areas in health, science and engineering.

The major will introduce you to a variety of applications around biomechanics, medical devices, tissue engineering, medical imaging, and diagnostic and therapeutic uses of nanotechnology. If you’re a science or medical graduate, this is a great way to expand your knowledge of medical technologies without the need for a full engineering degree.

CAREER OPTIONS
Work in medical device and biotechnology companies, diagnostic labs, hospitals and research organisations where your ability to combine biology and engineering knowledge and skills will be highly sought after. You could also play a role in government policy and regulation.

Course structure
Master of Science/Master of Science (Extension)

YEAR 1
Physiological Bases of Human Movement (6cp)
Advanced Communication Skills in Science (6cp)
Programming Fundamentals (6cp)
Innovation, Entrepreneurship and Commercialisation (6cp)
Project Management in Science (6cp)
Biomedical Instrumentation (6cp)
Human Pathophysiology (6cp)
Select 6 credit points from the following:
- Bionanotechnology (6cp)
- Medical Devices and Diagnostics (6cp)
- Medical and Applied Physiology (6cp)

YEAR 2
Select 24 credit points from the following:
- Biomedical Engineering Project A (12cp)
- Medical Imaging (6cp)
- Molecular Nanotechnology (6cp)
- Nanomaterials (6cp)
- Neural Networks and Fuzzy Logic (6cp)
- Physiological Systems (6cp)
- Biomedical Polymers (cp)
- Tissue Engineering Scaffolds (6cp)
Select 24cp of electives (Master of Science (Extension) only).
Course structure
Master of Philosophy in Science

**YEAR 1**
- Physiological Bases of Human Movement (6cp)
- Advanced Communication Skills in Science (6cp)
- Programming Fundamentals (6cp)
- Innovation, Entrepreneurship and Commercialisation (6cp)
- Project Management in Science (6cp)
- Biomedical Instrumentation (6cp)
- Human Pathophysiology (6cp)

Select 6 credit points from the following:
- Bionanotechnology (6cp)
- Medical Devices and Diagnostics (6cp)
- Medical and Applied Physiology (6cp)

**YEAR 2**
- Master of Philosophy Thesis
Marine Science and Management

There's high demand for qualified scientists who understand the impact of forces like climate change on marine environments.

Marine Science and Management is a truly multidisciplinary and cross-university major that spans the Sydney Institute of Marine Science (SIMS) and all its partner institutions: UTS, the University of Sydney, Macquarie University and UNSW. You'll study core units at UTS and undertake two electives at a SIMS partner university. Then you’ll complete a final capstone project at SIMS itself, with a lecture series from SIMS scientists and a practical component using real-life data from the Australian Integrated Marine Observatory.

CAREER OPTIONS
Work as a consultant in fields such as fisheries, environmental sustainability and management, impact assessment, tourism and education. Or use your newfound skills to pursue opportunities in marine science and management. Our graduates are working in government and regulatory bodies, marine and conservation organisations, consultancies, local councils and research organisations.

Course structure
Master of Science/Master of Science (Extension)

<table>
<thead>
<tr>
<th>YEAR 1</th>
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<tbody>
<tr>
<td>Advanced Communication Skills in Science (6cp)</td>
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<tr>
<td>Innovation, Entrepreneurship and Commercialisation (6cp)</td>
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<tr>
<td>External Marine Study 1 (6cp)</td>
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<tr>
<td>Topics in Australian Marine Science (6cp)</td>
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<tr>
<td>Understanding Data and Statistical Design (6cp)</td>
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<tr>
<td>Project Management in Science (6cp)</td>
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<tr>
<td>Climate Change and Ecological Modelling (6cp)</td>
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<tr>
<td>Select 6 credit points from the following:</td>
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<tr>
<td>- Marine Productivity and Climate Change</td>
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<td>- Marine Communities</td>
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<tr>
<td>- Coral Reef Ecosystems</td>
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<table>
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<tr>
<th>YEAR 2</th>
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<tbody>
<tr>
<td>External Marine Study 2 (6cp)</td>
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<tr>
<td>Monitoring Ecological Variability (6cp)</td>
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<td>Select 12 credit points from the following:</td>
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<tr>
<td>- Fisheries Resources (6cp)</td>
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<td>- Environment Research Project A (12cp)</td>
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<tr>
<td>Select 24cp of electives (Master of Science (Extension) only)</td>
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</table>
Course structure
Master of Philosophy in Science

YEAR 1
Advanced Communication Skills in Science (6cp)
Innovation, Entrepreneurship and Commercialisation (6cp)
External Marine Study 1 (6cp)
Topics in Australian Marine Science (6cp)
Understanding Data and Statistical Design (6cp)
Project Management in Science (6cp)
External Marine Study 2 (6cp)
Select 6 credit points from the following:
- Marine Productivity and Climate Change
- Marine Communities
- Climate Change and Ecological Modelling
- Coral Reef Ecosystems

YEAR 2
Science Honours Thesis 1 (24cp)
Science Honours Thesis 2 (24cp)

DAVID BOOTH
Professor of Marine Ecology, Program Director in Marine Science and Management
David Booth is a well-known and respected academic who’s passionate about marine conservation and a strong advocate of sustainable fisheries and marine parks. He’s one of the ‘go-to people’ when it comes to expertise in marine science. David has over 100 published papers in the areas of reef-fish ecology, climate change and other anthropogenic impacts on fishes and fisheries. His research interests also include the journey of tropical fish down the East Australian Current past Sydney, estuary fish around Sydney, and the ecology and behaviour of threatened fishes such as sea dragons, black cod and white sharks.

HOLLY BONE
Master of Science (Honours) in Marine Science and Management
“I completed a Bachelor of Marine Biology at UTS and wanted to stay in this learning environment. My supervisors and teachers had all been very knowledgeable, professional and had practical experience from their own research and work before becoming academics.

My research project involved observing fish behaviours and community structures between different sites at Towra Point Nature Reserve in NSW. I used GoPro and visual observation to try to capture undisturbed behaviours in the field, then I compared this data to habitat preference experiments in the lab. Ultimately the research aims to help manage the site against the threats of a changing environment.

After my research is completed, I’d like to find a job where I can still work in wetland environments – which I’ve come to deeply appreciate – and contribute to environmental management and education.”
Mathematical and Statistical Modelling

This major is all about logistic and statistical modelling and analytic tools. You’ll learn to solve problems using a range of creative and logical approaches.

You may be a non-mathematician seeking to broaden your career opportunities by topping up with some mathematical skills. You may be already employed in a maths or related role. Either way, this major has been designed so you can tailor your studies to your level of maths proficiency. As well as gaining specific disciplinary knowledge, you’ll gain fundamental management skills – emerging ready to drive people and projects inside range of organisations.

CAREER OPTIONS
Apply your mathematics and statistics expertise in the banking and finance sectors, health industries and the information technology sector. Graduates also work in market research and in logistics and transport in companies like Linfox, AGL, Woolworths and Coles.

Course structure
Master of Science/Master of Science (Extension)

YEAR 1
Linear Algebra (6cp)
Innovation, Entrepreneurship and Commercialisation (6cp)
Advanced Communication Skills in Science (6cp)
Project Management in Science (6cp)
Select 12 credit points from the following:
– Elective (6cp)
– Advanced Calculus (6cp)
– Simulation Modelling (6cp)
– Quantitative Management Practice (6cp)
– Design and Analysis of Experiments (6cp)
– Programming for Data Analysis (6cp)
Select 12 credit points from the following:
– Sample Surveys
– Differential Equations
– Mathematical Methods
– Nonlinear Methods in Quantitative Management
– Network and Combinatorial Optimisation
– Advanced Statistical Modelling
– Stochastic Processes
– Mathematical Research Project A

YEAR 2
Select 24 credit points from the following:
– Advanced Calculus (6cp)
– Simulation Modelling (6cp)
– Quantitative Management Practice (6cp)
– Design and Analysis of Experiments (6cp)
– Programming for Data Analysis (6cp)
– Mathematical Research Project B (12cp)
– Mathematical Research Project (24cp)
Select 24cp of electives (Master of Science (Extension) only).
LILY SERNA
Data Analyst, Atlassian

Lily Serna has had a varied and exciting career thanks to her qualifications in mathematics and finance.

Lily’s ‘day job’ is as a data analyst at Atlassian, the Australian software giant that generates more than half a billion dollars a year in revenue. “I just love my job,” Lily says. “It involves doing all things maths – from statistical analysis to modelling and everything in between.”

Some people will know Lily as the maths expert and co-host of SBS TV game show Letters and Numbers and she has appeared on the ABC science show Catalyst.

If you love maths, Lily highly recommends considering a mathematics degree. Maths grads are in big demand, she says. “Most people with my skill set are getting regular calls from recruiters looking for people to fill data roles, because we’ve moved to an age where there’s an enormous amount of information that’s been gathered and a huge need for people with the skills to make sense of that.”

Course structure
Master of Philosophy in Science

YEAR 1
Linear Algebra (6cp)
Innovation, Entrepreneurship and Commercialisation (6cp)
Advanced Communication Skills in Science (6cp)
Project Management in Science (6cp)
Select 12 credit points from the following:
- Elective (6cp)
- Advanced Calculus (6cp)
- Simulation Modelling (6cp)
- Statistics for Quantitative Finance
- Quantitative Management Practice (6cp)
- Design and Analysis of Experiments (6cp)
- Programming for Data Analysis (6cp)
Select 12 credit points from the following:
- Stochastic Calculus in Finance
- Sample Surveys
- Differential Equations
- Mathematical Methods
- Nonlinear Methods in Quantitative Management
- Network and Combinatorial Optimisation
- Advanced Statistical Modelling
- Stochastic Processes

YEAR 2
Mathematics Thesis 1 (12cp)
Mathematics Thesis 2 (12cp)
Select 12 credit points from the following:
- Seminar A (6cp)
- Seminar B (6cp)
- Seminar C (6cp)
- Seminar D (6cp)
- Advanced Bayesian Methods (6cp)
- Advanced Stochastic Processes (6cp)
Select 12 credit points from the following:
- Seminar A (6cp)
- Seminar B (6cp)
- Seminar C (6cp)
- Seminar D (6cp)
- Modern Analysis with Applications (6cp)
- Multivariate Data Analysis (6cp)
No Specific Major

Passionate about more than one area of science? With the no specific major specialisation, you can combine subjects from various majors in a way that reflects your interests.

It gives you the flexibility to craft your own degree, either to align with a specific career path or to satisfy your personal curiosity. It’s a great option if you’re looking to kickstart a science career, or if you’re a scientist wanting to expand your expertise. Either way, you’ll engage with a range of theoretical subjects and practical applications across a diverse field of enquiry.

This major option is not available in the Master of Philosophy in Science.

Course structure

Master of Science, Master of Science (Extension)

YEAR 1
Advanced Communication Skills in Science (6cp)
Project Management in Science (6cp)
Innovation, Entrepreneurship and Commercialisation (6cp)
Select 6 credit points of options:
  - Linear Algebra (6cp)
  - Programming Fundamentals (6cp)
  - Understanding Data and Statistical Design (6cp)
Select 48cp of options from choice block 90649 (No specified major):
  View options at handbook.uts.edu.au/directory/cbk90649
Select 24cp of electives (Master of Science (Extension) only).
Research at UTS Science

Research. It’s who we are. At UTS Science we’re passionate about knowledge that drives change.

We’re known for delivering research that has a tangible impact on people, communities and the environment. Our work occurs in a wealth of scientific disciplines, including climate change, infectious diseases, biomedical devices, forensic science, materials science, medical and health sciences, mathematics, physics, chemistry, biology and environmental sciences.

In the latest Excellence in Research for Australia assessment (2018), we were ranked at world standard or above in every one of our research disciplines. In fact, our work in physical sciences, analytical, material and physical chemistry, environmental sciences, microbiology, plant biology and genetics earned the highest possible rating – ‘well above world standard’. That puts us on par with some of the world’s leading institutions. We’re also the top Australian university on the CWTS Leiden Ranking for the proportion of our research that appears in leading science journals.

STATE OF THE ART FACILITIES
As a research student you’ll have access to the purpose-built $150 million Vicki Sara Building, which houses custom-designed labs for multiple disciplines. (Check it out at uts.ac/Building7.) Due for completion in 2020 is a new science building dedicated to research, with seven levels of cutting-edge labs and facilities. (See uts.ac/Building4)

Learn more about our research facilities at uts.ac/ScienceFacilitiesResearch.

YOUR SUCCESS IS OUR SUCCESS
When you enrol in a research degree at UTS Science, you’ll become an integral part of our collaborative, outward-looking and future-focused research community. You’ll work at the frontiers of human knowledge, building fundamental research capabilities and gaining hands-on experience with the tools and technologies that define modern science.

You’ll also gain a wealth of professional skills, such as communication and project management, that’ll prepare you to work effectively in industry and government environments. And, if you’re like 80 per cent of our grads, you’ll go on to find professional employment within three months of graduation.
LEARNING WITH THE BEST
When you study with us, you’ll work alongside the people who are changing the future of science. Our researchers are world leaders across a wide range of disciplines, and they’re leading the development of new research discoveries that change the way we live.

Our researchers are world leaders across a wide range of disciplines. Associate Professor Sheila Donnelly is using parasitic worms to fight autoimmune diseases. Professor Liz Harry is investigating medicinal honey as a tool to treat multi-drug-resistant infections. Professor Peter Ralph is driving a huge program of algae-based biotechnology innovation. These are just a few of the superstars who call UTS Science home.

RESEARCH STRENGTHS
Our research falls into either the School of Life Sciences or the School of Mathematical and Physical Sciences. It’s also divided into groups of work known as research strengths, into research centres or institutes, and into faculty research teams. We also have joint research centres with partners

<table>
<thead>
<tr>
<th>Institute</th>
<th>Description</th>
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<tr>
<td>Infection, immunity, innovation</td>
<td>This institute addresses challenges in understanding and controlling infectious disease in humans and animals.</td>
</tr>
<tr>
<td>Climate Change Cluster</td>
<td>C3, as it’s known, uses technology to measure and predict the structure, function and health of plant-based ecosystems.</td>
</tr>
<tr>
<td>Centre for Forensic Science</td>
<td>This centre takes an interdisciplinary approach to addressing crime and security issues.</td>
</tr>
<tr>
<td>Centre for Health Technologies</td>
<td>CHT is home to world-leading expertise in the development of medical devices and biotherapeutics research.</td>
</tr>
<tr>
<td>Centre for Clean Energy Technology</td>
<td>This centre focuses on the development of efficient devices for energy harvesting, storage and conversion.</td>
</tr>
<tr>
<td>Institute for Biomedical Devices</td>
<td>IBMD is working on revolutionary biomedical technologies that take advantage of scientific advances in photonics and materials.</td>
</tr>
<tr>
<td>Centre for Neuroscience and Regenerative Medicine</td>
<td>This centre focuses on projects aimed at understanding the central nervous system and its disorders, with the aim of improving quality of life.</td>
</tr>
<tr>
<td>Centre for Inflammation</td>
<td>A collaboration between UTS and the Centenary Institute, the centre is investigating the interface between infectious disease, inflammation and immunology</td>
</tr>
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</table>

JOINT RESEARCH CENTRES
- Australia-China Joint Research Centre for Point-of-Care Testing: This centre is working to produce a low-cost, portable point-of-care testing device to detect genetic disorders, infections, foetal abnormalities and signs of cancer.
- ARC Research Hub for Integrated Device for End-user Analysis at Low-levels: Led by UTS, the IDEAL Hub brings together science and industry to work on technologies to vastly improve the sensitivity, speed and cost-effectiveness of detecting biological and chemical molecules at low levels.
- Rail Manufacturing Cooperative Research Centre: This centre is developing new technologies and knowledge to advance Australia’s rail manufacturing.
Make a meaningful contribution to knowledge with a Doctor of Philosophy in science or maths.

As a doctoral candidate you’ll pursue a unique research project that answers critical questions, opens new areas of inquiry or transforms accepted wisdom. You’ll develop your findings into a formal thesis under the guidance of experienced and expert supervisors. A PhD can be the first step in an academic career or an opportunity to take a deep dive into your intellectual passions.

As well as pursuing an intensive program of research, you’ll have access to development subjects that help you build research skills and support your professional growth.

CAREER OPTIONS
PhD graduates can find careers in academia as researchers, research fellows or research associates, and as highly trained professionals in science-related fields in industry.

ADMISSION REQUIREMENTS:
You’ll need to have completed either an Honours degree class 1 or 2(1) or have a recognised research Master’s degree. You’ll also need to demonstrate the quality of your proposed research project and identify a supervisor with relevant expertise who’s willing to supervise your work. Depending on the subject of your PhD, you may also need to demonstrate specific technical skills.

Domestic students should head to uts.edu.au/research-applications for information on how to apply, and international students should go to uts.edu.au/international.

See more information on how to apply on page 36.

ANDREW WALTON
PhD in Forensic Science

“I completed a Bachelor of Forensic Biology in Biomedical Science (Honours) at UTS, which is one of only a handful of universities that offer research in the area of forensic science. I really enjoyed the environment and the supervision I received there.

Fingerprints are unique to individuals. However, all fingerprints can be categorised into three main groups: loops, arches and whorls. I’m looking to see if these patterns – plus their subcategories, in addition to other features – show a difference in frequency between different ethnicities and the sexes.

My day consists of recruiting volunteers and gathering their fingerprints, DNA and ancestry data. A lot of data crunching on Excel follows, plus a bit of Photoshop involving the fingerprint scans. Every now and then I also do DNA extractions and quantifications in the lab. I hope my research experience will help me transition smoothly into a forensic position where I can make a difference.”
Pursue an in-depth research project in your chosen area of science.

In the Master of Science (Research) program you'll not only develop fundamental research skills and discipline-specific expertise but also professional attributes that go beyond the lab. Those skills will include problem definition, hypothesis formulation and testing, data acquisition, analysis and interpretation, as well as project presentation.

Your main focus will be developing an original thesis that explores a significant research question. Throughout your degree you'll work closely with an academic supervisor who specialises in your field of inquiry. Not an experienced researcher? Don’t worry. We have a range of research methodology and professional development subjects that will help you build the skills you need.

CAREER OPTIONS
Graduate opportunities include environmental consultant, medical scientist, researcher, resource manager, scientist or technologist.

ADMISSION REQUIREMENTS
You'll need a recognised Bachelor’s degree or an equivalent or higher qualification, demonstrated English language proficiency and a written research proposal developed in collaboration with your nominated supervisor.

HOW TO APPLY
Domestic students should head to uts.edu.au/research-applications for information on how to apply, and international students should go to uts.edu.au/international.

See more information on how to apply on page 36.

JOSHUA STAINLAY
Master of Science (Research)

“I chose to do a research degree because I wanted to be able to call some research my own before working on a project for somebody else. This is the perfect way to achieve that.

My research aims to discover which garden plants have low flammability, in order to change what people will plant in their gardens at bushfire interfaces. I chose to focus on this because I've grown up in a bushfire prone area, and after meeting my supervisor in my undergraduate degree – someone who was already in this area.

I conduct my experiments in the UTS greenhouses, where I take care of around 40 plants. I also research on my computer and have weekly meetings with my supervisor. I still have time to train and play AFL outside of university and work one day a week.”
Build high-level research skills in a degree that will prepare you for a wide range of careers.

In the Master of Science (Research) in Mathematical Sciences you’ll develop an original piece of research while also building additional expertise through an exploration of mathematical literature. You’ll also broaden your professional skills with experience in problem definition, hypothesis formulation and testing, data acquisition, analysis and interpretation, and project presentation.

Throughout your degree you’ll work closely with an academic supervisor who specialises in your field of inquiry. Your main focus will be developing an original thesis that explores a significant mathematics question. Not an experienced researcher? Don’t worry. We have a range of research methodology and professional development subjects that will help you build the skills you need.

CAREER OPTIONS
Graduates of this course significantly broaden their career choices, and the research topic may be chosen to facilitate specific career paths – for example, in senior levels of market research, quantitative management and quantitative finance.

ADMISSION REQUIREMENTS
You’ll need a recognised Bachelor’s degree or an equivalent or higher qualification, demonstrated English language proficiency and a written research proposal developed in collaboration with your nominated supervisor.

HOW TO APPLY
Domestic students should head to uts.edu.au/research-applications for information on how to apply, and international students should head to uts.edu.au/international

See more information on how to apply on page 36.

Learn from the best

STEPHEN WOODCOCK
Senior Lecturer, School of Mathematical and Physical Sciences

An applied mathematician and footy lover, Dr Stephen Woodcock is using his expertise in numbers to develop practical and simple solutions to real-world problems.

Stephen’s research projects have covered a vast range of applications, from improving the design and efficiency of wastewater treatment systems to modelling the biogeography around the Great Barrier Reef and measuring ocean health.

Stephen is a keen and committed teacher who mentors high school, undergraduate, postgraduate and higher degree research students. He has a unique ability to communicate how maths can be applied to many life scenarios and is known for using his love of sport to take maths to the public.

When he’s not conducting research or inspiring students you can find him writing articles for The Conversation. He’s explored quirky topics such as predicting the Oscars, where you should aim for a goal in a penalty shootout, and how to win office footy tipping competitions (hint – don’t listen to the experts!).
Effective environmental managers are increasingly in demand, and so are the CSARM courses required to keep their skills up to speed. But not all CSARM qualifications are created equal.

UTS offers the only university-based CSARM program, and it’s one that’s been designed with experienced environmental professionals in mind.

You’ll complete five self-contained modules in three days or less, updating your expertise, extending your knowledge base and building connections with colleagues across the field of environmental science as you go.

**HERE’S WHAT YOU GET WHEN YOU STUDY WITH US**

- A UTS Certificate of Attendance or Certificate of Completion (on completion of post-module work).
- Recognition of prior learning for UTS Master of Science by coursework (when you successfully complete designated post-module work).
- Credit towards consultant certification programs such as the Certified Environmental Practitioner scheme and Engineers Australia CPD program.
- A discount on course fees if you’re a previous graduate of UTS.

For more information or to enrol, head to consitecourses.uts.edu.au

The world of work is changing, technology is creating new opportunities and markets are shifting. So what do you need to stay ahead?

UTS Open courses help you adapt and thrive in the face of these disruptions. You’ll develop knowledge and skills you can use in your work, in your study and to tackle some of life’s bigger questions.

UTS Open draws from UTS extensive postgraduate program and industry connections. Courses take just three to five hours of your time and include fascinating topics such as blockchain and copyright and human rights.

We’ll soon have longer courses too – some potentially with credit towards UTS degrees.

A small step can lead to big change, so head to open.uts.edu.au to discover a new passion today.
How to apply & fees

THE ACADEMIC YEAR
There are three teaching sessions at UTS:
– Autumn Session: March to June
– Spring Session: July to October
– Summer Session: November to February
While not all subjects run during the Summer session, make sure you check out which ones do – it’s a great way to get ahead or reduce your study load during Autumn and Spring.

APPLICATION CLOSING DATES
If you want to start studying in the Autumn or Spring sessions, you need to apply by:
Autumn Session: 30 September 2019
Spring Session: 30 April 2020

LOCAL APPLICANTS: COURSEWORK
In a coursework-based postgraduate degree you’ll attend tutorials and lectures, and complete assessments such as essays and exams. Submit your application online:
– through the UTS Online Application system at uts.edu.au/pg-admissions
– at one of our Postgraduate Expos or postgraduate information sessions.
Find out everything you need to know about upcoming information sessions at bit.ly/science-events

LOCAL APPLICANTS: RESEARCH
In a research-focused postgraduate degree you’ll undertake and complete a research project. Before you apply you’ll need to consider what you want to research, find an expert supervisor and write a research proposal. Once you’ve done that, send your application to the UTS Graduate Research School.
Visit uts.ac/apply-for-research or email gsr@uts.edu.au to find out more about the application process, and to apply.

INTERNATIONAL APPLICANTS
If you’re an international student, head to uts.edu.au/international to find the course information, fees and application details relevant to you.

ENGLISH LANGUAGE PROFICIENCY
There are English language proficiency requirements for all courses. These requirements may apply to you, even if you are not an international student.
Visit uts.edu.au/english-language-requirements to find out more.

NON-AWARD STUDY
Do you want to study a single subject without committing to a full degree? You can! It’s called non-award study and it’s a great way to upgrade your skills or just learn more about something you enjoy. What’s even more exciting is that subjects you complete may be recognised when undertaking future study. To apply, visit uts.ac/non-award-study

TIMETABLE INFORMATION
Do you like to plan ahead? Then check out the UTS Timetable Planner. This online tool lets you see the timetable for the current session so you can get an idea of how subjects for your degree might be offered and scheduled. The 2020 timetable is available from mid-October 2019. Visit timetable.uts.edu.au

RECOGNITION OF PRIOR LEARNING (RPL)
If you receive a UTS offer and you’ve undertaken previous studies elsewhere, you may be eligible for recognition of prior learning. Faculty of Science students may be granted a maximum of eight subject exemptions, including four core subjects, due to prior undergraduate study. For further information visit uts.edu.au/recognition-prior-learning

OFFERS
UTS will begin making postgraduate offers for 2020 from October 2019.

FEES
If you’re studying a coursework-based postgraduate degree, you’ll need to pay tuition fees. You can find out more about what your degree will cost at uts.edu.au/tuition-fee-calculator.
For research-based postgraduate degrees, you’ll need to pay a fee unless you’re eligible for the Research Training Program, in which case the Australian Government will cover the cost for you. To find out more visit uts.edu.au/domestic-hd-fees
If you do have to pay a fee and you’re a local student, you may be eligible for the Australian Government loan scheme FEE-HELP. This mean you don’t have to pay your tuition fees up front. Find more information at uts.edu.au/government-help-schemes
You can start repaying your FEE-HELP loan simply by notifying your employer, who’ll send payments through the PAYG tax system. You can also make payments directly to the Australian Taxation Office.

ALUMNI ADVANTAGE
If you’ve already completed a degree at UTS then you’re eligible for the Alumni Advantage program, which offers a 10% savings on full-fee degree programs. Find out if you’re eligible for Alumni Advantage at alumni.uts.edu.au/advantage