

#1 young* uni



Welcome to UTS Engineering

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Faculty snapshot

11,166	total number of enrolments
7690	undergraduate enrolments
2509	postgraduate coursework enrolments
967	higher Degree Research enrolments

UTS at a glance (2020)

2198	higher degree research
10,203	postgraduate coursework
33,858	undergraduate, enabling and
	non-award

UTS student diversity

29%	are 25 or older
49%	are female

50% were born outside of Australia

Please note the above numbers are approximate as of January 2020.

Connect with us



UTSFEIT



UTSengineeringandIT



UTSFEIT

Acknowledgement of Country

UTS acknowledges the Gadigal People of the Eora Nation and the Boorooberongal People of the Dharug Nation upon whose ancestral lands our campuses stand. 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.

1

Why engineering at UTS?

Experience the UTS difference.

INDUSTRY-FOCUSED LEARNING

Nothing prepares you better than real industry experience. That's why we offer hands-on, practice-based learning that cultivates exceptional engineers. And you couldn't study in a better location with 40% of Australia's tech start-up head offices calling our neighbourhood home.

FUTURE READY

Theory is great, but hands-on experience will make sure you're future ready. Our industry partnerships enable us to offer you working knowledge throughout your degree. And you'll study in world-class, purpose-built teaching spaces and laboratories.

CONNECTIONS THAT COUNT

Would access to more than 1000 companies give your career a guaranteed advantage? Of course it would. UTS' dedicated Internships team are available to provide personalised assistance and support to ensure you gain the best work experience giving you a distinct edge from your peers when you graduate.

THE WORLD IS WATCHING

Put yourself in the right place from day one. We may be young, but we're making our mark quickly. Among universities under the age of 50, UTS is already the No. 1 ranked university in Australia and No. 10 in the world.

EXPAND YOUR HORIZONS

Every door in the world is open to you right now and we want you to keep it that way.
Use our Global Exchange, International
Studies course or Beyond UTS International
Leadership Development (BUILD) program
with its overseas volunteering placements, to
lay down the foundations for a global career.

DO IT YOUR WAY

We get it, you can't hit 'pause' on life when you start university. Find the timetable that suits you with our day/evening classes, summer school and part-time study options.

ENGINEER FROM DAY ONE

Step one listen, step two do. Engineering subjects are delivered by industry professors who understand the importance of practice. Be an engineer from the start, applying your skills to real industry challenges, studios and hackathons.





256 exchange agreements in 43 countries

69th in the world for graduate employability

(QS Graduate employability Rankings 2020)

5 star rated

for excellence









UTS was awarded 5 stars in all 7 categories (QS Stars Rating 2018-2021)

UTS Engineering Research

Rated world standard or above

Excellence in Research Australia by the Australian Research Council in the 2015

Top 150 universities globally

QS World University Rankings 2021

UTS ranked Australia's #1 young uni

QS World University Rankings Top 50 Under 50, 2021

No.3

in the world for Computing Science and Engineering

Academic Ranking of World Universities (ARWU) 2020

in Australia for Computer Science & Engineering

Academic Ranking of World Universities (ARWU) 2020

World-class facilities

ENGINEERING AND IT BUILDING

Every space in the building is designed to turn traditional learning on its head to embed technology and enhance creativity, entrepreneurship and collaboration. Digitally equipped classrooms, collaborative theatres and study spaces adapt to support group work, technology-enabled activities and practice-based learning.

The building is a living, breathing laboratory, embedded with revolutionary technology and purpose-built to spark creativity and collaboration. Everything you need to take on tomorrow is right here, all under one roof.

UTS DATA ARENA

Data comes to life in the building's interactive 3D UTS Data Arena. It is a 3D data visualisation arena showcasing the latest in immersive technology. It enables a unique method for the exploration and visualisation of data. The facility allows researchers to observe interrelationships, patterns and anomalies not normally seen in 2D format.

PROTOSPACE

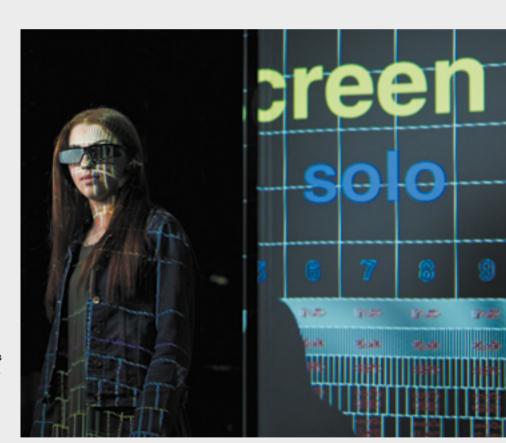
A 900m² additive and advanced manufacturing facility that actively supports education, exploration and innovation. This unique lab is unlocking the next generation of manufacturing opportunities, giving UTS students access to cuttingedge 3D technologies, software and technical expertise.

LABORATORIES

Whatever engineering field you've got your eye on, we've got fully specced-up lab spaces to hone your skills. The building contains civil, electrical, information and communication technology, and mechanical laboratories, where you can gain hands-on, practical experience.

TECH LAB

A brand new research facility that brings together transdisciplinary research on a large scale with a focus on developing and applying new techniques around digital transformation and IoT.



LEARNING PRECINCT

In between classes, you can study or conduct group work in the FEIT Learning Precinct, where you can also access teachers for support, get your hands on reference material and other resources.



SOFTWARE DEVELOPMENT STUDIO

A rich environment to become professionally competent via a collaborative industry software development experience.

UTS LIBRARY

The library has expanded to include an underground storage system that uses robots to retrieve books, freeing library space for student collaboration and quiet study. This upgrade is part of the UTS City Campus Master Plan, a \$1 billion investment to re-develop UTS.

UTS STARTUPS

UTS Startups includes an entrepreneurship program designed to give you start-up skills and provide you with access to resources that help launch the entrepreneurs of the future. Learn more at **startups.uts.edu.au**

Internships

Let a degree at UTS Faculty of Engineering and IT give you the edge.

When you choose to study at the UTS Faculty of Engineering and IT you get to experience the best of both worlds - a great degree and the chance to complete internships alongside your course.

The **Diploma in Professional Engineering Practice** is a 48-week structured Practice
Program, consisting of two 6-month
internships alongside your engineering
course. You graduate with practical, handson experience, to give you a competitive edge
when you finish uni.

GAIN REAL-WORLD EXPERIENCE

Internships are structured programs that give you valuable hands-on work experience. You get to see how the technical knowledge you learn at uni is applied in practice. It's the perfect way to explore the world of work to learn more about the type of job options and career paths available to you.

DEVELOP EFFECTIVE SOFT SKILLS

Working in a professional environment is much more than applying what you're learning at uni, it's also a chance to develop your soft skills in the workplace. Skills such as teamwork, communication, time management, adaptability and problem solving are all traits that potential employers look for and can help you land a job.

BUILD VALUABLE NETWORKS

An internship as part of your UTS Engineering or IT degree is a chance to make valuable connections and start building your industry network. Your internship work colleagues may become lasting contacts who let you know about potential job opportunities and act as your mentors and referees in the future.

CREATE A JOB-WINNING RESUME

Completing internship programs as part of your UTS degree means you're able to offer something different on your resume by including your industry-relevant work experience. It's a sure-fire way to get you noticed by potential employers when looking for that all important first job out of uni.



Internship FAQs

We've covered your top questions on the Diploma in Professional Engineering Practice.

Q. WHAT IS THE DIPLOMA IN PROFESSIONAL ENGINEERING PRACTICE?

It is a 48-week structured Practice Program, consisting of two six-month internships during students' engineering course. It's a compulsory component for all domestic students enrolled in a single professional engineering course.

Q. OTHER UNIVERSITIES REQUIRE STUDENTS TO COMPLETE THREE MONTHS EXPERIENCE, ISN'T THAT ENOUGH?

Developing complex engineering expertise can take a long time, typically 3-4 years post-graduation. The longer your internship, the greater exposure you'll have to the realities of the engineering world and the measures taken to tackle complex projects.

You'll complete two internships, one as early as second year and the other in fourth year, a total of 12 months, which will give you a distinct advantage at a job interview (if you haven't already stitched up employment in your second internship).

Q. WHAT SUPPORT DO I HAVE SECURING AN INTERNSHIP?

The careers team are available to assist you with your job search. We maintain links with more than 1000 organisations offering both scholarships and internships, the latter being advertised on our in-house jobs portal, CareerHub. We also offer opportunities to find mentors, meet contacts, and build networks that will prove invaluable in your career.

Q. HOW MANY HOURS SHOULD I COMMIT TO MY INTERNSHIP?

An internship is similar to a full-time job. You'll be expected to commit to the contracted hours of employment during this time. Don't worry, there are no other compulsory classes during this time so you can solely focus on your work placement.

Q. DO I GET PAID FOR AN INTERNSHIP?

Most students get paid during their internship, however this is at the discretion of the employer. The average work salary for UTS students range from \$700-\$1000 depending on major and the students level of education.

Q. I ALREADY HAVE WORK EXPERIENCE. DO I NEED TO COMPLETE AN INTERNSHIP?

Yes, as part of the Diploma in Professional Engineering Practice you must complete an internship.

If your current role meets the requirements of the Diploma in Professional Engineering Practice then you can register the internship via CareerHub, CareerHub is our very own job board dedicated to jobs for students.

Q. WHAT EMPLOYERS WILL I WORK WITH?

We partner with a range of companies across industry, who employ UTS engineering students. They advertise available internships via CareerHub. You can also look for internships with other employers who are not current partners. These jobs can be found via SEEK or other national job boards.

Our staff are here to help

You're not on your own when looking for internships. Dedicated staff are available to assist you with resume writing, interview skills and job finding strategies.

Are you up for the challenge?

WHAT IS ENGINEERING?

Engineering is all around us. From the infrastructure of our cities to robotics, personal electronics, renewable energy, Opal Card system and medical devices.

Today, engineers are pioneering solutions to global challenges in the areas of energy, water, food, the environment, technology, transport, housing, as well as aging populations.

WHAT SKILLS ARE NEEDED?

Engineers are true problem solvers. They are creative, logical and have strong attention to detail. This attention to detail is supported by strong mathematical skills, including mathematical modelling.

Communication, leadership and interpersonal skills are also vital as engineers influence lots of other people to adopt their ideas and work towards a shared vision.

MATHS AND ENGINEERING

You don't have to be top of the class in maths to be an engineer, but it is important to have a strong foundation in maths.

We recognise that students enter UTS with varying backgrounds in mathematics, so we've designed a diagnostic tool known as the Maths Readiness Survey to help commencing engineering students select the first-year maths subject most appropriate to their background.

You can also enrol in mentor programs with other students, tutors and academics to assist with maths or other engineering subjects.

BRIDGING COURSES

UTS provides bridging courses in chemistry, mathematics and physics for students who do not meet the assumed knowledge requirements of their course. Bridging courses are usually offered in February.

For more information, visit uts.edu.au/ future-students/science/essentialinformation/bridging-courses

NOT SURE WHICH MAJOR TO CHOOSE?

It can be a tough decision to choose a major when you've yet to experience core engineering subjects. The **flexible engineering** major allows you to mix and match subjects from any major.

You can combine complementary fields of engineering, or create your own unique skillset. If you change your mind, you can transfer to a designated major in your second year, provided you meet the academic requirements.

To 'engineer' literally means to 'make things happen'.



Careers

Engineering is your passport to success. Start your career journey at UTS.

From the infrastructure of our cities to robotics, green vehicles, recycled water systems, mobile phones and renewable energy, engineering is all around us.

Today's engineers are pioneering solutions to global challenges in the areas of energy, water, food, environment, technology, transport, housing and the ageing population. It's this blend of engineering and technology that will be an in-demand combination across all industries around the world for years to come.

Take a look at the prospects for engineers globally:

25%

of leading retail stores will have explored or deployed in-store robots to relieve human workers from repetitive tasks, thus increasing worker productivity by 40% by 2023

DC FutureScape: Worldwide Robotics 2019 Predictions

\$64,250

The average starting salary for graduate engineers is \$64,250

Australian Bureau of Statistics 2018

+158%

increase in demand for employees with a 'critical thinking' mindset over the last three years

Foundation for Young Australians, The New Work Smarts, 2017

76.4%

of students were in full-time employment four months after graduation

Engineering Professions, Australia, 2017 Department of Employment, Australian Government 11,000

engineering management roles available by 2022

Australian Government, Job Outlook 60,000

job openings for software and applications programmers by 2022

Australian Government, Job Outlook

Prepare for the future

Engineers are playing a critical role in the technology revolution. Futurists predict six key areas of discovery which will influence future career pathways for graduates.

ROBOTICS

Blending mechanical engineering, electrical engineering and computer science, intelligent systems will play an important role in business and in day-to-day life.

Consider Mechanical and Mechatronic Engineering, Electrical Engineering or Software Engineering.

ARTIFICIAL INTELLIGENCE (AI)

Al is a part of our everyday lives. Google's search algorithms, facial recognition tools, virtual personal assistants like Siri or Alexa and video games such as Call of Duty are all examples of Al. By using data from the past we can make almost accurate predictions about the future.

Consider a sub-major or elective in Artificial Intelligence.

INTERNET OF THINGS (IoT)

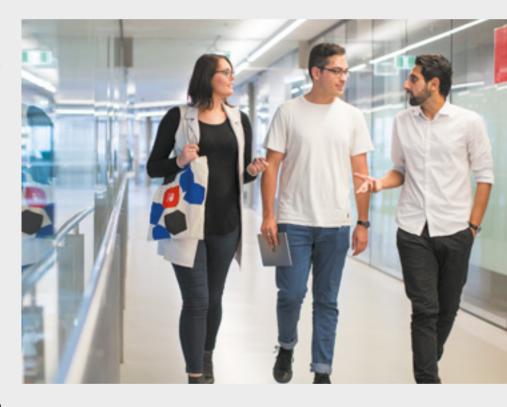
IoT includes networks of physical devices embedded with electronics, sensors, software and network connectivity that is allowing devices to connect and exchange data. IoT will shape the future of farming and many other industries, allowing for smarter decision making, improved monitoring of operations and output, and improved offering to customers.

Consider Data Engineering or Electronic Engineering.

AUTONOMOUS VEHICLES

Self-driving cars will be the biggest disruption in transport history! Harnessing tech advances in machine learning, IoT and the cloud, we can expect to see a widespread uptake in autonomous vehicles in 10-15 years.

Consider Software Engineering.



3D PRINTING

Additive manufacturing turns 3D digital models into solid objects which are built up in layers. Using various types of material 3D printing has the potential to radically transform the manufacturing industry, medical industry and architecture. UTS has its own 3D printing facility, the ProtoSpace.

Consider using ProtoSpace, our 3D print facility, to support your engineering projects and research.

DATA SCIENCE

Data scientists use automated methods to extract knowledge or insights from structured or unstructured data to improve decision-making. We can see this in our day-to-day via predictive text, suggested Netflix shows based on viewing history, and facial recognition on social media.

Consider Data Engineering.

Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice

Take charge of your future at UTS.

WHAT'S IT ALL ABOUT?

Get the in-depth preparation you need to make your mark in the engineering industry. Combine strong technical skills with transformative professional skills in complex problem solving, communication, innovation and team-work to deliver impact across local and global communities.

2021 Selection rank*: See selection ranks on pages 14-23

Majors: See pages 14-23

Duration: 5 years full-time (part-time available

for domestic students)

Available intakes: Autumn (February), Spring (July)

UAC code: See UAC codes on pages 14-23

UTS course code: C09067
CRICOS Code: 084099M

Assumed knowledge: HSC (or equivalent) English Standard, Mathematics Extension 1 and Physics. English Advanced is recommended, Chemistry is recommended for the Biomedical, Civil, and Civil and Environmental majors.

Professional recognition: Accredited by Engineers Australia

CHOOSE YOUR MAJOR

You choose your major at the time of application to the course, but there are opportunities to change later.

- Flexible
- Biomedical*
- Civil, including specialisations in Construction and Structures
- Civil and Environmental^
- Data
- Electrical
- Electrical and Electronic^
- Electronic
- Mechanical
- Mechanical and Mechatronic[^]
- Mechatronic
- Software

See pages 14-23 for an explanation of these majors.

*Not available in combined degrees with Medical Science and Science

^Not available in combined degrees

COMBINED DEGREES

The Bachelor of Engineering (Honours) can be combined with:

- Bachelor of Arts in International Studies*
- Bachelor of Business*
- Bachelor of Creative Intelligence and Innovation
- Bachelor of Laws**
- Bachelor of Medical Science*
- Bachelor of Science#

The Diploma in Professional Engineering Practice is not a required component of a combined degree but may be added to the courses marked # above.

See pages 26-31 for further details on combined degrees.

** Combined with Bachelor of Engineering Science

ACCREDITATION

The Bachelor of Engineering (Honours) is accredited by Engineers Australia at the Graduate Professional Engineer level. The degree is recognised internationally by signatories to the Washington Accord.

For more information visit ieagreements.org/accords/washington/

INTERNATIONAL STUDENT?

Considering the Bachelor of Engineering (Honours) without the Diploma in Professional Engineering Practice or the Bachelor of Engineering Science? See page 33.

Let's break it down. Here's what a UTS engineering program looks like.

CORE

Core subjects are taken by all engineering students regardless of major and provide the foundation knowledge and skills required of every engineer.

MAJOR

Develop the essential technical knowledge specific to your chosen field of practice.

Major subjects include a final-year Capstone Project, which is an in-depth research study on a topic of your choice. Many students work on their Capstone Project with one of their internship companies, while others work within the Faculty's research centres.

ELECTIVES

Consolidate your expertise with additional engineering subjects, or expand your interests by enrolling in subjects from other faculties.

PROFESSIONAL PRACTICE

The Diploma in Professional Engineering Practice is an internship program. You work in an engineering company of your choice for two periods of six months, generally in your second and fourth years.

PREPARATION & REFLECTION

These subjects help you get the most out of your internships. You'll take them before and after your two periods of internship as part of the Diploma. Think resume preparation, interview advice and e-portfolios including your experience.

STUDIOS

Team-based projects that include a challenging industry task with multiple solutions. Implement the fundamentals of your learning, using the latest tools, whilst developing professional skills in communication, team-work, complex problem solving and creativity.

Claire Grimble Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice



"Biomedical engineering interests me because it's focused on helping people and using new technology to enhance the healthcare industry. It combines lots of things, like software and mechanical engineering, so you can discover what's most interesting to you as you do your degree.

This year I received the Endeavor leadership grant and travelled to Austria to take part in a summer academy for women around the world studying engineering. Biomedical engineering is particularly popular and well-established in places like Europe and America, so it was really good to get a greater understanding and deepen my experience. It was awesome to connect with women from around the world and create a network of people that I can connect with both personally and professionally."

Typical course structure for a single major

	31								
Year 1		Year 2		Year 3		Year 4		Year 5	
Session 1	Session 2	Session1	Session 2	Session 1	Session 2	Session 1	Session 2	Session 1	Session 2
Core	Core	Core	Internship	Core	Core	Core	Internship	Capstone	Capstone
Core	Core	Major		Major	Major	Major		Major	Major
Major	Major	Major	Work Integrated Learning1	Major	Major	Major	Work Integrated Learning 2	Elective	Elective
Major	Major	Major		Major	Major	Major		Elective	Elective
		Practice Preparation 1	Professional Experience 1	Practice Reflection 1		Practice Preparation 2	Professional Experience 2	Practice Reflection 2	

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Majors

The major represents your chosen engineering field of practice and will typically influence the career path you take. We have 11 majors to choose from, all leading to a wide range of career options.

Flexible

2021 Selection rank*: 80.15 **UAC Code:** 603105

Explore the world of engineering.

The Flexible major gives you the option to design your own fully accredited interdisciplinary engineering degree with an academic advisor. So you can find that niche area, a blend between two or more existing majors and make it your own.

Alternatively, if you're not sure which engineering major you want to take, the Flexible major provides an opportunity to explore some engineering disciplines in your first year before transferring to a designated major.

CAREER OPTIONS

Your technical, analytical and practical engineering skills, along with your logical thinking will become your graduate attributes. Add to this an ability to identify problems, focus on solutions, work in teams and manage projects and people, and you'll be sought after in a wide range of areas once you graduate.

Career opportunities span all engineering disciplines, including emerging areas such as:

- Smart cities
- Renewable energy
- Distributed generation
- Internet of Things (IoT)
- Industry 4.0
- Data analytics and visualisation Cyber security
- Medical technologies
- Agriculture and food security

Michelle Quaglia Flexible Engineering



"Opting for the flexible major allowed me to tailor my engineering studies to focus on the exact subjects that would develop my skills in line with my career objectives. As I progressed through my engineering degree and after focusing on innovation and electronics, I realised I wanted to deepen my knowledge and understanding of software and software practice. I was able to achieve this by adding 5 software subjects to my flexible major - providing a suitable depth of understanding in software practice, Python, Java and Android development.

At the end of my degree, I have come out with a palette of engineering skills and knowledge, brought from the electrical, innovation and software engineering streams. I've found the flexible major has provided me with very relevant exposure to skills which I now use as a graduate engineer in my day to day work."

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Biomedical

2021 Selection rank*: 81.2 603130

UAC Code:

Break new ground in healthcare.

Biomedical engineering is multi-disciplinary by nature and covers a broad scope of areas relating to medical technology: geonomics, tissue engineering, bioinformatics, nanotechnology, 3D printing and bio-instrumentation.

Biomedical engineers design and develop medical-related equipment and systems for analysis, diagnosis, therapy and rehabilitation. Their ultimate goal is to improve healthcare delivery and extend the quality and longevity of human life.

In this program, you'll learn the basics of biology, information technology, electrical, electronic, and mechanical engineering and medical science. Choose subjects based on your particular areas of interest such as biomedical instrumentation, bioinformatics, biomechatronics, neuroscience, and biomedical applications of artificial intelligence.

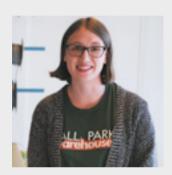
CAREER OPTIONS

When you graduate, you'll be ready to work with other engineers, IT professionals, medical staff and researchers thanks to this multidisciplinary field. As a biomedical engineer, you'll find opportunities in:

- Bioinstrumentation and biomedical device companies
- Biotechnology and biomechanics manufacturing companies
- Medical research centres or hospitals in Australia or abroad
- Medical imaging
- Medical devices
- Regulatory affairs
- Rehabilitation engineering
- Biomedical engineering research

You're also likely to work closely with electrical, mechatronic and ICT engineers, and will find opportunities in many of the areas suggested for those majors.

Zara Barger **Biomedical Engineering**



"I chose UTS because I feel like it's definitely one of the best universities for engineering in Australia. The facilities are really state of the art, and the fact that you do two, 6-month internships really appealed to me. It's really important to get that work experience, so that once you graduate, you know what you're doing.

I did my first internship with a cancer therapeutics company called Ingenic. I undertook lab research with their new drug delivery system and tested it out on cancer cells, which was really cool."

I learned a lot of soft skills, like how to present to the CEO and stakeholders, as well as technical skills, for example what clinical practice is best for laboratory research.

My dream job would probably be working in cancer research. Doing my first internship really solidified that for me - I realised that's where I want to be, and that's what I want to be doing."

Civil

2021 Selection rank*: 81.3 **UAC Code:** 603015

Build tomorrow's future.

Civil engineers are problem solvers and visionaries who plan, design, build, maintain and demolish the infrastructure of our country. These include buildings, stadiums, roads, bridges, tunnels, railways, mines, dams, water supply, wastewater treatment as well as the physical infrastructure of electrical and telecommunication systems.

In this civil engineering program, you will learn all the key skills you need to become a professional civil engineer, plus skills in construction, project management, design and surveying. You'll also learn about the properties and use of concrete, steel, timber and soil, plus the physics and mechanics of large and small structures. You will also gain expertise in water supply systems, flood protection, sanitation, hydraulics and waste disposal.

CAREER OPTIONS

Civil engineers work in office-based jobs in planning, consulting or design as well as outside on construction sites, managing and supervising projects. You will be able to work in any of the areas suggested for the Flexible major, as well as finding a range of civil engineering opportunities with:

- Major development and design firms such as Aurecon, Brookfield Multiplex, Lend Lease, Mirvac, Arup or Landcom
- Government agencies and their contractors
- Local councils
- Local and suburban engineering consultancies specialising in private, residential or commercial developments, water and flood management, road and rail infrastructure, or project management

Civil (Construction)

2021 Selection rank*: 80.85 **UAC Code:** 603095

Meet the demands of a growing city.

Civil construction engineers specialise in the construction of large projects such as high-rise apartments or office blocks. They require high-level skills in communication, leadership, critical thinking and project management.

You'll learn all the key skills you need to become a professional civil engineer, as well as gain an understanding of human resources, finance, environmental planning and law. This includes development applications and environmental impact assessments. With crossfaculty subjects, you'll also learn the details of building services such as lifts, air conditioning, cabling, IT and telecommunications.

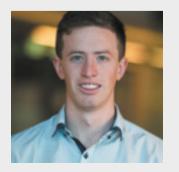
CAREER OPTIONS

You can work in any of the areas suggested for the Civil major, and find opportunities with:

- Major developers
- Private commercial developers and consultancies

This specialisation is also ideal if you want to work as a private developer or consultant, as you'll have all the skills you need to run an entire construction project from start to finish.

Mathew Da Silva Civil Engineering



"As an intern with Sydney Trains, I was involved in major projects, such as rail inspection projects or major re-railing projects. I was introduced to the maintenance world, where I was analysing data, validating it on site, risk assessing the defects and eventually scoping the work and packaging it out.

I was also introduced to the project management side of engineering as I was given a rail testing project where I was tasked with budgeting, scoping, planning, resourcing and executing works. It was a great exposure to the industry and I had always been keen to move into the project management area."

Majors

Civil (Structures)

2021 Selection rank*: 80.5 **UAC Code:** 603018

Build the world around you.

Structural engineers specialise in the analysis and design of structures, ranging from small to large and highly complex. They use advanced design and modelling techniques to design efficient, long-lasting structures and to understand the traditional and advanced materials available for their construction.

In this program, you'll learn all the key skills you need to become a professional civil engineer, plus gain an advanced understanding of the behaviour of structures under stresses due to extreme weather, earthquakes or explosions.

Using leading-edge computer software to model, analyse and design structures, you'll also develop skills in assessing structural damage. This includes practical expertise in assessing and improving the safety of older structures that maybe subject to loads and conditions they weren't originally designed to withstand.

CAREER OPTIONS

You can work in any of the areas suggested for the Civil major as well as finding opportunities with:

- Major commercial developers
- Government agencies and their contractors
- Engineering consultancies, particularly those that specialise in designing and building large structures or assessing existing structures

Civil and Environmental

2021 Selection rank*: 80.25 **UAC Code:** 603005

Join the global environmental movement.

Civil and Environmental engineers are key to a sustainable future with an expertise that's in demand to help safeguard our planet. They are experts in assessing environmental impact and design of green buildings, transport, waste and other engineered systems.

Civil and Environmental engineers specialise in the efficient use of energy, protecting soil and water from contamination and design waste, pollution control and resource recovery systems. They are involved in impact assessment, treatment of contaminated sites, as well as management and design concepts across engineering disciplines.

In this program, you'll learn all the key skills needed to become a professional Civil and Environmental engineer. You'll also gain expertise in biotechnology, environmental analysis, ecology and physico-chemical processes, plus an understanding of the social, political and legal aspects of environmental planning and management.

You'll learn to design environmentally sustainable strategies and develop solutions for environmental topics including air, water, soil, noise, climate change and energy in your community.

CAREER OPTIONS

You can work in any of the areas suggested for the Flexible major, plus find opportunities with:

- Environmental consultants
- Water, waste, soil and energy industries
- Local councils and government agencies
- Catchment management authorities
- International development organisations
- Non-government organisations such as the Australian Conservation Foundation or Greenpeace

Alexandra Devlin Civil and Environmental Engineering



"The thing that I like about engineering, is the practical side. Really seeing things coming to life. It's not just thoughts on paper, it's thoughts on paper, which turned into reality.

It's about people, and it's about connecting to people and project management."

Electrical

2021 Selection rank*: 80.85 **UAC Code:** 603035

Use renewable energy to power the future.

Electrical engineers deal with the generation and application of electricity, including high-voltage power generation and supply networks. With traditional power generation at the centre of global warming issues, electrical engineers are now at the forefront of developing renewable energy systems and super-efficient electrical devices that aim to reduce our energy demands.

In this program, you'll learn all about circuits, large scale electrical system design and operation, energy generation, analogue and digital intelligent control (such as on-board computers in cars, aircraft or trains), 'fuzzy logic' systems, and instrumentation (such as digital temperature and pressure gauges).

You'll graduate with practical skills in hardware and software that enable you to design and build large scale electrical and control systems.

CAREER OPTIONS

You can work in any of the areas suggested for the Flexible major, as well as finding opportunities with:

- Car, aircraft and train manufacturers
- Defence agencies and military hardware manufacturers
- Energy companies, including sustainable energy providers
- Biomedical and health engineering companies

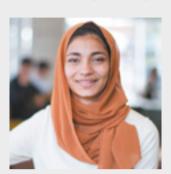
You're also likely to work closely with mechanical, mechatronic, electronic and data engineers, and will find opportunities in many of the areas suggested for those majors.

WHAT'S THE DIFFERENCE?

Electronic Engineers design small-scale circuits that live inside smart devices for consumers and industry. You learn about designing sensors, the Internet of Things, electronic components, miniaturization of devices, and the software and communications systems that make them work.

Electrical Engineers design, maintain and build high voltage power and control systems that run the world's electricity grid and other large-scale industrial applications. This includes both traditional and renewable energy generation, and control systems such as those found in factories, aircraft, trains and other vehicles.

Kulsoom Hussain Electrical Engineering



"I developed an interest in renewable energy when I was studying physics at high school and I really wanted to do more in the area of photovoltaics, and to work with communities, especially in remote areas, to help them access sustainable and reliable power.

I choose UTS because I also wanted to combine it with international studies and UTS was the only place I could do this. I spent a year in China studying Mandarin which was one of the best experiences of my life!

The other reason I chose to study at UTS is the internship component. The internships really give you a lot of valuable experience; a whole year in industry puts you in a better position than other graduates from other universities. UTS also has great industry partnerships and connections which benefit students.

As I am about to leave uni, I am feeling pretty good about my situation – I have enough experience to help me find the right opportunity that aligns with what I want to do."

Majors

Electronic

2021 Selection rank*: 81.35 **UAC Code:** 603045

Design the next generation of smart devices.

Electronic devices are driving tech advances across global industries. Components are becoming smaller, faster, lighter and more power efficient, allowing for revolutions in computation and communication technologies.

As an electronic engineer, you combine engineering techniques and maths to design and build electronic hardware found inside smart devices. These devices include smartphones, smart watches, smart health monitoring devices and many more.

In this program, you'll learn about digital systems, sensing, electronic analysis and design with a choice of sub-majors in Internet of Things (IoT).

Graduate with practical skills in hardware and software that enable you to design and build miniaturized electronics systems giving you options to move into a range of global high-tech industries.

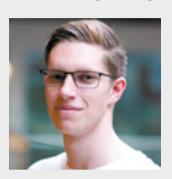
CAREER OPTIONS

You can work in any of the areas suggested for the Flexible major, plus find opportunities in the following industries:

- Aerospace
- Automotive
- Construction
- Defence
- Marine
- Oil & gas
- Pharmaceutical
- Power generation
- Rai
- Telecommunications

You're also likely to work closely with mechatronic, electrical and data engineers, and will find opportunities in many of the areas suggested for those majors.

Angus Ryan Electronic Engineering



"Two six-month internships—the opportunity to work in the field of your degree—as well as a modern, recently-built engineering building were the key factors that led me to study at UTS.

I'm taking my first internship at GetShift, a startup at the Australian Technology Park in Eveleigh. I've had the opportunity to build my own 3D printer, learn and develop Windows software and design models within CAD. Most importantly, I created my own circuit from scratch. I've felt as if I haven't done a day of work, but rather spend months on my passion!

Studying Electronics Engineering at UTS has been intense but rewarding. I've learned so much from circuit design to programming my own digital system. What I enjoy about university is the ability to mould the study plan to your lifestyle, in my case giving myself two days off to work part-time at GetShift."

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Electrical and Electronic

2021 Selection rank*: 81.35 **UAC Code:** 603035

Use smart electronic and electrical systems to support increasing complex human activities

Electrical and electronic engineers combine a range of communication and electrical energy technologies to underpin the ongoing transformation of how humans commute, stay connected and consume energy. With emerging technologies in Internet of Things (IoT) and microgrids for example, distributed energy and communication systems have enabled more flexible use of power and information. An increasing demand now exists for analytical techniques and design skills in devices, software and systems being able to handle increasing system complexity, particularly in terms of security, efficiency and reliability.

In this program, you'll learn about communication electronic circuits and sensors, electrical energy circuits and systems, IoT components and software, digital intelligent control and embedded systems, and renewable energy systems design and operation.

You'll graduate with practical skills in hardware and software that enable you to design, development and control a range of IoT devices and energy systems.

CAREER OPTIONS

You can work in any of the areas suggested for the flexible major, as well as finding opportunities with:

- Wireless and IoT technology companies and product developers
- Transportation sector focusing on electrification
- Defense agencies and military hardware manufacturers
- Power and energy companies, including utilities and sustainable energy providers

Data

2021 Selection rank*: 82.5 **UAC Code:** 603060

Combined expertise in advanced analytics and engineering is the gateway to business innovation.

Data Engineers create and manage secure cyber-physical systems and infrastructure to service the ever-growing demands of our computer-driven data-centric society. These secure software and hardware systems enable organisations to innovate and optimise their services using broadband networking and powerful computing.

You'll learn professional engineering skills and the entrepreneurial values required to build and manage secure and reliable data platforms. You will also develop skills in advanced practice, gain in-depth knowledge in one or more areas of specialisation, and learn to embrace innovation in order to achieve excellence in your engineering future.

Current specialisations include Cybersecurity, Networks, Real-time systems (internet of things), Data Analytics, and Image Processing.

CAREER OPTIONS

- Data Engineer
- Data Architect
- Visualisation Analyst
- Developer, Big Data Platform
- Data Services Engineer
- Data Network Engineer
- Software and Systems Multimedia and Pattern Recognition.
 This major also utilises project-oriented studios with participation from industry mentors.

Majors

Software

2021 Selection rank*: 80.9

UAC Code: 603085

Future proof your career.

Software engineering is the application of engineering principles to the design, development and maintenance of software.

It focuses on large, complex and critical software systems that are interwoven into our daily lives. Examples include power distribution, traffic control, autonomous vehicles and large systems that hold secure data, systems that must work the first and every time.

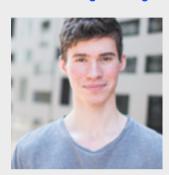
A software engineer ensures that the software is built systematically, rigorously, measurably, on time, on budget, and within specification to meet these complex demands.

You'll learn the scientific principles and mathematical methods used to solve critical problems in this discipline, as well as the trends and innovations shaping the international software industry. You will also develop skills in design and innovation, project management, economics and finance and commercialisation and entrepreneurship.

CAREER OPTIONS

- Chief Technology Officer
- Development Manager
- Devops Manager
- Enterprise Architect
- Systems Designer
- Consultant
- Chief Architect

Mikhail Fedulov Software Engineering



"Last year I completed five hackathons in five different areas – including the Ericsson Challenge. I enjoy working with other people, and being part of a hack team is a great way to learn technical skills, acquire knowledge of tools, and develop in team and project management. I hope to work in consultancy and these are the skills that are in demand."

Greg EllisExecutive Director Ticketing & Concession Transport NSW

"There really won't be enough data engineers out there, so I think the opportunities are going to be fairly limitless."

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Mechanical

2021 Selection rank*: 81.05 **UAC Code:** 603055

At the forefront of technology innovation.

Mechanical engineering is the broadest of all the engineering disciplines. Mechanical engineers design, build and maintain anything that moves — from microscale sensors to jet plane engines, robots, biomedical devices, spacecraft, wind turbines and heavy industrial machinery.

In this major, you'll study dynamics and learn to calculate and control the movement and interaction of solid objects, fluids, heat and power. You'll also study some electrical engineering subjects and will apply your learning through hands-on projects that help you build the confidence and ingenuity needed to push the boundaries of machine-based technology.

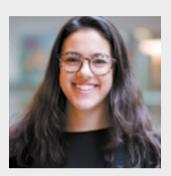
CAREER OPTIONS

You can work in any of the areas suggested for the Flexible major, plus find opportunities within:

- Aerospace companies
- Automotive companies
- Biomedical and health companies
- Chemical industry
- Defence agencies
- Electronics industry
- Marine industry
- Materials and metals industry
- Pharmaceutical industry
- Rail industry
- Robotics industry
- Utilities industry

You're also likely to work closely with electrical, mechatronic and ICT engineers, and will find opportunities in many of the areas suggested for those majors.

Kate Leone
Mechanical and Mechatronic Engineering



"The reason I chose UTS was the internship program; it was something I knew employers would regard highly. My first internship was in Hong Kong, for a German company automating a catering services facility at the airport. I had no idea of how I was going to get there and organise everything, so UTS helped me.

For my final-year capstone project, I'm working with UTS Rapido, a unit delivering technical solutions for industry, and another company, AbilityMade. I'm helping them develop a 3D printed foot and ankle orthoses solution that reduces the time from waiting-list to final product from over 12-months to 48 hours. It helps children born with cerebral palsy to walk, so they'll be able to avoid wheelchairs later in life. I've always wanted to do engineering to get a skillset where I could give back."

Majors

Mechatronic

2021 Selection rank*: 83.05 **UAC Code:** 603120

Engineering for an autonomous future.

Mechatronic Engineering work on all aspects of the smart machine, from design and testing to manufacturing. They use a combination of mechanical, electronics, computer systems and software engineering to design and build mechanical systems and their controllers, software and hardware, plus electronic processes and the networks that link them.

In this program, you'll study dynamics (the science of moving things) and learn to calculate and control the movement and interaction of solid objects and electricity. You'll also learn to design, build and manage automated and autonomous mechanical systems, with an emphasis on robots, smart machines, intelligent control systems, and biomedical devices.

CAREER OPTIONS

You can work in any of the areas suggested for the Flexible major, plus find opportunities with:

- Advanced machinery and robotics manufacturers
- Manufacturing and mining industries
- Research groups in nanotechnology, robotics and other developing fields

You're also likely to work closely with electrical, mechanical and ICT engineers, and will find opportunities in many of the areas suggested for those majors.

Mechanical and Mechatronic

2021 Selection rank*: 86.15 **UAC Code:** 603115

Open up a world of high-performance opportunities.

This major brings together mechanical and mechatronic engineering subjects so that you gain an understanding at both specialisations. You'll study dynamics (the science of moving things) and learn to calculate and control the movement and interaction of solid objects, fluids, heat and electricity. You will also learn to design, build and manage automated and autonomous mechanical systems, with an emphasis on robots, smart machines, intelligent control systems, and biomedical devices.

CAREER OPTIONS

You can work in any of the areas suggested for the Mechanical and Mechatronic majors.

David EagerProfessor, School of Mechanical and Mechatronic Engineering



"Mechanical and Mechatronic Engineers solve problems, resolve conflict, manage projects and work in diverse teams that include other professionals such as architects, lawyers, doctors and accountants. They make change happen while adding benefits of society. They ask the question, "is there a better way?" and they have a willingness to take reasonable risks with a view to making a significant positive impact."

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Bachelor of Engineering Studies

2021 Selection rank*: N/A

Majors: Advanced Manufacturing, Engineering and

Technology Studies, Flexible Engineering

Duration: 3 years full-time or 6 years part-time

Available intakes: Autumn (March), Spring (July)

UAC code: See UAC codes on pages 14-23

UTS course code: C10408
CRICOS Code: 603141

Assumed knowledge: HSC Mathematics Extension 1; Physics;

and English Standard. English.

WHAT'S IT ALL ABOUT?

The course provides students with the skills required at an engineering technologist level – and hence the ability to work with professional engineers – without developing full professional engineering competencies.

It is intended for students who require a broad overview of STEM knowledge via the "Flexible Engineering" or "Engineering and Technology Studies" majors; and to specialise in a field of technology, for example, students with prior vocational qualifications may choose the Advanced Manufacturing major to learn the latest industry 4.0 manufacturing technologies, without meeting the requirement for Engineering Australia professional accreditation.



Course structure

Students are required to complete 144 credit points, comprising:				
CBK92027 Core choice	36cp			
CBK91933 Major choice (Engineering Studies)	84cp			
CBK90011 Electives	24cp			
Total	144cp			

Students admitted to Advanced Manufacturing major must select the choiceblock Core subjects (Advanced Manufacturing). Students in the Flexible Engineering major and Engineering and Technology Studies major must select the choiceblock Core subjects.

The major is selected at the time of admission; however, it is possible to apply to change major at a later stage. Students admitted to the advanced manufacturing major should decide by the end of the first year of full-time study whether to transfer to another major or continue with the advanced manufacturing program.

*Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).



Combined degrees

Why settle for one specialisation? Create your niche by combining your areas of interest.

Bachelor of Engineering (Honours), Bachelor of Arts in International Studies

2021 Selection rank*: 82.25

Duration: 5.5 years full-time

Add an extra year if undertaking the Diploma in Professional Engineering Practice

Available intakes: Autumn (February)

UAC code: 609032 **UTS course code:** C09123 **CRICOS code:** 0100570

Open up a whole world of opportunities.

With a combined engineering and international studies degree you'll not only develop professional engineering skills from your chosen engineering major, you'll also open up a whole world of opportunities. The international studies component of this course gives you the rare chance to immerse yourself in another language and culture, develop an international perspective on your studies, and broaden your thinking. The international studies component involves a year abroad in one of the nine regions that you can choose to study in the degree while pursuing a major research project in a field of your choice. UTS pays for your travel between Sydney and your country of study, tuition fees at the overseas institution, visa fees and the cost of the UTS Overseas Insurance Policy.

ENGINEERING MAJORS

Flexible, Biomedical, Civil, Data, Electrical, Electronic, Mechanical, Mechatronic, Software.

COUNTRY MAJORS

Canada, China, France, Germany, Italy, Japan, Latin Americas, Spain, Switzerland.

CAREER OPTIONS

You can work in any of the areas suggested for your chosen engineering major, within Australia or in another country. Engineering is an international discipline, and bilingual, global-thinking engineers are able to problem-solve anywhere in the world.



Bachelor of Engineering (Honours), Bachelor of Business

2021 Selection rank*: 80.15

Duration: 5 years full-time (part-time available for

domestic students)

Add an extra year if undertaking the Diploma in Professional Engineering

Practice

Available intakes: Autumn (February)

 UAC code:
 609350

 UTS course code:
 C09070

 CRICOS code:
 084091G

Honours: Available in Business as an additional year

(full time) to meritorious students



Blend your technical engineering degree with high-level strategic thinking.

With a combined engineering and business degree, you'll develop the ability to succeed in both engineering and business environments.

As well as the professional engineering skills you'll develop in your chosen engineering major, you'll gain valuable and highly sought-after business skills from your business major. You'll graduate with the ability to use your engineering problem-solving skills in relation to people management, business management. finance, marketing or international business.

ENGINEERING MAJORS

Flexible, Biomedical, Civil, Data, Electrical, Electronic, Mechanical, Mechatronic, Software.

BUSINESS MAJORS

Accounting, Advertising and Marketing Communications, Economics, Finance, Human Resource Management, International Business, Management, Marketing.

CAREER OPTIONS

You can work in any of the areas suggested for your chosen Engineering major, plus find opportunities in:

- Banking
- Accounting and economics
- Marketing
- Any commercial or business sector

Your engineering skills will enable you to understand and develop products so you may find yourself particularly sought after by manufacturing businesses. Your business skills will ensure the product is financed, developed to meet consumer needs and marketed effectively. You'll also be ideally suited to the financial sector, running your own engineering business or senior management in an engineering setting.

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Combined degrees

Bachelor of Engineering (Honours), Bachelor of Creative Intelligence and Innovation

2021 Selection rank*: 81.7

Duration: 5 years full-time **Available intakes:** Autumn (February)

 UAC code:
 609560

 UTS course code:
 C09076

 CRICOS code:
 084097B

Honours: Available in Creative Intelligence and

Innovation to meritorious students

Go a step further. Drive cross-disciplinary, industry and social change.

With a combined engineering and creative intelligence and innovation degree, you'll gain a blend of technical knowledge underpinned by a philosophy of innovation and creativity that will help you turn ideas into reality. The creative intelligence competencies you'll pick up should enable you to navigate a rapidly accelerating world of change.

As well as the professional engineering skills you'll develop via your chosen engineering major, you'll gain proficient skills in critical, inventive and creative thinking, future scenario building, business analysis, entrepreneurism, problem solving, teamwork and communication. You'll also develop the ability to work on your own, as well as across and between other disciplines.

ENGINEERING MAJORS

Flexible, Biomedical, Civil, Data, Electrical, Electronic, Mechanical, Mechatronic. Software.

CAREER OPTIONS

You can work in any of the areas suggested for your chosen engineering major and will be well-suited for a career within a fast-paced, innovative engineering environment. Your combined degree will equip you with skills that are particularly useful for positions involving:

Product planning, strategy and design within a solutions focused environment

These skills can also be used to start and market your own business.





Bachelor of Engineering (Honours), Bachelor of Medical Science

2021 Selection rank*: 82.65

Duration: 5 years full-time (part-time available

for domestic students)

Add an extra year if undertaking the Diploma in Professional Engineering Practice

Available intakes: Autumn (February)

 UAC code:
 609370

 UTS course code:
 C09074

 CRICOS code:
 084095D

Honours: Available in Medical Science as an

additional year (full time) to meritorious

students

With a combined engineering and medical science degree, you'll go far.

Not only do you get to develop professional engineering skills via your chosen engineering major, but you will also gain an in-depth understanding of medical science.

In the medial science side of your degree, you will explore the fields of chemistry, biology, anatomy, biochemistry, microbiology, physiology, neuroscience, pharmacology and medical devices.

As well as your engineering major, you'll complete 13 core Medical Science subjects. For the full list of subjects see the relevant course information at handbook.uts.edu.au/eng

ENGINEERING MAJORS

Flexible, Civil, Data, Electrical, Electronic, Mechanical, Mechatronic, Software.

CAREER OPTIONS

You can work in any of the areas suggested for your chosen engineering major, plus find opportunities in:

- Medical technology and instrumentation
- Biotechnology and bioengineering
- Nanotechnology and molecular biology
- Mining, agriculture and fisheries
- Environmental science
- Food and drink, product design, pest control or pharmaceuticals

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Bachelor of Engineering (Honours), Bachelor of Science

2021 Selection rank*: 80.00

Duration: 5 years full-time (part-time available

for domestic students)

Add an extra year if undertaking the Diploma in Professional Engineering Practice

Available intakes: Autumn (February)

 UAC code:
 609360

 UTS course code:
 C09072

 CRICOS code:
 084093F

Honours: Available in Science as an additional year

(full time) to meritorious students

Back your engineering projects with scientific rigor.

With a combined engineering and science degree, you'll gain the technological expertise to determine scientific problems plus the practical engineering skills needed to implement effective solutions. Add to this cutting-edge practical laboratory skills as well as an understanding of intellectual property and the ethical issues related to science research.

You'll need to choose a single engineering major for the Bachelor of Engineering (Honours) and a single science major for the Bachelor of Science.

Areas in which you can develop skills include DNA-centred technologies and applications, microbiology and biochemistry, therapeutic products (such as vaccines and drugs), scientific research and analysis, energy and resource exploration, urban ecology, and environmental biotechnology and sustainability.

ENGINEERING MAJORS

Flexible, Civil, Data, Electrical, Electronic, Mechanical, Mechatronic, Software.

SCIENCE MAJORS

Applied Physics, Biomedical Science, Biotechnology, Chemistry, Environmental Science, Mathematics, Medical Science, Nanotechnology.

CAREER OPTIONS

You can work in any of the areas suggested for your chosen engineering major, plus find opportunities in:

- Medical technology and instrumentation
- Biotechnology and bioengineering
- Nanotechnology and molecular biology
- Mining, agriculture and fisheries
- Environmental science
- Food and drink, product design, pest control or pharmaceuticals

Combined degrees

Bachelor of Engineering Science[^], Bachelor of Laws

2021 Selection rank*: 97.80

Duration: 5.5 years full-time **Available intakes:** Autumn (February)

UAC code: 609050 **UTS course code:** C10136 **CRICOS code:** 040713B

^Not accredited by Engineers Australia

Honours: Available in Law to meritorious students

A blend of technical knowledge and legal skills.

With a combined engineering science and law degree, you'll gain a blend of technical knowledge and legal skills that enable you to become a legal practitioner in New South Wales.

As well as the engineering skills you'll develop via your chosen engineering major, you'll gain an overview of the legal system, technology legislation, technology-specific criminal law, contract law and environmental law.

If you wish to obtain full recognition as a graduate lawyer, you have the option of completing the Practical Legal Training Program. With a year of further study, you also have the option of graduating as a professional engineer.

ENGINEERING MAJORS

Flexible, Civil, Data, Electrical, Electronic, Mechanical, Mechatronic, Software.

CAREER OPTIONS

You can work in any of the areas suggested for your chosen engineering major, plus find opportunities as a:

- Legal advisor
- Legal investigations analyst
- Patent associate
- Policy analyst
- Compliance and regulatory affairs
- Consultant

You can work in engineering, law firms, or both. Law firms need lawyers with technical expertise and the engineering industry needs technical specialists with legal knowledge. Demand for these skills is high. In fact, this combined course was developed in response to this very demand.

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Degree add-ons

Stand out from the crowd with a Diploma in Innovation or a Diploma in Languages.

Smarter futures start here

The Diploma in Innovation is a qualification that adds to your degree by preparing you for the future of work. It responds directly to industry demand for graduates who can collaborate across disciplines.

There's an emphasis on entrepreneurial thinking, too: by the time you graduate, you'll be ready to be an entrepreneur or intrapreneur. Our course content embraces the unlimited possibilities of the new world of work. Subjects include 3-week intensive studios on innovation and entrepreneurship, explorations of complexity and sustainability, and deep dives into concepts of frame innovation and futures thinking.

Interested? You can add the diploma to any UTS bachelor's degree (except BCII). What's more, all diploma subjects are offered as winter and summer school intensives, so even though you're adding an extra qualification, you'll still graduate on time.

+ Add the Diploma in Languages

Gain a global outlook.

Bring the world to your doorstep with a Diploma in Languages. Add this one-year diploma to your UTS degree to gain language and cultural skills, build your professional identity, and graduate with a range of capabilities that will prepare you for an international career. Language options include Chinese, French, German, Italian, Japanese and Spanish.

No need to apply just yet – the diploma is available to students already studying an undergraduate or postgraduate coursework degree program at UTS, so sign up when you enrol. No matter what you study, the diploma can give your qualification an international edge.



Additional courses for international students

Bachelor of Engineering (Honours)

Direct entry open to international students only

Duration: 4 years (full-time only)

Available intakes: Autumn (February), Spring (July)

UTS course code: C09066
CRICOS code: 084098A

Professional Recognition: Accredited by Engineers Australia

As an international student, you have the option of completing the Bachelor of Engineering (Honours) with or without the Diploma in Professional Engineering Practice (see page 12 for details).

Should you choose to enrol in the course without the Diploma, you will still obtain the necessary exposure to professional engineering life - with at least 12 weeks' work experience.

You will also complete the Engineering Practice Preparation and Engineering Practice Reflection subjects to fulfil the professional practice component of the course, as well as having the chance to specialise with an engineering major. See the full list of engineering majors on pages 14-23.

Bachelor of Engineering Science*

Direct entry open to international students only

Duration: 3 years (full-time only)

Available intakes: Autumn (February), Spring (July)

UTS course code: C10066
CRICOS code: 033909D

As an international student looking for technologist-level studies, this course is for you. You won't receive professional engineering status, but you will gain graduate attributes similar to those gained in the Bachelor of Engineering (Honours). These will allow you to work with professional engineers.

ENGINEERING MAJORS

Civil, Data, Electrical, Electronic, Flexible, Mechanical, Mechatronic, Software

*Not accredited by Engineers Australia

Women in Engineering and IT (WiEIT)

Join us to build a world designed for humanity.

We create and lead social change so that study and career journeys in Engineering and IT are not limited by gender. As an IT student at UTS, you are a part of our diverse community of inspiring students, staff, professionals and allies who will be part of your journey with us from your first day to graduation.

BUDDY UP

Get insider info from our students on how to make the most of uni when you start with us! We will pair you with a buddy, a student in second year or above, who can help you navigate your first year of engineering/IT with us at UTS. Get a tour of the campus, explore the local café scene, join student society events, tips on how to balance uni with life, and meet other students across the uni.

DEDICATED HANG OUT SPACE

Find your people in the Women in Engineering and IT (WiEIT) Cube on Level 5 in Building 11, the Engineering and IT building on our city campus. Use this space to meet the community, host events, ideate projects or just hang out with friends.

INSPIRE FUTURE GENERATIONS

Creating engineering and technology solutions needs diverse minds to design solutions that include the needs of those who are different and similar to us.

Inspire girls in primary and high school to create the change of tomorrow by sharing your own journey and helping them build the skills and confidence through our STEM school outreach initiatives.

Julia Yeo Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice Civil and Environmental Engineering



"The Lucy Mentoring Program gave me deeper insight into the engineering industry.

Through site and office visits with my mentor, I had the opportunity to connect with countless engineers with different areas of expertise, hear about their experiences and witness their day to day roles."

CONNECT WITH AN INDUSTRY PROFESSIONAL THROUGH MENTORING

From second year onwards, connect with an IT industry professional through the Lucy Mentoring Program. Your industry mentor will help guide your study and career journey, no matter whether you have no plan, one plan, or many plans!

Not sure which career pathways are for you? Your mentor's experience and advice could help design your future career!

Does mentoring really help? Yes! In 2020:

- 87% of students were confident in communicating with industry professionals after the program, compared to 21% before the program.
- 78% of students could identify female role models in their field compared to 26% before the program.

"Lucy Mentoring has changed my perception of who I am, and with what I want to do in the future. It has helped me build the confidence I need to realise that everyone in the industry genuinely wants to help newcomers. This program has also allowed me to meet new people, especially aspiring successful women."

- Jannat, mentee 2020

GET INVOLVED

Check out our website for more info on what we do and join our Women in Engineering and IT community on Facebook. We share events, internships, jobs, scholarships, volunteering opportunities and things to get involved with - join us for social events, networking with industry, and events both on and off-campus! wieit.uts.edu.au

Satya Pranavi Gangapuri

Bachelor of Engineering
Diploma in Professional Practice (Biomedical)



"Lucy Mentoring has been an amazing opportunity to gain an abundance of knowledge about my industry of biomedical engineering, the professional workplace and many other aspects to planning my future career. I gained vital knowledge that helped me improve immediate skills such as resume and cover letter writing as well as interview preparation. Beyond learning about applying and improving myself as an engineering student. I learnt more about the various career paths open for me and essential skills

that I can focus on building from now, so I can grow to be an ideal candidate for future opportunities. I was able to connect with my mentor and also share my own personal worries and needs. developing a range of soft skills and perspective throughout our meetings. Lucy Mentoring impacted me in a life-changing way, as throughout each session with my mentor and the check-in points. I felt more confident in my own skills and experience, as well as learning about diverse topics from an industry perspective."

Scholarships

The Women in Engineering and IT Cooperative Scholarship is proudly sponsored by industry to increase the participation of women in engineering and IT. This is a 4-year scholarship valued at \$66,000 which includes industry work placements.

The Faculty of Engineering and IT Women in Engineering and IT Scholarship is available for incoming female students. This scholarship is valued at \$10,000 over 1 year.

Eligibility criteria apply.

See uts.edu.au/wieit-scholarships for information.

University life

There's no one size fits all approach to university life!

Anyone who has ever been a uni student will tell you that getting involved in clubs societies makes the whole ride pretty incredible.

We have over 100 clubs and societies on campus, along with bars, cafés and a range of sporting facilities. To ensure you feel confident and supported, we offer help with housing, money, making friends, health, cultural issues and career development.

Students explore robotics in the Centre for Autonomous Systems. Photo: Christopher Shain

UTS ENGINEERING SOCIETY

Hang out with your cohort and get involved in social events, industry events and networking opportunities with one of the largest clubs on campus.

utsengsoc.com.au

UTS ROBOTICS SOCIETY

Discover everything robotics, from servos to software, and connect with likeminded students. Gain access to equipment, participate in robot building competitions, and receive support from industry. With projects ranging from fully autonomous robotic systems to candy dispensers, they provide you with the opportunity to combine creativity and technology to form new ways of interacting with the world around us.

UTS CYBER SECURITY SOCIETY

Boost your programming knowledge with exclusive workshops and study help sessions and learn how to defend against attacks through the techniques that attackers use.

UTS MOTORSPORTS

Showcase your ingenuity by building and racing an open-wheel race car. The motorsports club has represented UTS in the Formula SAE Australasia competition for 10 years, and raced an electric car in the event for the first time in 2015.

utsmotorsports.com

ENGINEERS WITHOUT BORDERS

Build your leadership and sustainability skills and apply theory to humanitarian engineering projects. Opportunities include doing an internship overseas or participating in an overseas volunteering experience through UTS BUILD.

ewb.org.au

HELPS

Higher Education Language and Presentation Support (HELPS) provides non-credited English language and academic literacy support to UTS students. Enhance your learning experience with individual and group support in a friendly and respectful environment.

helps.uts.edu.au

We encourage you to check out the full list of clubs and societies at:

activateuts.com.au/clubs



Discover entrepreneurship at UTS

Interested in entrepreneurship but not sure how to get involved?

Every career path benefits from an entrepreneurial mindset. UTS equips you with the tools to become entrepreneurs, whether it's with UTS Startups community or the entrepreneurial subjects, courses and degrees at UTS

- there's an entrepreneurial offering available for you!

ENTREPRENEURIAL COURSES, SUBJECTS AND DEGREES

Gain insight into the world of entrepreneurship with subjects available across the undergraduate and postgraduate degrees, diplomas and certificates at UTS. You'll be introduced to entrepreneurial methods and tools to solve problems, test ideas, create impact and launch businesses.

BEGIN YOUR JOURNEY AT UTS STARTUPS

Got an idea and the passion to make it into something big?

UTS startups is the home of entrepreneurship at UTS. We inspire students to be entrepreneurs and support them at scale. Come to one of our inspirational events. Try our on-demand experiences and join the UTS Startups community to meet other student founders, access our digital spaces and collaborative workspaces in Building 15 and 16, check-in with mentors and gain connections to industry!

startups.uts.edu.au



Global opportunities

Ready for the world beyond?

At UTS, we're committed to getting you out into the world – in fact, we send more students overseas than any other uni in NSW. So what are you waiting for?

Dive headfirst into the language and culture of another country, travel the world during uni break, and get a global perspective on your engineering degree that'll set you apart from your peers.

GLOBAL EXCHANGE

Study overseas for one or two teaching sessions at a UTS partner university. There are 256 exchange partners in over 43 countries and territories to choose from.

INTERNATIONAL INTERNSHIPS

The Bachelor of Engineering (Honours) includes two six-month internships which can be taken with a local or international company. Students who intern overseas develop an international business network, add another language to their resumé, plus gain exposure to multinationals who don't have offices in Australia.

BUILD FOR SHORT-TERM INTERNATIONAL OPPORTUNITIES

BUILD (Beyond UTS International Leadership Development) is a program that will help you develop your leadership potential through a range of local and global opportunities. You could study Amazonian languages in Peru, French in Switzerland or work with a social enterprise supporting developing communities with education or electricity.

ENGINEERS WITHOUT BORDERS (EWB)

EWB gives you the opportunity to operate as an humanitarian engineer in local and regional communities. The program aims to develop key social skills essential to being successful team leaders on the forefront of social change.





Applying to UTS

It's time! Join the innovation generation as a student at UTS. Here's how:

Find a course

Choosing what to study can be tough. Start by checking out the course information pages of this guide (pages 12-33), as well as the UTS website.

More info:

uts.edu.au/eng-ug-courses

Check your admission requirements

Once you've chosen a course, check that you meet the admission requirements.

High school leavers:

If you're completing your HSC (or equivalent) in 2021, we'll assess your application based on your selection rank for entry into most UTS courses. Your selection rank is a combination of your ATAR/IB score, plus any adjustment points you receive.

Mature age and non-current school leavers:

If you're not a high school leaver, you'll be assessed on criteria such as your ATAR, post-school qualifications, or relevant work experience, along with any additional selection criteria.

More info:

uts.edu.au/admissions

Indigenous students:

If you're an Australian Aboriginal or Torres Strait Islander, the Jumbunna Institute for Indigenous Education and Research can help you get in to UTS through the Jumbunna Pathways Program or Unistart Program.

More info:

uts.edu.au/apply-jumbunnapathways

International students:

If you're not a citizen or permanent resident of Australia, or a citizen of New Zealand, you must apply as an international student directly through UTS International.

Tel: 1800 774 816 (free call within Australia)

Tel: +613 9627 4816 (for international calls)

More info:

international.uts.edu.au

If your prior education was not conducted in English, you must complete an English language test or show your results from a completed test in the last two years.

IELTS (Academic)	6.5 overall with a writing score of 6.0
TOEFLIBT	79-93 overall with a writing score of 21
AE5/AE6 (PASS)	AE5
PTE (Academic)	58-64
CAE	176-184

Check if you're eligible

Scholarships

When? Scholarship applications open as early as April 2021. See what's on offer and check your eligibility on our website.

More info:

uts.edu.au/scholarships

Admission Schemes

There's more than one way to get into uni. We offer a range of admission schemes that can help get you into the course you want.

Visit UTS

Come and say hello at one of our events or faculty info sessions – it's a great way to get to know UTS. And don't miss UTS Open Day (please check the website for dates and times), the biggest day on campus, where you'll have the chance to explore your course and career options.

More info:

undergraduate.uts.edu.au/ events

openday.uts.edu.au

Apply through UAC

Applications for most UTS undergraduate courses must be lodged online through the Universities Admissions Centre (UAC). On-time applications close at the end of September 2021*. Be sure to have your UTS preferred course as your first preference.

Application information is available in the UAC Guide and on the UAC website. If you're a Year 12 student, you can obtain a free copy of the guide from your school. Some courses have additional selection criteria, so you may need to submit extra material to UTS in addition to your UAC application. Check out the UTS Handbook for more information about applying for your chosen course.

More info:

uac.edu.au

handbook.uts.edu.au

Complete the Engineering Questionnaire

If you fall short of the ATAR by 1-3 points, we will still consider your application if you complete the questionnaire and demonstrate a strong motivation to study engineering at UTS.

Spend 20 minutes completing the Engineering Questionnaire, and give yourself the best chance to get into your preferred course at UTS.

More info:

eng-questionnaire.uts.edu.au

Review your options once

Are you eligible for subject points?^

Once your results are released, visit our Year 12 Subject Scheme table with your performance bands in hand to see if you're eligible for an adjustment of up to five points towards your selection rank. These subject points are in addition to any points you may receive from one of our other admission schemes.

More info:

uts.edu.au/admission-schemes

Accept your offer

The majority of our offers are released during December Round 2 via UAC on 21 December 2021*. Check the UAC website for offer round dates.

Offers will be made to eligible IB students in January following the release of your results.

More info:

uac.edu.au

Get in touch

Domestic students

Phone: 1300 ASK UTS (1300 275 887)

Email: feit@uts.edu.au

More info:

ask.uts.edu.au

International students

Phone: 1800 774 816 (free call within Australia) Phone: +61 3 9627 4816

Email: international@uts.edu.au

More info:

uts.edu.au/international

Once you're in...

Congratulations! Keep the following dates in mind.

17 Feb-6 March 2021:

Orientation Autumn Session for new students.

17 Feb-6 March 2021:

Autumn Session begins.

[^]For high school leavers only.

^{*} Correct at the time of printing. Visit uac.edu.au

Applying to UTS

Admission schemes

Need to boost your selection rank? Apply for a UTS admission scheme and we'll consider your ATAR plus other selection criteria when we assess your application. There are a range of merit and access based schemes. If you're a high achiever, or if life events have impacted your Year 12 results, these schemes can help you make the leap into your chosen degree.

More info:

uts.edu.au/admission-schemes

Admission pathways

Our admission pathways provide an alternative route into your preferred UTS course – and there are lots of pathways on offer. From internal programs (Insearch, Jumbunna Unistart and internal degree transfers) to external options (STAT test, limited ATARs or vocational diplomas), there's more than one way to get into UTS.

More info:

uts.edu.au/admission-pathways

Fees and financial assistance

As a domestic student, you'll study in Commonwealth Supported Place – the Australian Government will fund some of the cost of your study, while you'll pay a student contribution and other fees direct to UTS. The good news? The HECS-HELP loan scheme lets you defer the cost of your student contribution until you reach a set income threshold. What's more, the UTS Financial Assistance service can help you get on top of your personal finances, giving you more time to focus on study.

More info:

uts.edu.au/csp

This guide is not intended for international students. For information on fees for international students, visit the UTS International website:

international.uts.edu.au



Scholarships

At UTS, we're all about rewarding effort – and supporting circumstance. That's why we offer more than \$12 million in UTS coursework scholarships and prizes every year. If you're a high achiever, in financial need, or if you're from a diverse background, a UTS scholarship can help take care of your finances so you can focus on the important stuff.

Scholarships for high achievers

Academic achievement is worth celebrating – and our high achievers' scholarships do just that. Some scholarships are awarded across all UTS undergraduate degrees (e.g. the UTS Vice Chancellor's Outstanding Achievement Scholarship, valued at \$12,500 per year for the duration of the course), while other scholarships are offered through our faculties (e.g. the UTS Business Dean's Scholarship, valued at \$30,000).

Co-operative scholarships

Get a foot in the door of your chosen profession with an industry-sponsored scholarship. These co-op scholarships provide funding to support your studies – and they usually include an internship with the partnering organisation as well. Interested? You'll need a good academic record, demonstrated leadership potential, enthusiasm and dedication, as well as a genuine interest in your chosen field.

UTS offers:

 Engineering industry-based merit scholarships

Equity scholarships

Our equity scholarships aim to overcome financial disadvantage in whatever form it takes. Whether you have a disability or ongoing medical condition, a rural home address, a refugee background or carer's responsibilities, these scholarships can help make university study possible.

Scholarships for women

We pride ourselves on providing an inclusive work and study environment for women – in fact, we've been consistently recognised by the Workplace Gender Equality Agency for our efforts. We offer several scholarships to encourage women to undertake study in different areas.

Scholarships for Indigenous Australians

We're committed to offering scholarships and prizes to support Aboriginal and Torres Strait Islander students. Some of these are awarded on academic merit while others are equity-based.

Scholarships for athletes

You've given your life to your sport – now let your sport give something to you.
ActivateUTS assists students to combine high-performance sport with their studies, so you'll be supported to excel in both areas. They offer three scholarships: the Elite Athlete Program, Emerging Athlete Program and Elite Athlete Housing Scholarship.

We also offer a few other scholarships for athletes to assist you in pursuing your academic and sporting goals.

Application dates

Scholarship application dates vary. Be sure to check the UTS scholarship website for specific closing dates.

Which scholarship is right for me?

With so many scholarships on offer, it can be tricky to figure out which ones you're eligible for. Use our online search tool to filter scholarships according to the criteria that best describes you.

More info:

uts.edu.au/scholarships

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Engineering Scholarships for commencing students (local)

Scholarship name	Awarded to	Benefit	Duration	Selection rank*	Other
WOMEN IN ENGINEERING AND IT COOPERATIVE SCHOLARSHIP	High achieving female students that have a passion and interest to pursue a career in Engineering. Industry sponsored. Multiple scholarships available.	\$66,000 over 4 years + 3 industry placements	4 years	85+	Applicants are required to attend an interview at UTS as part of the selection process.
FEIT WOMEN IN ENGINEERING AND IT SCHOLARSHIP	High achieving female students that have a passion and interest to pursue a career in Engineering. Faculty sponsored. Multiple scholarships available.	\$10,000	1 Year	85+	Applicants are required to attend an interview at UTS as part of the selection process.
ENGINEERING AND IT DEAN'S SCHOLARSHIP	High achieving commencing students with the top Selection rank* enrolled in a UTS Faculty of Engineering & Information Technology undergraduate degree. More than one available.	\$10,000 per year	2 years	95+	Merit
LINDEN LITTLE ENGINEERING EQUITY SCHOLARSHIP	Current school leavers experiencing financial need and other educational disadvantage which can make it difficult to access and succeed in tertiary education. Available to commencing students in the Bachelor of Engineering (Honours). Diploma in Professional Engineering Practice in any major.	\$15,000 per year	2 years	80+	Equity
THE ELEANOR DUNN SCHOLARSHIP IN ENGINEERING	Applicants who have the potential and commitment to study Electrical, Mechanical, Mechatronic, Software or Data Engineering — major/ double major, and are from a financially disadvantaged background or experiencing other educational barriers.	\$5,000 per year	5 years	N.A.	Equity preferenced
WJ & LM SINCLAIR SCHOLARSHIP IN ENGINEERING	Applicants who have the potential and commitment to study engineering, are of Aboriginal or Torres Strait Islander descent and/or are from financially disadvantaged background. Up to two student scholarships may be offered enrolled in any major of Bachelor of Engineering (Honours). Diploma in Professional Engineering Practice.	\$10,000-\$20,000 per year	5 years	69+ or 80+	Equity

Cross-faculty scholarships

Scholarship name	Awarded to	Benefit	Duration	Selection rank*	Other
RICHARD CROOKES CONSTRUCTION MERIT SCHOLARSHIP FOR WOMEN	Elite female students in the fields of study relevant to the building industry with the desire to support and increase the number of qualified female professionals in the building industry.	\$15,000 + paid placement	2 years	N.A.	Merit
WEBUILD - AUSTRALIA TOMORROW'S BUILDERS SCHOLARSHIP	Supports students in the Faculty of Engineering and Information Technology (FEIT) and/or the Faculty of Design, Architecture and Building (DAB) who have an interest in the construction and infrastructure sector. Salini Impregilo wants to bolster Australia's growth by supporting long-term infrastructure plans, working with today's generation and into the future.	\$10,000 + paid placement	1year	N.A.	Merit
WESTERN EARTHMOVING SCHOLARSHIP FOR CONSTRUCTION AND ENGINEERING	Supports a broad range of students in the Engineering and Construction disciplines. The scholarship engages students to deepen their understanding and experience of Western Earthmoving's work and its impact in the development industry.	\$10,000 + paid placement	1 year	N.A.	Merit

As a current student, you can apply for scholarships with:

- Ericsson
- Canon Medical Systems
- Thales
- And more!

Visit **uts.edu.au/scholarships** to see all scholarships offered at UTS Engineering and IT.

^{*}Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).



UTS Open Day

Please check the website for dates and times

openday.uts.edu.au

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• QS Top 50 Under 50 2021

UTS CRICOS 00099F 30027 February 2021 Images: Toby Burrows, Anna Zhu. DISCLAIMER: The information in this brochure is correct as at March 2021. Changes in circumstances after this date might alter the accuracy or currency of the information. UTS reserves the right to alter any content described in this brochure without notice. Readers are responsible for verifying information that pertains to them by contacting the university.

Note, this guide is for domestic students. International students should refer to the International Course Guide or uts.edu.au/international