CHECK OUT YOUR FUTURE CAMPUS

A TRANSFORMED CAMPUS, COMPLETE WITH CUTTING-EDGE FACILITIES WILL BE OPENING AND READY FOR YOU WHEN YOU START IN 2015.

DISCLAIMER: The information in this brochure is correct as of February 2014. Changes in circumstances after this date may alter the accuracy or currency of the information. UTS reserves the right to alter any matter described in this brochure without notice. Readers are responsible for verifying information that pertains to them by contacting the University.

UTS CRICOS PROVIDER CODE: 00099F

VISIT UTS

Women in Engineering and IT Hands-on Days
Thursday 27 March 2014 and Friday 5 September 2014
City campus

UTS: Engineering Undergraduate Courses and Scholarships Information Evening
Wednesday 21 June 2016
City campus
5pm – 7:30pm

UTS: Engineering and IT Discovery Days
Friday 18 July 2014 and Friday 5 December 2014
City campus
8:30am – 3:15pm

CHECK OUT YOUR FUTURE CAMPUS

ENGINEERING UNDERGRADUATE COURSES GUIDE 2015

eng.uts.edu.au
THINK.CHANGE.DO
Refugee Access Scheme recognises the educational disadvantage experienced by people with a refugee background and aims to assist by providing improved employment prospects through tertiary education and integration within the Australian community. Applicants will need to meet the English and Academic requirements of the course.

For more information about Educational Access Schemes contact UTS Equity & Diversity Unit
Tel: +61 2 9514 1084
Web: uts.edu.au/future-students/undergraduate/essential-information/educational-access-scheme
Email: equity@uts.edu.au

ENTRY PATHWAYS
If you don’t gain entry to your degree of choice, consider undertaking another form of study and then reapply the following year as a non-current school leaver. At UTS there are a number of pathways you can take to gain entry to your preferred course:

- Complete an INSEARCH Diploma
  UTS: INSEARCH is the premium pathway provider to UTS. Diploma programs can provide direct entry into corresponding undergraduate degrees and you could fast track into the 2nd year of a UTS undergraduate degree, depending on the course you choose.

- Complete a TAFE Diploma
  UTS offers some subject exemptions to students who apply to study at UTS after first completing a course at TAFE. Each exemption is assessed on an individual basis.

Commence study of a course with a lower ATAR requirement
Students who commence study at either UTS or another university, and apply to transfer to their preferred degree after a year. The marks you achieve in your first year of study will count towards your application and you may be eligible to receive credit recognition towards your final degree for some of the subjects you’ve studied.

For more information on all entry pathways into UTS visit undergraduate.uts.edu.au/pathways

CREDIT RECOGNITION
If you have already completed, or part-completed a university course, you will be eligible for credit recognition. This will either exempt you from certain specific subjects or reduce the number of elective subjects you need to complete. If you have completed a TAFE Diploma or Advanced Diploma in an Engineering sub-discipline or a UTS: INSEARCH Diploma of Engineering, you will also be eligible for credit recognition.

MATHS AND PHYSICS PREPARATION
If you don’t have the assumed knowledge but have a strong interest in engineering, there are bridging courses, transition subjects and student support services available. These will enable you to complete the course within the standard course duration. For more information visit uts.edu.au/future-students/science/essential-information/bridging-courses
WHY ENGINEERING AT UTS?

UTS ranks first in Australia and 20th in the world for universities under 50 years old* – demonstrating our commitment to excellence in teaching and research.

PRACTICE-BASED DEGREES
Learning the theory is important, but the real value lies in knowing how to apply it. Unlike any other course in NSW, UTS: Engineering degrees offer two 6-month internships in industry, where you work with professional engineers as a trainee engineer. These internships offer hands-on experience – you apply the theory you’re learning in class and start the process of developing and building applied knowledge. In most cases your internship will be paid work.

QUALITY TEACHING
UTS is a recognised leader in teaching and learning. We pride ourselves on having skilled lecturers who are not only passionate about their areas of expertise, but remain up-to-date on new developments and knowledge in their field. We teach you to think constructively in interactive learning environments, with group work and discussions that give you a taste of being out in the workplace.

INDUSTRY NETWORKS
Advancing our links with industry and other organisations is important to us. The Faculty of Engineering and Information Technology has connections with over 800 companies and has its own Industry Partnering Unit (IPU) which assists students in securing internships. Expand your network through ours and make valuable contacts for your future career.

CUTTING-EDGE FACILITIES
Our new building is purpose-built for Engineering and IT students. Technology-rich, it has embedded wireless sensors and will feature a 3D data visualisation arena on the ground floor, along with a Disruptive Design Lab and Software Development Studio – all of which are spaces that foster interaction among the students, teachers and researchers within the building.

UTS’s commitment to innovative teaching and learning is reflected through such state-of-the-art technologies and learning environments, including our world-leading UTS Remote Laboratory, accessible from anywhere at any time.

INTERNATIONAL OPPORTUNITIES
The personal, social and professional development you gain through an international study experience will add excitement and value to your degree, and broaden your career options. You can study overseas for a semester or two as part of our UTS: Global Exchange program, or combine your degree with International Studies. Other opportunities for international engagement include our popular BUILD program, which offers overseas volunteering opportunities as well as short-term academic programs.

CONVENIENT LOCATION
Within easy walking distance of Central Station and the Sydney CBD, our City campus is easily accessible by bus and train. UTS is located within the creative industries ‘inner city triangle’, the location of 39 per cent of Australia’s creative industry head offices. Our City campus is surrounded by places to shop, eat and just hang out.

ADAPTABLE STUDY OPTIONS
Many UTS classes are offered in multiple timeslots, giving you the option to choose day classes, evening classes, summer school, part-time or block courses. We also encourage you to think outside your discipline and undertake a combined degree to broaden your career opportunities, or choose electives outside your field of study in subjects that interest you.

STUDENT LIFE AND SUPPORT SERVICES
A great university experience also relies on being part of a social and supportive community. UTS has over 100 clubs and societies, along with bars, cafes and a range of sporting facilities, including a gym. We offer academic support and services to help with housing, money, health, cultural issues and career development.

The UTS Engineering Society (UTSEngSoc) is a large and active social club for all Engineering students. For more information visit engsoc.org.au

Orientation Camp
Meet your fellow students at the Engineering and IT Faculty Orientation Camp. It’s a lot of fun and a fantastic opportunity to meet staff and prepare for uni.

Women in Engineering
As a current female student, you can connect with fellow female students through the Women in Engineering and IT (WiE&IT) program. They offer support, networking opportunities, site-visits and connection to other programs such as the Sydney Women in Engineering & IT (SWIEIT) Speakers Program and the Lucy Mentoring Program. For more information visit uts.ac/womeninEIT

* 2013/2014 edition of QS World University Rankings for Top 50 Under 50
WORLD-CLASS FACILITIES
Our building brings new spaces to life to support both informal and formal learning experiences, providing a vibrant environment where students and staff collaborate and engage.

Filled with state-of-the-art teaching spaces, cutting-edge environmental features and collaborative student spaces, our building has been designed to fuse technology with modern teaching to support UTS’s model of learning and to cultivate the specific skills required for the Engineering and IT industries. Its facilities include:

- a dedicated learning and design centre – a collaborative learning space for all students, offering group study areas, resources and toolkits to foster authentic workplace experiences and active learning
- a Software Development Studio – a rich environment for students to become professionally competent via an industry-collaborative software development experience throughout their degree
- the UTS Data Arena – a 3D data visualisation arena showcasing the latest in immersive technology. Built on the ground level of the building, the experience of the arena is described as being “immersed in a huge 3D virtual reality experience”
- collaborative lecture theatres facilitating multiple forms of engagement – including presentations, collaborative group work and technology-enabled activities

The building is in itself a living, breathing laboratory, embedded with wireless sensors to monitor temperature, air quality, noise, and dust particles. A group of research students at UTS are using this data for real-time research and future course content.

**ALCATEL-LUCENT FACILITY**

UTS has partnered with Alcatel-Lucent to prepare students for building and managing carrier-grade service-enabled telecommunication networks.

Since 2010 UTS has been offering students the option of undertaking internationally recognised industry certifications in service routing and more recently in 4G Mobile Networks. Students have access to the latest technologies and equipment being used by the telecommunications industry in Australia and around the world.

Courses offered focus on building scalable, manageable networks optimised for triple-play services (voice, video and data) and cost-effective virtual private services. This equipment is being used by the NBN Co in Australia and many other carriers and organisations.

**LABORATORIES**

UTS: Engineering students work in civil, electrical and mechanical laboratories, giving them practical, hands-on experience. We also house one of the only Shake Tables in Australia – this is an earthquake simulator used to test the stability of model structures.

Students have access to UTS and Faculty-specific computer labs, with some being specialist labs that students will use for certain subjects.

**UTS REMOTE LABORATORY**

The UTS Remote Laboratory is the largest and one of the world’s most advanced remote laboratories. Situated in the UTS Tower, it allows students to conduct real-time experiments with actual apparatus and equipment at any time of the day from anywhere in the world.

For more information visit feit.uts.edu.au/facilities/remote-lab
The Bachelor of Engineering [Honours], Diploma in Professional Engineering Practice incorporates two blocks of engineering internships [industry experience] into the degree, which allows you to integrate what you learn in the classroom into a work environment. UTS is the only university in NSW to offer these internships as part of an undergraduate course.

The internships are usually paid and reflect UTS’s commitment to industry-based learning, helping you gain a better idea of the economic, social and environmental realities of the working world.

**GIVING YOUR CAREER DIRECTION**

Through its Industry Partnering Unit (IPU), UTS: Engineering maintains links with more than 800 engineering organisations who offer scholarships and internships.

The Internship program will give you an insight into future employment opportunities as well as the type of organisation you could work for. You’ll quickly learn what skills and experience you need in your chosen career.

Through the professionals you meet, you’ll find mentors, meet contacts and build networks invaluable for your future career.

**INVALUABLE EXPERIENCE**

You’ll take on real responsibilities and show what you can do before you graduate. This kind of experience goes a long way towards impressing future employers.

**FINANCIAL BENEFITS**

Your two periods of internship may involve paid work. Pay can vary a great deal but in 2013, the average weekly salary for UTS:Engineering students while on internship was approximately $700. Students directly negotiate their internship conditions and many continue a valuable relationship with the company afterwards.

**FEES**

The internship periods are a component of the degree and have credit points attached to them. From January 2015, they will incur a tuition fee. Further details regarding fees are available upon request.

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**ELIZABETH SI**

Bachelor of Engineering (Biomedical), Diploma in Engineering Practice,* Bachelor of Business 2nd Year Student

Intern at Chemtronics Biomedical Engineering

With my internship, I love dealing with people and I like applying my technical skills to the tasks I get given as well.

Further down the track, I think you gain a more refined image of what you see yourself doing later on, because of your time as an intern. There is a lot of theory that we learn in class so I find the combination of practice and theory goes hand-in-hand.

I realise with biomedical there is a lot you can do. You get to help patients so you have to understand the clinical side as well, not just the functions of it. Internships help you to develop the soft skills you need to work in the industry.

For me at the moment, I’m considering going into nuclear medicine with biomedical. However, my passion for that was only refined when I started doing medical devices as part of my internship.”

* Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.
WHAT IS ENGINEERING?
Engineering is all around us from sustainable buildings to robots, water systems to power stations. Engineers use scientific and mathematical principles to create, apply and maintain technology to improve society. They need to deal with complex and multidisciplinary problems and challenges, and design innovative and appropriate solutions.

Engineers today are pioneering solutions to major world issues in the areas of energy, water, food, environment, transport, housing and the ageing population. It’s an exciting time to be an engineer!

ARE YOU UP FOR ENGINEERING?
Engineers are innovators, problem solvers, communicators, team players and visionaries. Science and mathematics will be a big part of your degree. If you haven’t completed these subjects as part of your senior years at high school, UTS has bridging courses in physics, chemistry and mathematics as well as a foundation level mathematics subject which will help you prepare for tertiary studies in engineering.

INDUSTRY OPPORTUNITIES
There are plenty of job opportunities in most areas of engineering, particularly in Australia, but also worldwide.

The UTS Bachelor of Engineering (Honours) degree is fully accredited by Engineers Australia, which means your degree is recognised around the world in countries who are part of the Washington Accord. See Accreditation on page 7.

CAREERS
Engineering is a diverse profession and there are many fields to choose from. At UTS, we offer several majors and specialisations. There are many career options available to you including:

> **Environmental Engineers** – make buildings more environmentally sustainable
> **Project Engineers** – manage a team of civil engineers on building projects
> **Mechanical Engineers** – work on anything from creating factory machinery to mechanical parts for automobiles and medical applications
> **Electrical Engineers** – work in third world countries on power generation, alternative energy or in biomedical engineering
> **Network Engineers** – be involved in the design, operation, and maintenance of diverse communication technologies to efficiently move information across rooms, buildings, cities, countries, and worldwide.
> **Researchers** – undertake a PhD and conduct research into engineering issues. Many companies outsource research to universities, to work on ground-breaking projects that have the potential to help millions of people.

HOW MUCH DO ENGINEERS EARN?
The median starting salary for engineering graduates across Australia is $64,000.*

* Graduate Careers Australia.
COURSE STRUCTURE

The Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice† is made up of five components, namely core subjects, engineering internships, engineering practice subjects, major subjects and electives.

The course structure is flexible, meaning if you’re unsure of which major you’d like to pursue, you can begin with the General major. You can then decide which major to specialise in after your first year, or you may choose to continue with the General major.

* Not available with combined degrees
† If you take a combined degree (see pages 14-19), you will complete a Bachelor of Engineering (Honours) and have the option of adding the Diploma in Professional Engineering Practice. The exception is the combined degree with Laws, which does not include internships. If you take a combined degree with Science, you have the option to take the Diploma in Professional Engineering Practice and/or an honours year in Science.

KEY INFORMATION

2014 ATAR: See majors, pages 8-13
Duration: 5 years full-time/part-time available.
Location: City campus
UAC Code: See majors, pages 8-13
UTS Course Code: C10061
CRICOS Code: 025003B

Assumed Knowledge: HSC with English Standard, Mathematics Extension 1 and Physics. English Advanced is recommended. Chemistry is also recommended for the Civil and Environmental major.

Combine your Degree with: Business, Science, Medical Science, Biotechnology, International Studies, Law, and Creative Intelligence and Innovation, see pages 14-19

Bonus Points and Questionnaire: See page 24

How to Apply: See page 24

Professional Recognition: Recognised and accredited by Engineers Australia.

COURSE DESCRIPTION

You study a four-year Bachelor of Engineering with a major (also known as field of practice) of your choice, plus the Diploma in Engineering Practice*, which gives you two six-month periods of internship with an engineering company of your choice. Doing the internships during your degree prepares you for professional practice, giving you valuable work experience before you graduate, and enabling you to integrate the classroom learning you do with genuine industry work for some of Australia’s biggest engineering names.

ENGINEERING MAJORS

There are nine majors to choose from:

- General
- Innovation (taken in conjunction with one of the other majors)
- Biomedical
- Civil, with specialisations in Construction or Structures
- Civil and Environmental*
- Electrical
- Information and Communication Technologies (ICT) Engineering, with sub-majors in Computer Systems, Software or Telecommunications
- Mechanical
- Mechanical and Mechatronics*

See pages 8-13 for an explanation of these majors.

TYPICAL COURSE STRUCTURE

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Major also known as field of practice
Core subjects: these subjects are a common thread throughout your course which will give you the skills and knowledge every engineer needs, regardless of your field of practice. They include communication, project management, physics, mathematics, design, engineering economics and engineering enterprise. You’ll learn how to use engineering processes to design, build, troubleshoot and manage projects, and will develop skills to analyse problems and find creative solutions. You’ll work with other students on technical, problem-based projects which will prepare you for working in industry.

Engineering internships: you’ll work in industry for two periods of six months, generally in your second and fourth years. The Industry Partnering Unit (IPU) provides a service where companies will advertise opportunities directly through a UTS system for you to access or you can find an appropriate placement yourself. You’ll work with other students on technical, problem-based projects which will prepare you for working in industry.

Engineering practice subjects: 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 in Professional Engineering Practice.

Major subjects: give you the essential technical knowledge specific to your major. Major subjects include a Capstone Project, which is an in-depth study of your choice. Many students work on their Capstone Project with one of their internship companies and some within the Faculty’s research centres. The Project is your chance to demonstrate your knowledge, skills and creative thinking, and can be ground-breaking with the potential to lead into a research degree.

Electives: are subjects you select based on your interests and the knowledge you want to add to your degree.†† You can choose electives from other engineering disciplines, postgraduate engineering subjects, or take subjects from other UTS faculties. You could also use your electives to study at one of our overseas partner universities as part of UTS: Global Exchange for a semester, or a short course through the BUILD program. If you have chosen a specialisation, some of your electives will be restricted to your field of study.

††Please note, elective are not available in combined degrees and in the Civil and Environmental and Mechanical and Mechatronic majors.

ACCREDITATION

The UTS Bachelor of Engineering (Honours) is recognised and accredited by Engineers Australia. When you graduate you will be eligible for graduate membership of Engineers Australia, which means your qualification will be recognised by all countries that are signatories to the Washington Accord (currently Australia, Canada, USA, UK and Ireland, Hong Kong, Japan, Korea, Malaysia, New Zealand, South Africa, Singapore, Turkey and Chinese Taipei). For more information visit washingtonaccord.org

With a completed year of industry experience as part of the Diploma in Professional Engineering Practice, you may only need another two years of work experience to apply for Chartered Professional Engineer (CPEng).
MAJORS

GENERAL
UAC Code: 603105
2014 ATAR: 85.00

If you’re not sure what field of practice you want to specialise in, or you’d like to customise your degree by combining several fields of practice, the General major is the one for you. It’s highly flexible, allowing you to select field of practice subjects from any of the majors offered.

You’ll be able to study an approved mixture of majors, allowing you to explore all the areas that interest you. If you find some areas interest you more than others, you can negotiate to specialise, which means you can effectively start your degree with this major and transfer to one of the other majors after first year. Alternatively, if you have had some experience of engineering and you see a particular niche which covers two or more majors, you can create your own specialist area of study.

CAREER OPTIONS
Your technical, analytical and practical engineering skills, logical thinking and your ability to identify problems, focus on solutions, work in teams and manage projects and people, will be sought after in a wide range of areas, including:

> State and federal government agencies, such as Transport for NSW or local councils
> Water and catchment authorities
> Development contractors and consultancies, from small private firms to giants such as Brookfield Multiplex
> Rail and road operators, and their construction contractors
> Banks and financial institutions, such as Macquarie Bank
> Planning, research and regulatory bodies
> Research institutions, such as the CSIRO
> Energy companies, such as TransGrid
> Defence agencies and their contractors
> Vehicle, train and aircraft manufacturers and their contractors
> Private engineering consultancies specialising in civil, electrical, ICT, mechanical or other disciplines

INNOVATION
UAC Code: 603125
2014 ATAR: 85.00

The Innovation major allows you to add an innovation dimension to the other majors. You’ll gain the skills to identify commercial engineering opportunities and develop products and processes to meet those opportunities. You’ll learn how to understand and manage engineering innovation processes in a variety of environments through specialised subjects covering topics such as creativity and idea generation, technological change, patents and intellectual property, product planning, product development and project funding.

With a range of cross-faculty subjects in areas like finance, marketing or intellectual property law, the Innovation major is an ideal complement to the other engineering majors, and you’ll graduate ready to realise commercial potential of great engineering ideas.

CAREER OPTIONS
You’ll be able to work in any of the areas suggested for your chosen major and will be well suited for a career within a multi-disciplinary engineering environment.

You will have developed skills that are particularly useful for positions involving:

> product planning and strategy
> product and business development
> marketing
> starting your own business

“IT was a great opportunity to study at UTS. It has the best work experience program, giving you the ability to become employed after your degree.

My UTS: Engineering course gave me the ability to understand all the technical aspects of building projects. My construction electives definitely helped me relate the theory with project delivery, so helping with my project management skills.

I am also grateful for the friendships I made. With the U: PASS program, I had a great coach and mentor, and my experiences have helped me with my current role, in providing daily feedback and advice to those I consult.”

*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.

DIMITRIOS SHORTLAND
Bachelor of Engineering (Civil – Construction), Diploma in Engineering Practice*
Graduate Engineer
Transport for New South Wales
Biomedical engineers design and develop medical related products and systems and work towards the enhancement of health and the improvement of people’s quality of life.

You will learn basics of biology, information technology, electrical and mechanical engineering. You will also be able to select subjects based on your interest, including biomedical instrumentation, bioinformatics, biomechatronics, neuroscience, and biomedical applications of artificial intelligence. You will be able to work effectively with other engineers, IT professionals, medical staff and researchers in this multi-disciplinary field.

CAREER OPTIONS
You will be able to work as a biomedical engineer in the biomedical and health industries and find opportunities in:

> Bioinstrumentation and biomedical device companies
> Biotechnology and biomechanics manufacturing companies
> Medical research centres or hospitals in Australia or abroad
> Medical imaging

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

CIVIL
UAC Code: 603015
2014 ATAR: 92.00
Civil engineers plan, design, construct and maintain structures and infrastructures including roads, bridges, tunnels, railways, dams, water and wastewater plants, and buildings.

They generally work in office based jobs planning, consulting or designing but can also be found outside on construction sites managing and supervising projects. The Civil major will give you the basic competencies you need to be 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, and the physics and mechanics of structures large and small. You will also gain expertise in water supply systems, flood protection, sanitation, hydraulics and waste disposal.

CAREER OPTIONS
You can work in any of the areas open to all engineers and find opportunities in:

> Major development and design firms, such as Brookfield Multiplex, Lend Lease, Mirvac, Arup or Landcom
> Government agencies and their contractors
> Local (particularly country) 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)
UAC Code: 603095
2014 ATAR: 87.65
You’ll learn all the key skills and competencies you need to become a professional civil engineer (as in the Civil major), but will exchange some subjects to specialise in the design and construction of large projects, such as high-rise apartment or office blocks, and high-level skills in scheduling and management of sub-contractors.

You’ll gain an understanding of human resources, finance and environmental planning and law, from development applications to environmental impact assessments. With cross-faculty subjects from Design, Architecture and Building, you’ll also learn the details of installing building services such as lifts, air conditioning, cabling, IT and telecommunications.

CAREER OPTIONS
You can work in any of the areas open to all civil engineers and find opportunities in:

> Major developers, such as Brookfield Multiplex, Lend Lease, Mirvac or Landcom
> 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.

ANNIE LUU
Bachelor of Engineering (Civil and Environmental), Diploma in Engineering Practice* Graduate
Business Consultant, Leadership Trainer and Coach
LUULA Consulting

“The best thing about working in the Engineering industry is the ability to create change, I like being exposed to cool, innovative designs solutions and products.

The UTS: Engineering course helped me develop a huge sense of importance and appreciation of the roles engineers have in community, government and business organisations; in solving problems across all levels so they can help create a more sustainable economy and future.

My current job entails delivering project management services to private business clients and leadership courses to corporate and working professionals. Recently I went to South Africa to deliver business coaching to entrepreneurs as part of the Branson Centre of Entrepreneurs program. It assists entrepreneurs to flourish in their businesses – creating employment opportunities, greater access to education, greater equality, a more united community, while combating crime and poverty.

There is learning in everything and engineering gives you opportunities and options that will develop your character and capacity for life. I see a problem as just an opportunity waiting to be discovered.”

*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.
You’ll learn all the key skills and competencies you need to become a professional civil engineer (as in the Civil major), but will exchange some subjects to specialise in the analysis and design of large, complex structures such as skyscrapers and large bridges. You will learn the advanced design and modelling techniques needed to erect and maintain structures like Sydney Tower, Sydney Harbour Bridge or the Sydney Opera House, and the traditional and advanced materials available for their construction.

You’ll also gain advanced knowledge in the behaviour of structures under stresses such as extreme weather, earthquakes or explosions, and develop skills in assessing structural damage. This includes practical expertise in assessing and improving the safety of older structures which may be subject to loads and conditions they weren’t originally designed to withstand. You will use leading edge computer software to model, analyse and design structures.

**CAREER OPTIONS**

You can work in any of the areas open to all civil engineers, and find opportunities with:

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

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**CIVIL AND ENVIRONMENTAL**

**UAC Code**: 603005
**2014 ATAR**: 90.00

You’ll learn all the key skills and competencies you need to become a professional civil engineer (as in the Civil major) and develop a holistic perspective on environmental issues.

You’ll develop practical skills and expertise in green materials and buildings, soil, water resources, transport and environmental interactions, treatment of contaminated sites, management and design concepts. You’ll also gain expertise in biology, ecology and microbiology, plus an understanding of the social, political and legal aspects of environmental planning and management. If you would like to design environmentally sustainable green strategies and be motivated to find solutions for environmental issues including air, water, soil, climate change and energy in your community, then Civil and Environmental Engineering is for you.

**CAREER OPTIONS**

You can work in any of the areas suggested for the Civil major, but will most likely find opportunities with:

- Environmental consultants
- Waste contractors
- Local councils and government agencies, such as the Department of Environment, Climate Change and Water, Department of Services, Technology and Administration, Department of Planning, Transport for NSW or water authorities

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**ELECTRICAL**

**UAC Code**: 603035
**2014 ATAR**: 85.00

Electrical engineers deal with the application of electricity, from small circuitry to high-voltage power generation and supply networks. With traditional power generation at the centre of the global warming problem, electrical engineers are now at the forefront of developing renewable energy systems and super-efficient electrical devices which will reduce our energy demands.

You will learn about circuits, electronic design, microprocessors, power 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 electronics systems.

**CAREER OPTIONS**

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

- Car, aircraft and train manufacturers
- Defence agencies and military hardware manufacturers
- Energy companies, including sustainable energy providers
- Biomedical and health engineering companies
- Electronic component manufacturers for consumer products such as mobiles, PDAs or household appliances

Electronics also has overlaps with Mechanical and Mechatronics and ICT, so you’ll also be able to work in many of the areas suggested for those majors.

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“**I chose to study Engineering at UTS because of their practical approach to learning. I had a year’s worth of experience and industry connections before I even graduated.**

I gained the fundamental knowledge and skills needed to be a civil engineer as my subjects not only provided a means for learning the required theory, but to communicate, discuss and assess engineering principles in a technical, professional and ethical nature.

The best thing about UTS though, is its central location and welcoming and supportive culture. I was very happy that UTS provided the UTS Women in Engineering and IT program which acted as a support and social network while I was at UTS.”

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*Susie Botross, Bachelor of Engineering (Civil – Structures), Diploma in Engineering Practice,*

*SUSAN BOTROSS*

*Civil Structures Engineer*)

SMEC

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*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.*
INFORMATION AND
COMMUNICATION
TECHNOLOGIES
ENGINEERING

UAC Code: 603060
2014 ATAR: 85.00
The ICT Engineering major will teach you
to work with software, hardware and
systems on a grand scale and with an
analytical approach. Where an IT graduate
might work in commercial settings with
networks and end-users, as an ICT
Engineering graduate you’ll develop skills
to design, build, develop and manage
commercial networks to advanced military
or transport applications, industrial
automation, intelligent control (such as
autopilot or automated production line
systems), robotics, aviation, telemetry and
satellite systems, including GPS.
You have the choice of specialising
in computer systems, software or
telecommunications but, regardless of
your sub-major, the ICT major is broad
enough to allow you to move between
these areas as your career progresses.

CAREER OPTIONS
You can work in any of the areas suggested
for the General major, but will also find
opportunities with:
> Transport organisations, such as
Transport for NSW or AirServices
Australia
> Manufacturing industries, particularly
those with automated production lines
> Logistics and supply chain companies
> Telecommunications companies, such as
Telstra, Optus or Vodafone
> Commercial service, software and
equipment providers, such as Ericsson,
Cisco Systems, Microsoft, IBM, SAP,
Yahoo or Google

“I chose UTS because of the internship
program it offers, which gives graduates
a significant edge when applying for jobs.
My two internships were both with Ausgrid
as I was on Ausgrid’s Cadetship program.
The first was in the Intelligent Network
section and my second internship was
in power system protection. I was doing
calculations of fault levels and setting
protection relays to ensure the network
is safe.

Now I’m working for Ausgrid as a project
manager for the field staff who maintain
the electrical network. Whenever
something goes wrong, people want
their power back ASAP so it’s a fast
moving and dynamic group to work in.

The UTS: Engineering course taught
me how to take technical concepts and
apply them practically. The two must go
hand in hand, but it took many years to
understand how that’s done. It’s a very
important skill and it takes much time
to learn.”

MICHAEL STANBURY
Bachelor of Engineering (Electrical),
Diploma in Engineering Practice*
Graduate
Project Manager
Ausgrid

*Predecessor to Bachelor of Engineering (Honours),
Diploma in Professional Engineering Practice.
I am currently working for Optus as a Network Engineer. Because of my UTS degree, I got a graduate role in the leading telecommunication company and later got promoted to my current role. I think engineering is the best stream that shows you how mathematics is applied in everyday life, and studying it at UTS has helped me advance in my career.

The leadership skills I gained while at UTS help me so much in my current role. The group work activities I did in my classes taught me to be proactive, and I achieved a ‘can do’ attitude which I need to apply every day at my workplace. Group work also gave me the opportunity to mix with people from different cultures and make friends with them.

Literally everything and every moment spent in UTS; I loved them and I consider these moments to be the best moments of my life including those intense moments before the exams.”

*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.

**MAJORS**

**INFORMATION AND COMMUNICATION TECHNOLOGIES ENGINEERING**

**COMPUTER SYSTEMS**

UAC Code: 603025  
2014 ATAR: 85.00

You’ll learn all the key competencies and skills from the ICT Engineering major, and will then take subjects specialising in designing, developing, troubleshooting and managing computing machinery from the ground up – the hardware that makes it tick and the software that gives it character.

This sub-major balances hardware, software and systems, and will teach you advanced design, analysis, programming and integration, as well as advanced technical management skills.

**CAREER OPTIONS**

You can work in any of the areas open to ICT Engineering and IT graduates, and could work for:

> Defence and military contractors
> Government agencies
> Computer systems consultancies

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

**SOFTWARE**

UAC Code: 603085  
2014 ATAR: 85.00

You’ll learn all the key competencies and skills from the ICT Engineering major, and will then take subjects specialising in software development and programming languages, technical design and advanced programming for commercial and industrial machines, including artificial intelligence and software for automatic control systems.

**CAREER OPTIONS**

You can work in any of the areas open to ICT Engineering and IT graduates, and could work for:

> Commercial software companies, such as Microsoft or SAP
> Major industrial computing companies
> Financial institutions

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

**TELECOMMUNICATIONS**

UAC Code: 603065  
2014 ATAR: 85.00

You’ll learn all the key competencies and skills from the ICT Engineering major, and will then take subjects specialising in communications systems, from the analogue and digital telephone, mobile and internet networks we’re all familiar with, to communications satellites, radar and the telemetry systems relied on by military, aerospace, aviation and motor racing.

You’ll learn about telecommunications standards, security and regulation – areas which are constantly under scrutiny and changing rapidly.

**CAREER OPTIONS**

You can work in any of the areas open to ICT Engineering and IT graduates, and could work for:

> Telecommunications companies and ISPs
> Defence and military contractors
> Government agencies

You’re likely to work closely with electrical and other ICT engineers, and will find opportunities in many of the areas suggested for those majors.
“Studying at UTS helped me to realise my potential. I initially doubted my ability to undertake tertiary studies whilst working full-time, but was pleasantly surprised by the grades I achieved.

Prior to undertaking the degree I had been employed in a variety of roles as a tradesperson. Studying an engineering degree was a necessary step in my career path, to advance my knowledge and skills, and to diversify my future employment prospects.

The course structure offered sufficient flexibility that enabled me to tailor my study plan, and the subjects offered were relevant to my field of practice. The knowledge and skills I gained has enabled me to perform many of my tasks more efficiently, and despite my previous industry experience, completing my degree also helped secure my current position.”

*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.
**COMBINED COURSES**

**Bachelor of Engineering (Honours), Bachelor of Science**

**Bachelor of Engineering (Honours), Bachelor of Medical Science**

**Bachelor of Engineering (Honours), Bachelor of Biotechnology**

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**KEY INFORMATION**

2014 ATAR: 85.00  
Duration: 5 years full-time plus extra year for Diploma in Professional Engineering Practice plus extra year for Science Honours. Part-time attendance also available.  
Location: City campus  
UAC Codes: 609360, 609370, 609380  
Bonus Points: Available, see page 24  
Professional Recognition: recognised and accredited by Engineers Australia.  
CRICOS Code: 040711D, 040710E, 043276E

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**COURSE DESCRIPTION**

With a combined engineering and science degree, you will have the technological expertise to understand scientific problems and the practical engineering skills to implement effective solutions.

As well as the professional engineering skills you will develop in your chosen Bachelor of Engineering major, you can specialise in Biotechnology, Medical Science or most of the science majors such as Nanotechnology or Environmental Science.

You can develop skills in areas such as 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 or environmental biotechnology and sustainability. You’ll also learn cutting-edge practical laboratory skills and gain an understanding of intellectual property and ethical issues related to science research.

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**CAREER OPTIONS**

You’ll find opportunities to work in any of the suggested areas listed for your chosen Engineering major, plus fields such as medical technology and instrumentation, biotechnology and bioengineering, nanotechnology, molecular biology, mining, agriculture and fisheries, environmental science, food and drink, product design, pest control or pharmaceuticals.

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**COURSE STRUCTURE – BACHELOR OF ENGINEERING (HONOURS), BACHELOR OF SCIENCE**

<table>
<thead>
<tr>
<th>8 Core Engineering Subjects</th>
<th>+</th>
<th>1 Engineering Major (19 Subjects)</th>
<th>+</th>
<th>1 Science Major (13 Subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Physical Modelling</td>
<td></td>
<td>&gt; Electrical Engineering</td>
<td></td>
<td>&gt; Applied Chemistry</td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 1</td>
<td></td>
<td>&gt; Mechanical Engineering</td>
<td></td>
<td>&gt; Applied Physics</td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 2</td>
<td></td>
<td>&gt; Civil Engineering</td>
<td></td>
<td>&gt; Environmental Science</td>
</tr>
<tr>
<td>&gt; Engineering Communication</td>
<td></td>
<td>&gt; ICT Engineering</td>
<td></td>
<td>&gt; Biomedical Science</td>
</tr>
<tr>
<td>&gt; Design and Innovation Fundamentals</td>
<td></td>
<td>&gt; General major</td>
<td></td>
<td>&gt; Nanotechnology</td>
</tr>
<tr>
<td>&gt; Engineering Economics and Finance</td>
<td></td>
<td></td>
<td></td>
<td>&gt; Mathematics</td>
</tr>
<tr>
<td>&gt; Entrepreneurship and Commercialisation</td>
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<td></td>
<td></td>
<td>&gt; Biotechnology</td>
</tr>
<tr>
<td>&gt; Engineering Project Management</td>
<td></td>
<td></td>
<td></td>
<td>&gt; Medical Science</td>
</tr>
</tbody>
</table>

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14
“I have always been fascinated by engineering and its immense potential. I think the major benefit in combining your degree with science is that it allows you greater flexibility in your career choices. It also exposes you to the doctrines of the two disciplines, because believe it or not, they are quite different. I find that I cover more areas of expertise with my combined degree – learning to look at a problem from both perspectives and solving them in a unique way.

The skills I developed in my course are also transferable, this includes project management techniques and mathematical modelling – skills which are sought after in the industry. Another thing which is just as valuable is industry experience. The more experienced you are, the better you will handle a situation. No amount of study can equate to the way you react appropriately to an unexpected situation.”

*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.

EDWARD CHAN

Bachelor of Engineering, Diploma in Engineering Practice*
Bachelor of Medical Science
6th Year Student

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### COURSE STRUCTURE – BACHELOR OF ENGINEERING (HONOURS), BACHELOR OF MEDICAL SCIENCE or BIOTECHNOLOGY

<table>
<thead>
<tr>
<th>8 Core Engineering Subjects</th>
<th>+</th>
<th>1 Engineering Major (19 Subjects)</th>
<th>+</th>
<th>13 Core Medical Science or Biotechnology Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Physical Modelling</td>
<td></td>
<td>Choose one Engineering major from the following:</td>
<td></td>
<td>With the Medical Science and Biotechnology majors, you will need to choose 13 subjects. For the full list of subjects visit the relevant course information at handbook.uts.edu.au/eng</td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 1</td>
<td></td>
<td>&gt; Electrical Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 2</td>
<td></td>
<td>&gt; Mechanical Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Engineering Communication</td>
<td></td>
<td>&gt; Civil Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Design and Innovation Fundamentals</td>
<td></td>
<td>&gt; ICT Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Engineering Economics and Finance</td>
<td></td>
<td>&gt; General major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Entrepreneurship and Commercialisation</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Engineering Project Management</td>
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</tbody>
</table>
With a combined engineering and international studies degree, you will not only develop the professional engineering skills from your chosen Engineering major, you’ll also open up a whole world of opportunities, have the rare chance to immerse yourself in another language and culture, develop an international perspective on your studies, and broaden your thinking.

**CAREER OPTIONS**

You’ll find opportunities to work in any of the suggested areas listed for your chosen Engineering major in Australia or in another country. Engineering is an international discipline, and bilingual, global-thinking engineers are able to tackle infrastructure, water and sanitation, environmental sustainability, communication technology and energy resources anywhere they’re needed.

"I loved Physics, Maths and French at high school, and I wanted a degree that would help me stand out rather than blend in. UTS has a great practice-based curriculum, and the ability to add on the International Studies was a major incentive. The best thing about studying at UTS is the community."

Jennifer Kay
Bachelor of Engineering (Civil)*, Bachelor of Arts in International Studies

*Predecessor to Bachelor of Engineering (Honours).
COURSE DESCRIPTION
With a combined engineering science and law degree, you will have a blend of technical knowledge and legal skills which will enable you to become a legal practitioner in New South Wales. If you wish to obtain full recognition as a graduate lawyer you have the option of also completing the Practical Legal Training Program. With a year of further study, you also have the option of graduating as a professional engineer.

As well as the engineering skills you will develop in your chosen Bachelor of Engineering Science major, you’ll also gain an overview of the legal system, technology legislation, technology-specific criminal law, contract law and environmental law.

CAREER OPTIONS
You’ll find opportunities to work in any of the suggested areas listed for your chosen Engineering major as a legal advisor, manager or 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, and this combined course was developed in response to this demand.

KEY INFORMATION
2014 ATAR: 97.20
Duration: 5.5 years full-time
Location: City campus
UAC Code: 609050


Bonus Points: Not available

Professional Recognition: This course satisfies the requirements for admission to the Supreme Court of NSW as a lawyer, provided students complete a practical legal training (PLT) program, such as the Graduate Certificate in Professional Legal Practice. To obtain full recognition by Engineers Australia as a graduate engineer, students must complete an additional year of engineering studies through the Bachelor of Engineering (Honours).

CRICOS Code: 040713B

COURSE STRUCTURE
6 Core Engineering Subjects + 1 Engineering Major (14 Subjects) + 15 Core Law Subjects + 6 Law Electives

Choose one Engineering major from the following:
- Electrical Engineering
- Mechanical Engineering
- Civil Engineering
- ICT Engineering
- Electrical Engineering
- Innovation Engineering
- General Major

- Foundations of Law
- Torts
- Contracts
- Ethics Law and Justice
- Civil Practice
- Commercial Law
- Real Property
- Remedies
- Public International Law
- Evidence
- Equity and Trusts
- Administrative Law
- Corporate Law
- Australian Constitutional Law
- Criminal Law and Procedure

Students may choose from a wide range of Law electives and may also undertake a semester overseas as part of the UTS: Global Exchange program.
COURSE DESCRIPTION
With a combined engineering and business degree, you will have a blend of skills and knowledge to enable you to succeed in both engineering and/or business environments. As well as the professional engineering skills you’ll develop in your chosen Bachelor of Engineering major, you’ll also gain valuable and highly sought-after business skills from a variety of majors available from the UTS Business School. You can combine your engineering talents with skills in people/business management, finance, marketing or international business.

CAREER OPTIONS
You’ll find opportunities to work in any of the suggested areas listed for your chosen Engineering major, plus fields such as banking, accounting and economics, marketing and any commercial or business sector.

You’ll be particularly sought after by manufacturing businesses. Your engineering skills will enable you to understand and develop products. Your business skills will ensure the product is financed, developed to meet consumer needs and marketed effectively.

You’ll also be ideally suited to working in the financial sector, running your own engineering business or senior management in engineering settings.

KEY INFORMATION
2014 ATAR: 85.00  
Duration: 5 years full-time plus extra year for Diploma in Professional Engineering Practice. Part-time attendance also available.  
Location: City campus  
UAC Code: 609350
Bonus Points: Not available
Professional Recognition: recognised and accredited by Engineers Australia.
CRICOS Code: 030574B

COURSE STRUCTURE

<table>
<thead>
<tr>
<th>6 Core Engineering Subjects</th>
<th>7 Core Business Subjects</th>
<th>1 Engineering Major (19 Subjects)</th>
<th>1 Business Major (8 Subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Physical Modelling</td>
<td>&gt; Economics for Business</td>
<td>Choose one Engineering Major</td>
<td>Choose one Business Major</td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 1</td>
<td>&gt; Accounting for Business</td>
<td>from the following:</td>
<td>from the following:</td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 2</td>
<td>&gt; Decisions A</td>
<td>&gt; Biomedical Engineering</td>
<td>&gt; Accounting</td>
</tr>
<tr>
<td>&gt; Engineering Communication</td>
<td>&gt; Marketing Foundations</td>
<td>&gt; Electrical Engineering</td>
<td>&gt; Economics</td>
</tr>
<tr>
<td>&gt; Design and Innovation</td>
<td>&gt; Integrating Business</td>
<td>&gt; Mechanical Engineering</td>
<td>&gt; Finance</td>
</tr>
<tr>
<td>Fundamentals</td>
<td>Perspectives</td>
<td>&gt; Civil Engineering</td>
<td>&gt; Human Resource Management</td>
</tr>
<tr>
<td>&gt; Engineering Project</td>
<td>&gt; Fundamentals of Business</td>
<td>&gt; ICT Engineering</td>
<td>&gt; International Business</td>
</tr>
<tr>
<td>Management</td>
<td>&gt; Finance</td>
<td>&gt; General Major</td>
<td>&gt; Management</td>
</tr>
<tr>
<td></td>
<td>&gt; Managing people and</td>
<td></td>
<td>&gt; Marketing</td>
</tr>
<tr>
<td></td>
<td>Organisations</td>
<td></td>
<td>&gt; Financial Services</td>
</tr>
<tr>
<td></td>
<td>&gt; Accounting for Business</td>
<td></td>
<td>&gt; Marketing Communication</td>
</tr>
<tr>
<td></td>
<td>Decisions B</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bachelor of Engineering (Honours), Bachelor of Business
COURSE DESCRIPTION
With a combined engineering and creative intelligence and innovation degree, you will gain a breadth of technical knowledge underpinned by a philosophy of innovation and creativity that will help you turn ideas into reality.

By focusing on the high-level conceptual thinking and problem-solving practices that lead to innovative, creative and entrepreneurial outcomes, you will gain leading-edge capabilities that are highly valued in the globalised world. These include critical, inventive and creative thinking, future scenario building, entrepreneurship, and the ability to work on your own, across and between other disciplines. These creative intelligence competencies should enable you to navigate across a rapidly accelerating world of change.

As well as gaining strong technical skills in engineering, you will gain skills in business analysis, problem solving, teamwork and communication. You will be exposed to real engineering problems in the classroom and as part of your engineering degree, you will complete 12 weeks of work experience and a capstone project involving in-depth study in an area of your choice. The link between theory and practice is very strong.

CAREER OPTIONS
You’ll find opportunities to work in any of the suggested areas listed for your chosen Engineering major and will be well-suited for a career within the fast-paced, innovative engineering environment.

Your double 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.

COURSE STRUCTURE

<table>
<thead>
<tr>
<th>8 Core Engineering Subjects</th>
<th>+</th>
<th>12 Core Creative Intelligence and Innovation Subjects</th>
<th>+</th>
<th>1 Engineering Major (20 Subjects)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Physical Modelling</td>
<td>&gt; Problems to Possibilities</td>
<td>Choose one Engineering major from the following:</td>
<td>&gt; Biomedical Engineering</td>
<td></td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 1</td>
<td>&gt; Creative Practice and Methods</td>
<td>&gt; Electrical Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Mathematical Modelling 2</td>
<td>&gt; Past, Present, Future of Innovation</td>
<td>&gt; Mechanical Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Engineering Communication</td>
<td>&gt; Creativity and Complexity</td>
<td>&gt; Civil Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Design and Innovation Fundamentals</td>
<td>&gt; Leading Innovation</td>
<td>&gt; ICT Engineering</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Engineering Economics and Finance</td>
<td>&gt; Initiatives and Entrepreneurship</td>
<td>&gt; General Major</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; Entrepreneurship and Commercialisation</td>
<td>&gt; Envisioning Futures</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
“Being a scholar enables meetings with sponsoring companies and provides a head start, which is fantastic. Another thing that was great was the chance to meet other scholars. This overcame the difficulty of not knowing anyone doing my course. I’ve met some wonderful people. What’s great about engineering is that there’s such a broad spectrum of different types of engineering – there’s a range of fields depending on what you enjoy most. Engineers help develop and create so many things people rely on and UTS has really hands-on courses. If you enjoy a challenge and team work, then engineering is definitely for you!”

*Predecessor to Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice.*

**AMANDA LEE**

Bachelor of Engineering (ICT), Diploma in Engineering Practice*

*Cooperative Scholar 2012*
Linden Little Engineering Equity Scholarship
This scholarship is available to students commencing in the Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice in any major.
Value: $28,000 over 2 years

FEIT Aboriginal and Torres Strait Islander Scholarship
Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice students in any major.
Value: $25,000 over 5 years.

Women in Engineering Equity Scholarship
The Women in Engineering Equity Scholarship is offered to a female with a minimum raw ATAR of 80 commencing in the first year of the Bachelor of Engineering (Honours), Diploma in Professional Engineering Practice in any major. This scholarship is also open to non-current school leavers.
Value: $14,000 offered to first year students

How to apply
Apply for an Engineering Equity Scholarship online at uts.edu.au/future-students/scholarships and apply through UAC (Universities Admissions Centre) at uac.edu.au/equity

Application closing dates vary, with some scholarships for future students closing as early as June. Please ensure you check the UTS website for specific closing dates and how to apply details at uts.edu.au/future-students/scholarships

UNIVERSITY-WIDE SCHOLARSHIPS

Vice-Chancellor’s Outstanding Achievement Scholarship
UTS offers up to five of these scholarships to top HSC students.
Value: $12,500 per annum for the duration of your undergraduate study in any discipline.

Vice-Chancellor’s Merit Scholarship
UTS offers up to five of these scholarships to top HSC students who have demonstrated financial disadvantage.
Value: $12,500 per annum for the duration of your undergraduate study in any discipline.

Vice-Chancellor’s Indigenous Undergraduate Tuition Fee Scholarship
Scholarships are awarded on academic merit to Australian Indigenous students who are commencing higher education studies for the first time.
Value: Tuition fees for the duration of your undergraduate studies.

Diversity Access Scholarship
Scholarships are awarded to students with demonstrated financial hardship to assist them in starting or staying at university.
Value: Between $600 and $5,000 depending upon assessment.

Application closing dates vary, with some scholarships for future students closing as early as June. Please ensure you check the UTS website for specific closing dates and details on how to apply uts.edu.au/future-students/scholarships

UTS: ENGINEERING UNDERGRADUATE AND SCHOLARSHIP INFORMATION EVENING
You are encouraged to attend the information evening on Wednesday 25 June 2014. There will be presentations on the scholarships offered, how to apply and interview skills. You will also hear from UTS students who will talk about their experiences of becoming engineering scholars. Please check the website to register your attendance at eng.uts.edu.au
FEES & FINANCIAL ASSISTANCE

TUITION FEES
Local students
Most local students will be studying in a Commonwealth Supported Place which means the Australian Government makes a contribution to the cost of your study while you pay a student contribution.

If eligible, you can elect to pay your student contribution upfront and receive a 10% discount. Alternatively, you can defer payment of your student contribution using HECS-HELP.

Students are also required to pay a Student Services and Amenities Fee. This fee funds services and amenities at UTS such as social and cultural clubs, services for developing students study skills, UTS food, beverage and retail outlets (including a 10% discount for students), the free legal services centre for students, and the second-hand bookstore. If you’re an Australian citizen or on a humanitarian visa, this fee may be deferred through a new government loan scheme called SA-HELP.

For more information on course fees visit fees.uts.edu.au

International students
Fees for international students are published annually, visit uts.edu.au/international

FINANCIAL ASSISTANCE
The UTS financial assistance service can help students with practical and financial aspects of life at university.

Local UTS students with ongoing and long-term low income can approach our financial assistance service for support with advocacy to Centrelink, information on HECS-HELP, loans and equity based scholarships and grants, and advice on budgeting.

Student Loans
As a UTS student you may be eligible for an interest free student loan from UTS of up to $500 to assist with bills, rent, one-off living expenses and other costs, such as medical costs.

For information on financial assistance at UTS visit uts.edu.au/future-students/undergraduate/essential-information/financial-support
FEES & FINANCIAL ASSISTANCE

STUDENT SUPPORT AND COMMUNITY

ENGINEERS WITHOUT BORDERS

Engineers Without Borders (EWB) work with disadvantaged communities to improve their quality of life through education and sustainable engineering programs. UTS has an active chapter of EWB where students of all disciplines (not just engineers) have the option of building leadership and sustainability skills while applying their university studies to humanitarian engineering projects such as the Great Engineering Challenge, Connectivity Program, High School Outreach Program, Capstone Project or perhaps by even doing an internship overseas.

For more information visit ewb.org.au/explore/chapters/nsw/uts

UTS: MOTORSPORTS

The UTS: Motorsports team competes every year in the Formula SAE, an engineering design competition run by the Society of Automotive Engineers (SAE) for university students. Students are encouraged to showcase their ingenuity and engineering skill by building, racing and marketing an open-wheel, formula-style race car that competes in various static and dynamic events.

The UTS: Motorsports team primarily consists of students from the Mechanical Engineering discipline but welcomes all motoring enthusiasts from other faculties and departments. This includes students from the Civil, Electrical, Mechatronics and Software Engineering disciplines as well as from the Faculty of Design, Architecture and Building. The team allows students to participate and learn from tasks ranging from engineering design to application and management.

For more information and to express interest in the UTS: Motorsports team, contact:
Email: motorsports@uts.edu.au
Web: utsmotorsports.com

WOMEN IN ENGINEERING

The Women in Engineering and IT Program (WiE&IT) at UTS was established to promote engineering and IT as relevant study and career choices for young women. New students can connect with WiE&IT staff at Orientation Camp in February or at one of WiE&IT’s first semester events including lunch in Autumn semester each year.

Students of both genders are invited to support and participate in WiE&IT social and networking events and year-round interactive programs designed to engage school students. Female students are invited to apply for the Lucy Mentoring Program, which pairs students with female engineering and IT mentors. Leadership initiatives include volunteering for Hands-on Days and the government sponsored Sydney Women in Engineering & IT (SWIEIT) Speakers Program.

A number of industry, professional and community organisations support WiE&IT through the provision of presenters, networking opportunities and mid-degree scholarships including Zonta Club of Sydney Breakfast, Suncorp, Engineers Australia, RailCorp, Minerals Council of Australia-Thiess, Google and NAWIC.

The Women in Engineering & IT Program at UTS is celebrating its 33rd birthday in 2014, making it the longest running program of its kind in Australia.

For more information visit uts.ac/womeninEIT

UTS ROBOTICS SOCIETY

The UTS Robotics Society promotes the building and learning of robotics. The Society has access to robotics equipment, participates in robot building competitions, and receives support from Faculty staff and industry.

For more information visit facebook.com/RoboSoc

UTS ENGINEERING SOCIETY

This is a student body within UTS: Engineering that organises a number of academic and social events including Orientation Camp and the Tower Building Competition sponsored by John Holland. They offer new students support and encourage student relationships. For more information visit engsoc.org.au

UTS GLOBAL EXCHANGE

Most of the overseas universities with which we have exchange agreements teach engineering courses in English, while also providing you with the opportunity to study the local language. The countries where English-language programs are offered are Austria, Canada, Chile, Denmark, France, Germany, Hong Kong, Hungary, Israel, Malaysia, Mexico, Netherlands, Philippines, Singapore, Spain, South Korea, Sweden, Thailand, Turkey, UK and USA.

For more information visit uts.edu.au/international
To apply for entry to UTS through the Jumbunna Direct Entry Program or UNISTART contact:

Jumbunna Indigenous House of Learning
Tel: 1800 064 312 (free call within Australia)
Tel: +61 2 9514 1902 (for international calls)
Web: jumbunna.uts.edu.au
Email: atsirecruitment@uts.edu.au

APPLICATIONS TO UTS

LOCAL STUDENTS
Applications for most UTS undergraduate courses must be lodged online through the Universities Admission Centre (UAC): www.uac.edu.au

Applications open in August and must be received by UAC by the end of September. Late fees apply for applications received after this date.

High School Students
For high school student applicants, selection is based on your ATAR only. You may also increase your chances of getting into UTS with the various Entry Schemes listed on this page.

If you are currently completing the International Baccalaureate (IB) in Australia, or if you have completed your IB in the past, you can apply to UTS through UAC. How your IB is considered varies depending on the degree you’re applying for. Details for each degree are provided on the specific course pages of the UTS website. If you completed your IB in another country you may also need to demonstrate your English language proficiency.

Mature-aged and Non-current School Leavers
For mature-aged students and non-current school leavers, selection is based on academic merit based on previous ATAR or post-school subjects already completed. UTS may also take into account your relevant achievements. You may also increase your chances of getting into UTS via Educational Access Schemes. See pages 24-25.

INDIGENOUS AUSTRALIANS
If you identify as Australian Aboriginal or Torres Strait Islander, the Jumbunna Indigenous House of Learning will provide specialised assistance to help you gain entry to UTS through the Jumbunna Direct Entry Program or UNISTART.

To apply for entry to UTS through the Jumbunna Direct Entry Program or UNISTART contact:

Jumbunna Indigenous House of Learning
Tel: 1800 064 312 (free call within Australia)
Tel: +61 2 9514 1902 (for international calls)
Web: jumbunna.uts.edu.au
Email: atsirecruitment@uts.edu.au

INTERNATIONAL STUDENTS
Please note this guide is not intended for international students and not all courses are available to international students.

Course information for international students is available in the relevant UTS: International Course Guide and online at uts.edu.au/international

Applicants who are not citizens or permanent residents of Australia or citizens of New Zealand must apply as international students directly through UTS: International.

UTS: International
Tel: 1800 774 816 (free call within Australia)
Tel: +61 3 9627 4816 (for international calls)
Web: uts.edu.au/international
Email: international@uts.edu.au

ENTRY SCHEMES

Year 12 Bonus Scheme
If you are in high school and perform well in the relevant HSC subjects that relate to the degree you want to do, you may be eligible to receive up to a maximum of 5 bonus points. HSC subjects that can help you accumulate bonus points for entry into a UTS: Engineering course include:
> Chemistry
> Design and Technology
> Engineering Studies
> English Advanced Extension 1 or Extension 2
> Industrial Technology
> Information Processes and Technology
> Information Technology
> Maths Extension 1 or Extension 2
> Physics
> Software Design and Development

The Year 12 Bonus Scheme is applicable to all UTS: Engineering courses except the Bachelor of Science (Honours), Bachelor of Laws. For more information visit uts.edu.au/future-students/year-12-bonus

Engineering Questionnaire
If your ATAR falls short of the course cut-off subsequent to bonus points being added, your ranking can be adjusted based on the submission of an online questionnaire. This questionnaire will be evaluated based on the following criteria:
> motivation
> interest in engineering
> affinity for the engineering discipline

Even if you believe that you will receive a high ATAR, we strongly recommend you complete the questionnaire. For more information visit eng.uts.edu.au/entry

Guaranteed Entry Scheme
If you achieve the guaranteed ATAR cut-off published in the 2015 UAC guide (which includes any bonus points you may be eligible for), and don’t receive an offer to a higher preference, UTS will be able to guarantee you a place.

UTS Educational Access Schemes
UTS Educational Access Schemes take into account a range of educational disadvantages that may have affected your most recent academic performance. The following schemes assist applicants to gain entry to UTS courses:
> inpUTS Educational Access Scheme awards 10 concessional ATAR points for high school leavers and students with post-secondary qualifications who have experienced educational disadvantage and achieve a minimum ATAR of 69.
> UTS Elite Athletes and Performers Special Admissions Scheme awards 5 concessional points off the ATAR cut-off to applicants who are elite athletes and/or performers (representing school or state in national level competition) and whose sport or performance commitments have impacted their studies.
> Schools’ Recommendation Scheme aims to support Year 12 students experiencing financial hardship and who have the potential to succeed at university. With the Scheme, UTS can offer these students a placement given that they are nominated by their school principal, a UTS course is one of their UAC preferences and they receive a minimum ATAR of 69 (80 for Law).
Refugee Access Scheme recognises the educational disadvantage experienced by people with a refugee background and aims to assist by providing improved employment prospects through tertiary education and integration within the Australian community. Applicants will need to meet the English and Academic requirements of the course.

For more information about Educational Access Schemes contact UTS Equity & Diversity Unit
Tel: +61 2 9514 1084
Web: uts.edu.au/future-students/undergraduate/essential-information/educational-access-scheme
Email: equity@uts.edu.au

ENTRY PATHWAYS
If you don’t gain entry to your degree of choice, consider undertaking another form of study and then reapply the following year as a non-current school leaver. At UTS there are a number of pathways you can take to gain entry to your preferred course:

- Complete an INSEARCH Diploma
  UTS: INSEARCH is the premium pathway provider to UTS. Diploma programs can provide direct entry into corresponding undergraduate degrees and you could fast track into the 2nd year of a UTS undergraduate degree, depending on the course you choose.

- Complete a TAFE Diploma
  UTS offers some subject exemptions to students who apply to study at UTS after first completing a course at TAFE. Each exemption is assessed on an individual basis.

- Commence study of a course with a lower ATAR requirement
  Students who commence study at either UTS or another university, and apply to transfer to their preferred degree after a year. The marks you achieve in your first year of study will count towards your application and you may be eligible to receive credit recognition towards your final degree for some of the subjects you’ve studied.

For more information on all entry pathways in to UTS visit undergraduate.uts.edu.au/pathways

CREDIT RECOGNITION
If you have already completed, or part-completed a university course, you will be eligible for credit recognition. This will either exempt you from certain specific subjects or reduce the number of elective subjects you need to complete. If you have completed a TAFE Diploma or Advanced Diploma in an Engineering sub-discipline or a UTS: INSEARCH Diploma of Engineering, you will also be eligible for credit recognition.

MATHS AND PHYSICS PREPARATION
If you don’t have the assumed knowledge but have a strong interest in engineering, there are bridging courses, transition subjects and student support services available. These will enable you to complete the course within the standard course duration. For more information visit uts.edu.au/future-students/science/essential-information/bridging-courses
A TRANSFORMED CAMPUS, COMPLETE WITH CUTTING-EDGE FACILITIES WILL BE OPENING AND READY FOR YOU WHEN YOU START IN 2015.

CHECK OUT YOUR FUTURE CAMPUS

UTS OPEN DAY
30 AUGUST 2014
(City campus)
9am – 4pm

UTS OPEN DAY
6 JANUARY 2015
(City campus)
9am – 4pm

Register for these events at: undergraduate.uts.edu.au/events

UTS FUTURE STUDENTS UNIT
future.students@uts.edu.au
02 9514 1711

VISIT UTS

Women in Engineering and IT
Hands-on Days
Thursday 27 March 2014 and Friday 5 September 2014
City campus

UTS: Engineering Undergraduate Courses and Scholarships Information Evening
Wednesday 25 June 2014
City campus
5pm – 7:30pm

UTS: Engineering and IT
Discovery Days
Friday 18 July 2014 and Friday 5 December 2014
City campus
8:30am – 3:15pm

DISCLAIMER: The information in this brochure is correct as of February 2014. Changes in circumstances after this date may affect the accuracy or currency of the information. UTS reserves the right to alter any matter described in this brochure without notice. Readers are responsible for verifying information that pertains to them by contacting the University.

UTS CRICOS PROVIDER CODE: 00099F

eng.uts.edu.au
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