Entrepreneurial.
Creative.
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Faculty snapshot
12,197 Total number of enrolments
9159 Undergraduate enrolments
2293 Postgraduate Coursework enrolments
745 Higher Degree Research enrolments

UTS at a glance
2002 Higher degree research
10,846 Postgraduate coursework
32,039 Undergraduate, enabling and non-award

UTS student diversity
32% are 25 or older
49% are female
49% were born outside of Australia

Please note the above numbers are approximate as of May 2018.

Contact us

Domestic students
Tel: 1300 ASK UTS (1300 275 887)
Online inquiry: ask.uts.edu.au
Email: FEIT@uts.edu.au

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

Connect with us

UTSFEIT
UTSengineeringandIT
UTSFEIT
UTSInternationalstudents
UTSINT

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 now 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.
Why Engineering at UTS?

The role of a professional engineer is changing. You’re expected to be the project lead, integrating advanced technology and resources whilst pushing the boundaries on innovation. Join the future of engineering at UTS.

BE AMONG THE BEST
We’re ranked in the top 200 universities globally placing us in the top 1%. We’re also the no.1 young university in Australia.

LEADING THE WAY IN GLOBAL RESEARCH
Our researchers are delivering breakthrough solutions which have the power to transform our future. UTS researchers have developed an inexpensive technology to provide a model for clean water which can be adopted worldwide, saving millions from potentially life threatening illnesses.

COURSES FOR ENGINEERS, BY ENGINEERS
Industry Advisory Boards ensure our content is dynamic and ahead or in line with industry developments. Board Members and Academics are experienced industry leaders and act as a valuable strategic resource to students.

INTERNATIONAL PERSPECTIVES
Interdisciplinary ties with leading international universities, researchers, industry experts and businesses give you the opportunity to be a true global citizen. Globally engage through these partnerships and take the step in addressing the next global challenge.

COLLABORATIVE ECOSYSTEM
There are no more ‘lecture’ rooms, but collaborative rooms where students can move freely to discuss ideas, question the class content and work in team projects. Learning activities and experiences are based on real world examples so you can easily draw parallels between theory and practical working examples.
BUZZING WITH ENERGY
Our building itself is a living breathing laboratory, embedded with wireless sensors to monitor temperature, air quality, noise and dust. We’re located on the CBD fringe, in walking distance to major transport intersections with a labyrinth of cultural, musical and social activities at your fingertips.

STRIKE A WORK-LIFE BALANCE
Benefit from classes scheduled to minimise disruption to your professional commitments. Domestic students can study part-time or full-time, and adjust the number of subjects taken per session. Most classes are held in the evening, and delivery options vary by subject, block mode or weekly attendance. It is a visa requirement that all international students study full-time only.

112th in the World
for engineering and technology
QS World University Ranking By Subject 2018

Top 100 globally
In Engineering/Technology & Computer Science
ARWU Broad Subject Field 2016-2017

Top 200 universities globally
QS World University Rankings 2016-2019

No. 1
UTS ranked Australia’s #1 young* uni

DO I NEED A BACHELOR’S DEGREE TO DO A MASTER’S DEGREE?
The traditional path to postgraduate study is via a completed bachelor’s degree, but if you have other qualifications and professional experience, you may be eligible to enter a graduate certificate. Graduate certificates set you on the path to postgraduate study, and you finish with a respected qualification after only 4 subjects. They make up the first four subjects of a master’s, so if you complete the graduate certificate at the required level you can continue your studies in the related master’s course.

HOW MUCH WILL IT COST?
Postgraduate study is an investment in your future, not just financially, but in time as well. Tuition fees are determined by the course in which you are enrolled and the credit point value of the subjects.

You can calculate an approximate course fee using the UTS Course Fee Calculator. [uts.edu.au/future-students/postgraduate/essential-info/what-will-it-cost](https://www.uts.edu.au/future-students/postgraduate/essential-info/what-will-it-cost)

IS THERE A STUDENT LOAN SYSTEM FOR POSTGRADUATE STUDENTS?
Yes. Domestic coursework students may qualify for FEE-HELP, a government loan scheme. FEE-HELP allows eligible students to defer payment of some or all of their tuition fees. The loan is repaid through the taxation system. [studyassist.gov.au/help-loans-and-csps/fee-help](https://studyassist.gov.au/help-loans-and-csps/fee-help)

Alternatively, if what you are studying is directly related to your current job and you pay your fees up front, you may also be able to claim your fees and other study related expenses as a tax deduction. See the ATO website for more details.

CAN I STUDY PART-TIME?
Yes. All postgraduate courses are available part-time to domestic students. UTS class times are designed with busy professionals in mind, with day and evening options available. Part-time students undertake less than 18 credit points per session and have the option to vary their study load each session to suit their schedule. You can view the timetable at: [timetable.uts.edu.au](https://www.timetable.uts.edu.au)

AM I ELIGIBLE FOR RECOGNITION OF PRIOR LEARNING (CREDIT)?
All applicants are assessed individually based on relevant tertiary qualifications. If you have a recent tertiary qualification in engineering or a related field, you may be eligible for up to 24 credit points that cover the basics you already know.

Credit cannot be applied to combined degrees. [uts.edu.au/future-students/engineering/essential-information/recognition-prior-learning](https://www.uts.edu.au/future-students/engineering/essential-information/recognition-prior-learning)

CAN I TRANSFER BETWEEN A GRADUATE CERTIFICATE AND A MASTER’S DEGREE?
Yes. The majority of our courses are articulated, meaning you can begin with a 24 credit point (4-subject) graduate certificate and apply to have your subjects credited towards an appropriate Master’s course. Alternatively, if you successfully complete the first 24 credit points of the Master’s and choose not to continue on with your studies, you may still graduate with a graduate certificate. See articulation chart on page 8.

International students may have visa restrictions that prevent course articulation

HOW CAN I APPLY?
Please refer to page 29 for full details on the application process.

Please contact:
Email: feit@uts.edu.au
Phone: +61 2 9514 2666
Program articulation

Our postgraduate programs are offered in a range of formats that provide alternative entry paths and study durations. They are linked qualifications, meaning they can be combined towards a higher qualification if you decide to continue your studies.

**GRADUATE CERTIFICATE**
Duration: 1 session (full time), 1 year (part time)
Start with a graduate certificate and study the first four subjects of a master’s. These courses will help you put the foundations in place before you pursue advanced studies in a master’s.

**GRADUATE DIPLOMA**
Duration: 1 year (full time), 2 years (part time)
You can choose to exit a master’s degree early with a graduate diploma.

**MASTER’S**
Duration: 1.5–2 years (full time), 3 years (part time)
Theoretical knowledge, practical application: a master’s degree combines both in perfect balance. You’ll gain a professional level skillset, thorough theoretical foundations, and an understanding of how to apply them in your chosen field. Depending on the discipline you study, you might also gain recognition or qualifications from associated professional organisations.

**MASTER’S EXTENSION**
Duration: 2 years (full time), 4 years (part time)
Take your knowledge one step further with an extension master’s. This qualification provides depth and expertise in your area of interest, beyond the conventional master’s structure. You’ll benefit from flexible subject choices and a specialist qualification that sets you apart.

- Credit points can vary across courses. See credit points listed for a specific course.
- Academic requirements must be achieved to transfer to the next stage.
- Applications are assessed on academic merit and work experience.
IN-BUILT RESEARCH SENSORS
The building itself is a living, breathing laboratory embedded with wireless sensors to monitor temperature, air quality, noise and dust particles.

SOFTWARE DEVELOPMENT STUDIO
A rich environment for you to become professionally competent via an industry collaborative software development experience throughout your degree.

TECH LAB
Tech Lab is an engineering and IT facility inspiring innovation and collaboration between expert researchers, industry partners and government.

The multi-functional site features 9000 square meters of office and laboratory space dedicated to technology innovation.

PROTOSPACE
ProtoSpace is our purpose-built additive manufacturing facility, incorporating 3D printing designed to bring prototype testing and product manufacture within the reach of UTS students.

Engineering precinct
There is no better place to see your future from.
LABORATORIES
The building contains civil, electrical, information and communication technology, and mechanical laboratories, where students gain hands-on, practical experience. You will have access to specialised computer labs, including the UTS Remote Laboratory – the largest and one of the world’s most advanced remote laboratories.

LEARNING PRECINCT
In between classes, you can study or conduct group work in the FEIT Learning Precinct. This student space is where you can access teachers for individual and small group support, as well as reference material and software and hardware resources.

DATA ARENA
This 3D data visualisation arena aids researchers to visually present and interact with complex data sets and 3D-spatial modules. It utilises projectors and stimulates weather such as wind and lightning to provide the experience of being immersed in a huge 3D virtual reality experience.

UTS LIBRARY
The UTS Library has expanded to include an underground storage system that uses robotic cranes for the retrieval of less-demanded books, making borrowing faster and simpler. This library upgrade is part of the larger UTS City Campus Master Plan, a $1 billion investment to redevelop UTS.
Stay up to date with emerging trends via a UTS Short Course.

Technology is at the core of the current digital revolution. As a working professional you are challenged to stay up to date with emerging trends, understand the latest technology, integrate opportunities into business practice and importantly, drive innovation.

A short course is a step in the right direction to discover these new areas of innovation, and how exactly you can apply it to your business.

Choose a half-day, one-day or five-day program that aligns with your individual learning goals, career aspirations or business strategy.

eng.uts.edu.au/short-courses

GLOBAL EXPERTS
Through collaborative partnerships with industry and government sectors, UTS experts design and deliver short courses on trending topics in the technology industry.

These topics meet industry demand and future predictions on key areas of innovation.

PRACTICAL TAKE-AWAYS
Apply your learning outcomes to business strategy and develop and an action plan that creates new opportunities for business transformation.

FLEXIBILITY
Choose a half-day, one-day or five-day program that aligns with your learning goals. Programs run multiple times during the year giving you options that allow for your current work and family commitments.

TAILORED COURSES
Does your team need something more specific? We can tailor the course to meet your learning objectives and specific organisational goals.

FACE-TO-FACE LEARNING
Located on the CBD fringe, the UTS Faculty of Engineering and IT offers face-to-face courses in state-of-the-art facilities. This includes access to next generation visualisation and collaboration technologies.

HAVE A QUESTION?
Contact
t: +61 2 9514 2666
e: datalounge@uts.edu.au
In the Faculty of Engineering and IT we teach from experience.

Ravindra Bagia, Senior Lecturer
School of Information, Systems and Modelling
Ravindra brings a wealth of industry experience to his teaching, having worked extensively in the development of complex defence and commercial systems before joining UTS. His research interests include application of systems theory to policy areas, systems engineering and project management.
utl.edu.au/staff/ravindra.bagia

Associate Professor Guang Hong
School of Mechanical and Mechatronic Engineering
Guang is an expert in internal combustion engines and lectures in the subjects of Thermodynamics, Air Conditioning and Internal Combustion Engines.

Her research is presently focused on developing new techniques for using renewable fuels more effectively and efficiently.

“I believe the practice-based learning model supported by advanced facilities in the new Engineering and IT building is what sets UTS apart from other universities.”
utl.edu.au/staff/guang.hong

Associate Professor Sarath Kodagoda
School of Mechanical and Mechatronic Engineering
Sarath is the Program Coordinator for Mechatronic Engineering. He is a recipient of two teaching awards from Office for Learning and Teaching at UTS and five research awards from the International Water Association, Australian Water Association, NSW Water Association, UTS Vice-Chancellor’s Award for Research Excellence and B/HERT Award. His research interests include robotics, data analytics and machine learning.
utl.edu.au/staff/sarath.kodagoda

Dr Priyadarsi Nanda
School of Electrical and Data Engineering
Priyadarsi is a core research member of the Centre for Real-time Information Networks and the Research Centre for Innovation in IT Services and Applications. He has expanded his research activities to include; Cyber Security, IoT Security, network Quality of Service, assisted health care using sensor networks and wireless sensor networks.
utl.edu.au/staff/priyadarsi.nanda
Management courses

Take charge of your future, today.
Engineers are pushing the boundaries on innovation, integrating technology and advancing business processes.
Keep pace with the latest advances in engineering, technology and business practices with a postgraduate program in engineering management.
Tailor your subject choices to best suit your career journey and accelerate into a leadership role.

Master of Engineering Management

Course code: C04275
CRICOS code: 081088E
Duration: Domestic
1-1.5 years full-time
2-3 years part-time
International
1-1.5 years full-time
Study load: 72 credit points (12 subjects)
Study mode: Standard mode (weekly attendance with some evening classes)
Available intakes: Autumn (March) / Spring (July)
How to apply: See page 37
English language requirements: See page 37
Course structure: See page 14
Admission requirements:
A UTS recognised bachelor’s degree, or an equivalent or higher qualification, with no more than 25 percent of subjects failed.

Graduate Certificate in Engineering Management

Course code: C11239
CRICOS code: 081085G
Duration: Domestic
0.5 year full-time
1 year part-time
International
0.5 year full-time
Study load: 24 credit points (4 subjects)
Study mode: Standard mode (weekly attendance with some evening classes)
Available intakes: Autumn (March) / Spring (July)
How to apply: See page 37
English language requirements: See page 37
Course structure: See page 14
Admission requirements:
A UTS recognised bachelor’s degree, or an equivalent or higher qualification, with no more than 25 percent of subjects failed.
### COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Graduate Certificate in Engineering Management</th>
<th>Master of Engineering Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Engineering Stream</strong></td>
<td>Choose 1 of the following:</td>
<td>Choose 2 of the following:</td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Managing Projects</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Major Stream</strong></td>
<td>Choose 2 of the following:</td>
<td>Choose 6 of the following:</td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Applied Financial Management</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Economic Evaluation</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Leadership and Responsibility</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Quality Planning and Analysis</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Value Chain Engineering Systems</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>Choose 1 elective</td>
<td>Choose 2 electives</td>
</tr>
<tr>
<td>Project Stream</td>
<td>N/A</td>
<td>Complete 2 subjects</td>
</tr>
<tr>
<td>Engineering Project Preparation</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Engineering Graduate Project</td>
<td>●</td>
<td>●</td>
</tr>
</tbody>
</table>


Please note: Elective subjects are taken from postgraduate-level Faculty subjects and may need prior approval. You may also need pre-requisite knowledge for some electives.

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**Natalie Josefsen**

**Master of Engineering Management**

With a five-year integrated master’s degree in Chemical Engineering complete, Natalie was keen to ensure her management skills were in line with her strong technical knowledge. “I wanted to see the bigger view of engineering so I decided to pursue a career in management. I’m currently taking a subject in risk management which is really interesting. We’re recreating situations or scenarios that take place in industry and suggesting re-engineered solutions to increase safety and prevent future risks.”

Through the UTS learning.futures model, Natalie is putting theory into practice through weekly team projects and working with her industry mentor through the Lucy Mentoring Program.

“I’m learning key leadership skills in class and applying them in group projects and in industry. The most important thing I’m learning is the importance of good communication. This seems so obvious but it’s critical to making it a success. When you’re working within a team you must first understand what people are good at. You must also make people comfortable and include everyone in the process to ensure the best output. This requires strong communication which is needed in every industry. It can be a challenge of course, but you learn a lot about yourself and good business practice.”

Graduate Certificate in Environmental Engineering Management

Course code: C11237
CRICOS code: 081086G
Duration: Domestic
0.5 year full-time
1 year part-time
International
0.5 year full-time
Study load: 24 credit points
(4 subjects)
Study mode: Standard mode
(weekly attendance with some evening classes)
Available intakes: Autumn (March) /
Spring (July)
How to apply: See page 37
English language requirements: See page 37
Course structure: See page 17
Admission requirements: A UTS recognised bachelor’s degree in engineering or the natural and physical sciences, or an equivalent or higher qualification, with no more than 25 percent of subjects failed.

Join the global environmental movement.
Environmental engineers are key to a sustainable future with the expertise needed to safeguard our planet.
The Environmental Engineering Management program develops leadership skills in environmental management, addressing issues that are high on political and professional agendas.
This course is relevant to practising professionals in engineering and the natural and physical sciences.

RONNY SCHNAPP
Graduate Certificate in Engineering Management

For Ronny Schnapp, the challenge of undertaking a postgraduate degree while working full-time pales in comparison to his experience as an undergraduate student.

“I actually struggled through my bachelor’s degree, probably because I was very young and not really psychologically prepared for the experience,” he says.

“But having done a lot of learning in other environments since I graduated, returning to uni as a postgraduate student has been more enjoyable. I’ve realised [that] as a mature-age student, I’ve got more grasp on how to learn.”

Ronny, a power systems analyst, studies two subjects a session, and completes his assignments after work and on weekends. He is now planning to extend his graduate certificate into a Master of Engineering.

His goal is to start moving through the ranks of the engineering profession to work in management.

“What we need more of in Australia are engineers with sound management qualifications and abilities,” he says.

“I’m confident that my studies have given me the abilities and knowledge to be a good leader.”

Read more student profiles uts.edu.au/eng-student-profiles
Master of Environmental Engineering Management

Course code: C04272
CRICOS code: 081089D
Duration: Domestic
1-1.5 years full-time
2-3 years part-time
International
1-1.5 years full-time
Study load: 72 credit points
(12 subjects)
Study mode: Standard mode
(weekly attendance with some evening classes)
Available intakes: Autumn (March) / Spring (July)
How to apply: See page 37
English language requirements: See page 37
Course structure: See page 17
Admission requirements:
A UTS recognised bachelor’s degree in engineering or the natural and physical sciences, or an equivalent or higher qualification, with no more than 25 percent of subjects failed.
### COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Graduate Certificate in Environmental Engineering Management</th>
<th>Master of Environmental Engineering Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Engineering Stream</strong></td>
<td>Choose 1 of the following:</td>
<td>Choose 2 of the following:</td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Managing Projects</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Choose 1 of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied Financial Management</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Economic Evaluation</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Leadership and Responsibility</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Quality Planning and Analysis</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Technology and Innovation Management</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Value Chain Engineering Systems</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td><strong>Ecology and Sustainability</strong></td>
<td></td>
<td>Compulsory Subject</td>
</tr>
<tr>
<td><strong>Core Subjects (Environmental Engineering Management)</strong></td>
<td>Choose 1 of the following:</td>
<td>Choose 5 of the following:</td>
</tr>
<tr>
<td>Advanced Water and Wastewater Treatment</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Air and Noise Pollution</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Contaminated Site and Waste Remediation</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Decentralised Environmental Systems</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Ecology and Sustainability</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Energy Demand Analysis and Forecasting</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Environmental Assessment and Planning</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Environmental Management of Land</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Environmental Policy for Energy Systems</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Environmental Risk Assessment</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Geographic Information Systems</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Green Technologies: Water-Waste-Energy Nexus</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Policy and Planning of Energy Conservation</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Site Investigations and Monitoring for Infrastructure Projects</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Sustainable Energy Resources</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Waste and Pollution Management</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>Choose 1 elective</td>
<td>Choose 2 electives</td>
</tr>
<tr>
<td><strong>Project stream</strong></td>
<td>Complete the following subjects:</td>
<td></td>
</tr>
<tr>
<td>Engineering Project Preparation</td>
<td>●</td>
<td></td>
</tr>
<tr>
<td>Engineering Graduate Project</td>
<td></td>
<td>●</td>
</tr>
</tbody>
</table>


Please note: Elective subjects are taken from postgraduate-level Faculty subjects and may need prior approval. You may also need pre-requisite knowledge for some electives.
Stay ahead of the game.
We live in a time of great change, driven by new knowledge and rapidly evolving technology.

The UTS Engineering Program is designed for professional engineers who want to explore complex engineering issues.

Access to real-world industry and research projects will develop your skills in problem solving, application of theory, design, creativity and stakeholder communication. All crucial skills to a successful career in industry.

This course has been designed to give you the flexibility to choose from 14 majors, an engineering graduate project* and a choice of electives.

* The engineering graduate project is only available at Master’s level.

### Graduate Certificate in Engineering

**Course code:** C11236  
**CRICOS code:** 081083K  
**Duration:**  
- **Domestic**  
  - 0.5 year full-time  
  - 1 year part-time  
- **International**  
  - 0.5 year full-time  

**Study load:**  
- 24 credit points  
  - (4 subjects)  

**Study mode:**  
- Standard mode  
  - (weekly attendance with some evening classes)  

**Available intakes:**  
- Autumn (March) / Spring (July)  

**How to apply:**  
- See page 37  

**English language requirements:**  
- See page 37  

**Admission requirements:**  
A UTS recognised bachelor’s degree in engineering, or an equivalent or higher qualification, with no more than 25 percent of subjects failed. The applicant’s proposed stream must be in the same field of practice undertaken at the undergraduate level.

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ROJAN SHRESTHA
**Graduate Certificate in Engineering**

For Rojan Shrestha, gaining a job with Vertical Telecoms was directly related to his UTS studies. In particular, the company was looking for someone with demonstrated experience working with Nokia routers and switches. As part of the university’s commitment to industry-relevant course content, UTS had existing relationships with a range of companies in the telecommunications field, including Nokia and Cisco.

“While I was studying at UTS, I took some subjects that were based on UTS’s collaboration with Nokia,” Rojan says.

“UTS has developed a work-based learning approach that I liked very much. When I started working, I didn’t need much technical training. I just went there, understood the company and got started straight away”

“When employers look for their prospective employees, they look for people who they need to use less resources for the training. I believe the time I spent with UTS not only helped me with my technical skills but also developed a can do attitude which will help me for my future career.”

Read more student profiles  
Master of Engineering

Course code: C04271
CRICOS code: 081087F
Duration:
- Domestic: 1-1.5 years full-time
- 2-3 years part-time
- International: 1-1.5 years full-time
Study load: 72 credit points (12 subjects)
Study mode: Standard mode (weekly attendance with some evening classes)
Available intakes: Autumn (March) / Spring (July)
How to apply: See page 37
English language requirements: See page 37
Course structure: See page 20
Admission requirements:
A UTS recognised bachelor’s degree in engineering, or an equivalent or higher qualification, with no more than 25 percent of subjects failed. The applicant’s proposed major must be in the same field of practice undertaken at the undergraduate level.

MAJORS
- Biomedical Engineering
- Civil Engineering
- Computer Control Engineering
- Cyber Security Engineering
- Energy Planning and Policy
- Environmental Engineering
- Geotechnical Engineering
- Manufacturing Engineering and Management
- Operations
- Robotics
- Software Systems Engineering
- Structural Engineering
- Telecommunications Engineering
- Water Engineering
- No Specified Major

Major in Cyber Security engineering
The major in Cyber Security has been designed to cover a complete cyber security solution. It will give you a critical understanding of information governance and assurance, combined with technology risk management practices. The major is broken into three main areas: policy (20%), application (30%) and technology (50%).

Major in Robotics – new 2019
Australia is on track to achieve a $2.2 trillion boost to national income by 2030 from increases to productivity through automation.
Delivered through practical studios, this multidisciplinary major will give you an advanced knowledge of robotic engineering. This includes the application of design thinking, a deep understanding of the traditional principles of robot motion systems, industrial application of robotics and advanced subjects that consider collision, avoidance and optimisation for robot trajectory planning and control.
Underpinned by maths, hardware and software, control and planning, sensing and perception, this major is motivated by real-world application to respond to global demand.
Be at the cutting-edge of engineering with a postgraduate qualification at UTS.
As our workforce changes and new technologies are introduced, we are increasingly reminded of the importance of technical skills. Formalise your knowledge and enhance your skill-set with a globally recognised qualification.

COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Graduate Certificate in Engineering</th>
<th>Master of Engineering</th>
<th>Master of Engineering (Extension)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Engineering Stream</strong></td>
<td>Choose 1 of following:</td>
<td>Choose 2 of the following:</td>
<td>Choose 2 of the following:</td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Managing Projects</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td>●</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Choose 1 of the following:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Applied Financial Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic Evaluation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leadership and Responsibility</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality Planning and Analysis</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Technology and Innovation Management</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Value Chain Engineering Systems</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Major Choice (see page 19 for the list of majors available)</td>
<td>Choose 2 subjects from your chosen stream</td>
<td>Choose 5 subjects from your chosen major</td>
<td>Choose 5 subjects from your chosen major</td>
</tr>
<tr>
<td>Sub-Major (Advanced Choice) (see page 21 for the list of sub-majors available)</td>
<td>N/A</td>
<td>N/A</td>
<td>Choose 4 subjects from your chosen sub-major</td>
</tr>
<tr>
<td>Electives*</td>
<td>Choose 1 elective</td>
<td>Choose 2 electives</td>
<td>Choose 2 electives</td>
</tr>
<tr>
<td>Project stream</td>
<td>N/A</td>
<td>Complete 2 subjects</td>
<td>Complete 2 subjects</td>
</tr>
<tr>
<td>Engineering Project Preparation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineering Graduate Project</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Please note: Elective subjects are taken from postgraduate-level faculty subjects and may need prior approval. You may also need pre-requisite knowledge for some electives.
Go a step further.

In addition to the course structure of the Master of Engineering, this extension course includes a sub-major worth 24 credit points.

Note: the sub-major must be in a different field of engineering to the major.

You can either start in this course or progress into it after completing at least one session of the Master of Engineering. You can also sample this course by completing the Graduate Certificate in Engineering and having those subjects credited towards the Master of Engineering (Extension).

SUB MAJORS
You will choose 24 credit points (4 subjects in most cases) as part of your sub-major (advanced choice).

- Biomedical Engineering
- Civil Engineering
- Computer Control Engineering
- Cyber Security Engineering
- Energy Planning and Policy
- Environmental Engineering
- Geotechnical Engineering
- Manufacturing Engineering and Management
- Operations
- Robotics
- Software Systems Engineering
- Structural Engineering
- Telecommunications Engineering
- Water Engineering
- No specified sub major
Master of Engineering (Advanced)

Course code: C04278  
CRICOS code: 081093G  
Duration: 
Domestic 2 years full-time  
4 years part-time  
International 2 years full-time  
Study load: 96 credit points (16 subjects)  
Study mode: Standard mode (weekly attendance with some evening classes)  
Available intakes: Autumn (March) / Spring (July)  
How to apply: Internal Course Transfer  
English language requirements: See page 37  
Admission requirements: 
Applicants are required to have: (i) completed 48 credit points in the Master of Engineering (C04271) or Master of Engineering (Extension) (C04277); and (ii) received approval of a member of academic staff to act as their research project supervisor.

Explore an in-depth research study in a major field of engineering.

This program involves undertaking substantial research study in a major field of engineering. This course will put you at an advantage should you apply for a higher degree by research program such as a PhD.

You will complete two professional engineering subjects, six subjects as part of your major and either a research project (over a period of 1 year) or a research project with a combination of electives.

Note: you must find a research supervisor before transferring into this course.
**Become a certified Engineer in Australia**

This course enables students to deepen knowledge and expertise in their field, and be ready-to-practice in engineering. Students can undertake a major in Biomedical, Civil, Cyber Security, Robotics, or Mechanical Engineering.

This course allows students to choose a program of study that not only helps to deepen the body of knowledge acquired in their first degree, but also gives them an opportunity to be prepared to embark on a 12-week professional experience, or equivalent (as required by Engineers Australia).

It also provides a unique opportunity to deepen their knowledge and gain practical skills by undertaking an independent engineering graduate project in a particular major.

---

**Graduate Certificate in Engineering Studies**

<table>
<thead>
<tr>
<th>Course code:</th>
<th>C11238</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRICOS code:</td>
<td>081084J</td>
</tr>
<tr>
<td>Duration:</td>
<td><strong>Domestic</strong>&lt;br&gt;0.5 year full-time&lt;br&gt;1 year part-time</td>
</tr>
<tr>
<td>Study load:</td>
<td>24 credit points (4 subjects)</td>
</tr>
<tr>
<td>Study mode:</td>
<td>Standard mode (weekly attendance with some evening classes)</td>
</tr>
<tr>
<td>Available intakes:</td>
<td>Autumn (March) / Spring (July)</td>
</tr>
<tr>
<td>How to apply:</td>
<td>See page 37</td>
</tr>
<tr>
<td>English language requirements:</td>
<td>See page 37</td>
</tr>
<tr>
<td>Course structure:</td>
<td>See page 24</td>
</tr>
<tr>
<td>Admission requirements:</td>
<td>A UTS recognised bachelor’s degree in a non-cognate engineering field, or an equivalent or higher qualification.</td>
</tr>
</tbody>
</table>

---

**Master of Professional Engineering**

<table>
<thead>
<tr>
<th>Course code:</th>
<th>C04309</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRICOS code:</td>
<td>088084G</td>
</tr>
<tr>
<td>Duration:</td>
<td><strong>Domestic</strong>&lt;br&gt;2 years full-time&lt;br&gt;4 years part-time</td>
</tr>
<tr>
<td>Study load:</td>
<td>96 credit points</td>
</tr>
<tr>
<td>Study mode:</td>
<td>Standard mode (weekly attendance with some evening classes)</td>
</tr>
<tr>
<td>Available intakes:</td>
<td>Autumn (March) / Spring (July)</td>
</tr>
<tr>
<td>How to apply:</td>
<td>See page 37</td>
</tr>
<tr>
<td>English language requirements:</td>
<td>See page 37</td>
</tr>
<tr>
<td>Course structure:</td>
<td>See page 24</td>
</tr>
<tr>
<td>Admission requirements:</td>
<td>A UTS recognised bachelor’s degree in engineering, engineering science or technology, or an equivalent or higher qualification, with no more than 25 percent of subjects failed. The applicant’s proposed major must be in the same field of practice undertaken at the undergraduate level.</td>
</tr>
</tbody>
</table>
### COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Graduate Certificate in Engineering Studies</th>
<th>Master of Professional Engineering</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Choice (Professional Engineering) (12cp)</strong></td>
<td>Choose 1 of the following:</td>
<td>Choose 2 of the following:</td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Managing Projects</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Choice (Professional Engineering) (6cp)</strong></td>
<td></td>
<td>Choose 1 of the following:</td>
</tr>
<tr>
<td>Applied Financial Management</td>
<td>N/A</td>
<td>●</td>
</tr>
<tr>
<td>Economic Evaluation</td>
<td>N/A</td>
<td>●</td>
</tr>
<tr>
<td>Leadership and Responsibility</td>
<td>N/A</td>
<td>●</td>
</tr>
<tr>
<td>Quality Planning and Analysis</td>
<td>N/A</td>
<td>●</td>
</tr>
<tr>
<td>Technology and Innovation Management</td>
<td>N/A</td>
<td>●</td>
</tr>
<tr>
<td>Value Chain Engineering Systems</td>
<td>N/A</td>
<td>●</td>
</tr>
<tr>
<td>Design and Innovation Fundamentals</td>
<td>N/A</td>
<td>Compulsory subject</td>
</tr>
<tr>
<td><strong>Complete the following subjects:</strong></td>
<td></td>
<td><strong>Complete the below subject</strong></td>
</tr>
<tr>
<td>Engineering Review 1</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Engineering Review 2</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Electives (12cp)</strong></td>
<td>Choose 1 elective</td>
<td>Choose 2 electives</td>
</tr>
<tr>
<td><strong>Major (54cp)</strong></td>
<td>N/A</td>
<td>Complete 5 subjects from your chosen major</td>
</tr>
<tr>
<td><strong>Project (18cp)</strong></td>
<td>N/A</td>
<td>Complete the following subjects:</td>
</tr>
<tr>
<td>Engineering Project Preparation</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Engineering Graduate Project Part 1</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Engineering Graduate Project Part 2</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td><strong>Engineering Practice Stream (6cp)</strong></td>
<td>N/A</td>
<td>Complete 1 of the following:</td>
</tr>
<tr>
<td>Engineering Practice Preparation 1</td>
<td>●</td>
<td>●</td>
</tr>
<tr>
<td>Engineering Practice in an Australian Context</td>
<td>Compulsory subject</td>
<td></td>
</tr>
<tr>
<td>Engineering Work Experience</td>
<td>Compulsory subject</td>
<td></td>
</tr>
<tr>
<td>Engineering Workplace Reflection</td>
<td>Compulsory subject</td>
<td></td>
</tr>
</tbody>
</table>
Double degrees

Do your career goals span multiple disciplines?
This combined degree links two of UTS’s world-leading programs to bridge the gap between engineering and business for emerging leaders.

Strengthen your skills in project management, decision-making and risk management as well as finance, marketing, accounting and strategic management.

This unique degree is for students with a Bachelor in Engineering who want to take the next step in their management career.

JUAN FELIPE MENDEZ DIAZ
Master of Engineering Management Master of Business Administration

When technology consultant Juan Felipe Mendez Diaz found himself getting involved in the business side of projects, negotiations started to become complicated.

“I’m an engineer, so I don’t have a business background,” he says. Originally from Colombia, Juan Felipe knew exactly what to focus on when undertaking a postgraduate degree. “I decided to go more for the management and MBA side.”

On choosing UTS, Juan Felipe says: “It’s the only uni that offers a mix between business and engineering. That was perfect for me in terms of what I wanted to do, and how I wanted to build my career.”

He found UTS’s modern learning environment engaging. “It’s group-focused, a more up-to-date way of teaching. The spaces are different—you can tell just by looking at the buildings. The classrooms are designed to how the subjects should be taught.”

The diversity of students was another appeal. “I’m always trying to learn from different cultures and interact with different people.”

Juan Felipe says the degree is broadening his business expertise in preparation for the future. “It helps me bridge the gap that I had.”

Read more student profiles
uts.edu.au/eng-student-profiles

Master of Engineering Management
Master of Business Administration

Course code: C04274
CRICOS code: 081096E
Duration: Domestic
2 years full-time
4 years part-time
International
2 years full-time

Study load: 96 credit points
Study mode: Standard mode
(weekly attendance with some evening classes)

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

How to apply: See page 37

English language requirements: See page 37

Course structure: See page 26

Admission requirements:
A UTS recognised bachelor’s degree in engineering with a grade point average (GPA) of 2.75 on a four-point scale, with less than 10 percent fails; or GMAT with overall minimum score of 550 with verbal 25, quantitative 35 and AWA 4.0; or demonstrated 4 years full-time (or equivalent) engineering-related work experience.
# COURSE STRUCTURE

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Master of Engineering Management, Master of Business Administration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Engineering Stream</strong></td>
<td></td>
</tr>
<tr>
<td>Complete the following subjects:</td>
<td>24cp</td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td></td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td></td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td></td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td></td>
</tr>
<tr>
<td><strong>Core Subjects (MEM)</strong></td>
<td></td>
</tr>
<tr>
<td>Choose 2 subjects from the following:</td>
<td>24cp</td>
</tr>
<tr>
<td>Integrated Logistic Support</td>
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</tr>
<tr>
<td>Managing Information Technology in Engineering</td>
<td></td>
</tr>
<tr>
<td>Quality and Operations Management Systems</td>
<td></td>
</tr>
<tr>
<td>Quality Planning and Analysis</td>
<td></td>
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<tr>
<td>Technology and Innovation Management</td>
<td></td>
</tr>
<tr>
<td>Value Chain Engineering Systems</td>
<td></td>
</tr>
<tr>
<td>Complete the following subjects as part of the Project stream:</td>
<td></td>
</tr>
<tr>
<td>Engineering Project Preparation</td>
<td></td>
</tr>
<tr>
<td>Engineering Graduate Project</td>
<td></td>
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<tr>
<td><strong>Core Subjects (MBA)</strong></td>
<td></td>
</tr>
<tr>
<td>Complete the following subjects as part of the MBA:</td>
<td>48cp</td>
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<tr>
<td>Accounting for Managerial Decisions</td>
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</tr>
<tr>
<td>Economics for Management</td>
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</tr>
<tr>
<td>Financial Management</td>
<td></td>
</tr>
<tr>
<td>Managing, Leading and Stewardship</td>
<td></td>
</tr>
<tr>
<td>Marketing Management</td>
<td></td>
</tr>
<tr>
<td>Organisational Dialogue: Theory and Practice</td>
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</tr>
<tr>
<td>People, Work and Employment</td>
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<tr>
<td>Strategic Management</td>
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</tr>
<tr>
<td><strong>Total Credit Points</strong></td>
<td>96cp</td>
</tr>
</tbody>
</table>
Master of Engineering
Master of Engineering Management

Course code: C04273
CRICOS code: 081095F
Duration:
Domestic
2 years full-time
4 years part-time
International
2 years full-time
Study load: 96 credit points (16 subjects)
Available intakes: Autumn (March) / Spring (July)
How to apply: See page 37
English language requirements: See page 37
Course structure: See page 28
Admission requirements:
A UTS recognised bachelor’s degree in engineering, or an equivalent or higher qualification, with no more than 25 percent of subjects failed. The applicant’s proposed major must be in the same field of practice undertaken at the undergraduate level.

Redefine your technical understanding whilst developing advanced leadership skills with a combined engineering program.

Choose from a variety of management and leadership subjects including advanced project management, judgment and decision-making, risk management and people management.

By following the course structure, you can complete the two degrees concurrently in only two years, rather than three years individually.
YAZMIN JIMENEZ LAGOS  
Master of Engineering, Master of Engineering Management

Engineer Yazmin decided soon after her Bachelor’s Degree that she wanted to pursue a postgraduate study to broaden her career prospects. “I realised after working three years with a concrete firm that I needed a change in my career. I wanted to develop my technical skills in the construction industry and eventually move to a management role. To be a successful manager, it’s important to have strong technical skills to be able to lead a team. I was drawn to this program as it develops capabilities in both areas.”

When the Lucy Mentoring Program opened up to Master’s students in 2018, Yazmin took the opportunity to work with a mentor from Lendlease, one of Australia’s largest construction firms, where she experienced life as a professional in the industry. “My mentor was a Construction Manager so I had the opportunity to assist with construction projects and go on site – that is difficult experience to get as a student so I was really happy to have that opportunity. I met people from across the business who explained their area of work and what they’re responsible for. This opened my eyes to specialist areas within construction that I hadn’t considered previously.”

Learn more about the Women in Engineering and IT community and the opportunities available for postgraduate students. wieit.uts.edu.au

---

**COURSE STRUCTURE**

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Master of Engineering, Master of Engineering Management</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Professional Engineering Stream</strong></td>
<td>42cp</td>
</tr>
<tr>
<td>Choose 5 of the below subjects:</td>
<td></td>
</tr>
<tr>
<td>Applied Financial Management</td>
<td></td>
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<tr>
<td>Economic Evaluation</td>
<td></td>
</tr>
<tr>
<td>Leadership and Responsibility</td>
<td></td>
</tr>
<tr>
<td>Quality Planning and Analysis</td>
<td></td>
</tr>
<tr>
<td>Technology and Innovation Management</td>
<td></td>
</tr>
<tr>
<td>Value Chain Engineering Systems</td>
<td></td>
</tr>
<tr>
<td><strong>Choose 2 subjects from the following:</strong></td>
<td></td>
</tr>
<tr>
<td>Advanced Project Management</td>
<td></td>
</tr>
<tr>
<td>Judgment and Decision Making</td>
<td></td>
</tr>
<tr>
<td>Managing Projects</td>
<td></td>
</tr>
<tr>
<td>Risk Management in Engineering</td>
<td></td>
</tr>
<tr>
<td>Systems Engineering for Managers</td>
<td></td>
</tr>
<tr>
<td><strong>ME major choice</strong></td>
<td>30cp</td>
</tr>
<tr>
<td>Complete 5 subjects in your chosen major</td>
<td></td>
</tr>
<tr>
<td><strong>Project Stream</strong></td>
<td>12cp</td>
</tr>
<tr>
<td>Complete the following 2 subjects:</td>
<td></td>
</tr>
<tr>
<td>Engineering Project Preparation</td>
<td></td>
</tr>
<tr>
<td>Engineering Graduate Project</td>
<td></td>
</tr>
<tr>
<td><strong>Electives</strong></td>
<td>12cp</td>
</tr>
<tr>
<td>Choose 2 electives</td>
<td></td>
</tr>
</tbody>
</table>

*See the Handbook www.handbook.uts.edu.au/eng for details. Please note: Elective subjects are taken from postgraduate-level faculty subjects and may need prior approval. You may also need pre-requisite knowledge for some electives.
The following is an overview of subjects available in each major. For detailed course structures and requirements visit the UTS engineering handbook at handbook.uts.edu.au/eng

Within each major, a project component is incorporated comprising two subjects (12 credit points):
- Engineering Project Preparation
- Engineering Graduate Project

## Biomedical Engineering

### Core - 2 compulsory subjects
- Biomedical Instrumentation
- Biomedical Signal Processing

### Choice - choose 3 subjects from the following:
- Advanced Robotics
- Bionanotechnology
- Bioinformatics
- Biomedical Polymer
- Human Anatomy and Physiology
- Human Pathophysiology
- Medical Devices and Diagnostics
- Medical Imaging
- Neural Networks and Fuzzy Logic
- Physiological Bases of Human Movement
- Wireless Access Networking Technologies

## Cyber Security Engineering

### Core - 2 compulsory subjects
- Cyber Security Essentials
- Unix Systems Programming

### Choice - choose 3 subjects from the following:
- Cloud Security
- Cloud Computing and Software as a Service
- Communication Protocols
- Cyber Security for Mobile Platforms
- Digital Forensics
- Infrastructure for Cloud Computing
- IoT Security
- Network Security Appliances

## Civil Engineering

### Core - choose 2 subjects from the following:
- Road Engineering Practice
- Catchment Modelling
- Concrete Technology and Practice
- Geographic Information Systems

### Choice - choose 3 subjects from the following:
- Advanced Soil Mechanics and Foundation Design
- Applied Geotechnics
- Contaminated Site and Waste Remediation
- Design for Durability
- Flood Estimation
- Pavement Analysis and Design
- Traffic and Transportation
- Urban Stormwater Design

## Computer Control Engineering

### Core - 2 compulsory subjects
- Advanced Robotics
- Neural Networks and Fuzzy Logic

### Choice - choose 3 subjects from the following:
- Biomedical Instrumentation
- Fundamentals of Software Development
- Systems Quality Management
- Web Technologies
- Wireless Access Networking Technologies
- Advanced Sensor Networks

## Majors

---

Postgraduate Course Guide
### Operations

**Core - 2 compulsory subjects**
- Operations Engineering
- Quality and Operations Management Systems

**Choice - choose 3 subjects from the following:**
- Integrated Logistic Support
- Quality Planning and Analysis
- Reliability Availability and Maintainability
- Technology and Innovation Management
- Value Chain Engineering Systems

### Software Systems Engineering

**Core - 2 subjects**
- UNIX Systems Programming (compulsory)
- .NET Enterprise Development (choose one)
- Advanced Internet Programming (choose one)

**Choice - choose 3 subjects from the following:**
- Cloud Computing and Software as a Service
- Enterprise Software Architecture and Middleware
- Enterprise Software Testing
- iOS Application Development
- Web Technologies
- Advanced Sensor Networks

### Structural Engineering

**Core - choose 2 subjects from the following:**
- Bridge Design
- Finite Element Analysis
- Steel and Composite Design
- Prestressed Concrete Design

**Choice - choose 3 subjects from the following:**
- Advanced Soil Mechanics and Foundation Design
- Application of Timber in Engineering Structures
- Concrete Technology and Practice
- Design for Durability
- Facade Engineering
- Structural Dynamics and Earthquake Engineering

### Telecommunications Engineering

**Core - 2 compulsory subjects**
- Communication Protocols
- Telecommunications Industry Management

**Choice - choose 3 subjects from the following:**
- 4G/5G Mobile Technologies
- Advanced Sensor Networks
- Enterprise Software Architecture and Middleware
- iOS Application Development
- MPLS and Services Architecture
- Network Management
- Software Defined Networks
- Transmission Systems
- Wireless Access Network Technologies

### Energy Planning and Policy

**Core - 5 compulsory subjects**
- Electricity Sector Planning and Restructuring
- Energy Modelling
- Environmental Policy for Energy Systems
- Evaluation of Infrastructure Investments
- Regulatory Economics

### Environmental Engineering

**Core - 2 compulsory subjects**
- Advanced Water and Wastewater Treatment
- Green Technologies: Water-Waste-Energy Nexus

**Choice - choose 3 subjects from the following:**
- Air and Noise Pollution
- Contaminated Site and Waste Remediation
- Decentralised Environmental Systems
- Engineered Natural Water Treatment Systems
- Environmental Assessment and Planning
- Geographic Information Systems
- Industrial Water Pollution Control Engineering
- Site Investigations and Monitoring for Infrastructure Projects
- Sustainable Energy Resources
- Waste and Pollution Management
### Geotechnical Engineering

**Core - choose 2 subjects from the following:**
- Advanced Soil Mechanics and Foundation Design
- Applied Geotechnics
- Pavement Analysis and Design
- Problematic Soils and Ground Improvement Techniques

**Choice - choose 3 subjects from the following:**
- Contaminated Site and Waste Remediation
- Geographic Information Systems
- Road Engineering Practice
- Traffic and Transportation

### Water Engineering

**Core - 2 compulsory subjects**
- Catchment Modelling
- Urban Stormwater Design

**Choice - choose 3 subjects from the following:**
- Contaminated Site and Waste Remediation
- Decentralised Environmental Systems
- Emergency Management
- Engineered Natural Water Treatment Systems
- Environmental Management of Land
- Flood Estimation
- Floodplain Risk Management
- Site Investigations and Monitoring for Infrastructure Projects

### Manufacturing Engineering and Management

**Core - 2 compulsory subjects**
- Computer-aided Mechanical Design
- Design Optimisation for Manufacturing

**Choice - choose 3 subjects from the following:**
- Advanced Flow Modelling
- Air and Noise Pollution
- Airconditioning
- Control of Mechatronic Systems
- Energy Conversion
- Internal Combustion Engines
- Managing Projects
- Materials Handling
- Sensors and Signal Processing

### Robotics

**Core - 2 compulsory subjects:**
- Robotics Studio 1
- Robotics Studio 2

**Choice - choose 2 subjects from the following:**
- Advanced Robotics
- Biomedical Instrumentation
- Control of Mechatronic Systems
- Engineering Graduate Project
- Fundamentals of Software Development
- Neural Networks and Fuzzy Logic
- Robotics Studio 3
- Start-up Data, Marketing and Sales

### No Specified Major


For a list of subjects available to students undertaking no specified major, visit [handbook.uts.edu.au/directory/cbk90968](http://handbook.uts.edu.au/directory/cbk90968)

Disclaimer: not all subjects listed are offered every session or year
Research at UTS

Solutions with real-world impact.

When you choose a Master of Engineering (Research) or PhD at UTS you will be part of a lively and rigorous research culture.

Our researchers are recognised leaders in their fields with a reputation for driving innovation and creating solutions with real world impact.

UTS is a major force in a range of specialisations including:

> intelligent mechatronic systems
> quantum computation and intelligent systems
> innovation in IT services and applications
> health technologies
> green energy vehicle innovation
> real-time information networks
> built infrastructure
> technology in water and wastewater
> advanced analytics
> electrical machines and power electronics
> energy policy
> human-centred technology design

KATELYN BYWATERS
Doctor of Philosophy in Sustainable Futures

Katelyn Bywaters’ final year Capstone Project as a Civil Engineering undergraduate led to an unexpected opportunity. Involving train station passenger movement tracking and exit routes, it caught the attention of two professors, who invited her to become a doctoral researcher on a UTS collaboration with Transport for NSW.

“In the Capstone I really enjoyed doing research and it’s not something I’d thought about before,” Katelyn says. “Research is a career path that’s not as talked about, especially in your undergraduate years. When the opportunity came up, I took it and really enjoy it.”

She’s now a member of the Responsive Passenger Information Project, which is developing technology to address rising congestion in the Sydney Trains Network. “I’m specifically looking at the passenger flow in Town Hall Station.”

A move from the Central Coast to Sydney ensued. “UTS is a very central campus,” Katelyn says. “There’s so many social and support programs, like Women in Engineering and IT.”

“UTS fosters very practical projects. It allows you to make the transition of either staying in academia, or doing research in industry.”

Read more student profiles
uts.edu.au/eng-student-profiles
The Centre for Autonomous Systems focuses on two key issues in robotics: ‘robots in unknown and complex environments’ and ‘human robot interaction’. Its research strengths include: autonomous robots; electrical machines; automotive systems; and investigation of human–machine and human–environment interaction. Its gritblasting robotic technology, now used to clean the Sydney Harbour Bridge, was successfully commercialised by SABRE Autonomous Solutions.

The Centre for Green Energy and Vehicle Innovations combines expertise from the former Centre for Intelligent Mechatronic Systems and Centre for Electrical Machines and Power Engines. It provides solutions for the rapidly expanding high-tech and overlapping industrial sectors for green energy systems and advanced low emission vehicles. Its vision to bring eco-friendly vehicles to mainstream motoring led to the recently designed dual clutch system for the Beijing Electric Vehicle Company.

The Centre for Technology in Water and Wastewater ensures the sustainable management of water resources in both urban and rural environments, here in Australia and internationally. Its research programs include: innovative treatment systems and technologies for water, wastewater and storm water; sustainable desalination techniques; advanced systems for ground and surface water treatment; and flood management and catchment modelling for flood prediction.

The Centre for Health Technologies uses cutting-edge biomedical engineering and biotechnology science to develop biomedical devices and systems. It focuses on health and disease processes; the development of new devices; and advanced methods for the early detection, diagnosis and rehabilitation of cardiovascular disease, diabetes, neurological disorders and cancer. Its four research programs include: non-invasive instrumentation; bio-therapeutics; bio-electromagnetics; and nano-biotechnology.

The Centre for Built Infrastructure Research is one of the earliest research centres at UTS. It addresses important global issues relating to building structures, materials, design, management, improvement, safety and conservation. Its research areas include: using smart materials for dynamic and structural engineering; innovative timber engineering; earthquake engineering; geotechnical engineering; and materials engineering such as ecofriendly ‘green cement’. It also houses the largest state-of-the-art shaker table facility in Australia.

The Transport Research Centre is a multidisciplinary, cross-facility transport research hub within UTS. The Centre provides a single point of contact for government, industry and community groups wishing to engage with research teams from across the university. It has a focus on the development of new technologies and approaches that optimise network performance across all transport modes.
Research courses

Master of Engineering (Research)

Course code: C03017
CRICOS code: 009468B
Duration:
Domestic
2 years full-time
4 years part-time
International
2 years full-time
Available intakes: Autumn (March) / Spring (July)

Doctor of Philosophy

Course code: C02018
CRICOS code: 036570B
Duration:
Domestic
4 years full-time
8 years part-time
International
4 years full-time
Available intakes: Autumn (March) / Spring (July)

A PhD involves an intense period of supervised study and research, culminating in the submission of a thesis. You must, through original investigation, make a distinct and significant contribution to the knowledge of your field of specialisation.

RESEARCH SUPPORT
The Graduate Research School provides support to research students, supervisors and early and mid-career researchers at UTS.

They offer development through research education programs, policy development, advice and scholarships.

For more information visit grads.uts.edu.au or contact:
UTS Graduate Research School
Tel: +61 2 9514 1336
Email: grs@uts.edu.au

RESEARCH SCHOLARSHIPS
UTS offers a range of scholarships for research students.

For more information visit uts.edu.au/future-students/scholarships

HOW TO APPLY
Please refer to page 37.

OUR RESEARCH COURSES
As a Master of Engineering (Research) or PhD student, you must find an academic with expertise in your chosen field to supervise your research. As we focus on industry collaboration, proposals that involve direct working relationships with industry professionals are strongly encouraged.

Applicants must secure the agreement of a supervisor prior to lodging an application.

For more information on Research in the Faculty of Engineering and Information Technology, including research areas and academic supervisors, visit feit.uts.edu.au or email feit.hdr@uts.edu.au
ORIENTATION
orientation.uts.edu.au
The UTS orientation program welcomes you to university life and helps you to get the most out of your student experience.

Discover the services available, find out course and subject information, tips on living in Sydney and meet new friends.

All students are expected to attend orientation activities and orientation is compulsory for international students.

PEER NETWORK
uts.edu.au/peer-network
Peer Networkers are student volunteers who are there to help new students when they first arrive on campus and throughout each session.

The Peer Network also encourages students to connect with others from Australia and around the world through the weekly Peer Network Café.

UTS INTERNATIONAL
uts.edu.au/international
The UTS International Student Centre provides international students with face-to-face contact to answer your enquiries regarding studies, administrative issues and living in Sydney.

AN OPEN AND RESPECTFUL ENVIRONMENT
uts.edu.au/current-students/support
UTS is a diverse community, welcoming many different cultures and faiths.

There is a chaplaincy service, which includes Baha’i, Buddhist, Christian, Jewish and Islamic chaplains, as well as clubs and societies offering spiritual support.

HIGHER EDUCATION LANGUAGE AND PRESENTATION SUPPORT (HELPS)
uts.edu.au/helps
UTS provides free English language and academic literacy skills assistance to students. Services include weekly study, reading and speaking skills workshops, writing clinics and daily drop in consultation. Practise speaking English with staff and student volunteers through the daily Conversations@UTS sessions.

PEER LEARNING - U:PASS
uts.edu.au/upass
U:PASS is a study group facilitated by senior students who have done well in a subject, tutoring more junior students. Within a session, you may review lecture notes, participate in problem solving activities or prepare for exams.

KICKSTART@UTS
The KickStart@UTS program introduces new international research degree students to the various sources of support available to assist you in preparing for research study.

CAREER SUCCESS
careers.uts.edu.au
Your career is in your hands: preparation for graduate success can start from your first months at university as you begin building your professional network. UTS offers resources and tools to guide you on the path to your professional career.
THE ACADEMIC YEAR
There are three teaching sessions at UTS:
– Autumn Session: March to June
– Spring Session: July to October
– Summer Session: November to February
While not all subjects offered by UTS are currently run during Summer session, make sure you check out which ones are – it’s a great way to get ahead or to reduce your study load during Autumn and Spring sessions.

APPLICATION CLOSING DATES
If you want to start studying at UTS in either the Autumn or Spring sessions, you need to apply by:
– Autumn Session: 31 January 2019
– Spring Session: 28 June 2019

DOMESTIC APPLICANTS: COURSEWORK
Submit your application:
– through the UTS Online Application system at uts.edu.au/pg-admissions; or
– at one of our Postgraduate Expos or postgraduate information sessions.
Find out everything you need to know about upcoming information sessions at uts.edu.au/events

RESEARCH APPLICANTS
Before you submit your application, you’ll need to consider what you want to research, write a research proposal and find a supervisor. When you’ve done that, submit your application to the UTS Graduate Research School.
Visit uts.ac/apply-for-research to find out more about the application process and to apply.

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

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

OFFERS
UTS will begin making postgraduate offers for 2019 from 18 September 2018.

FEES
If you’re studying a postgraduate coursework course, you’ll need to pay tuition fees. You can find out more about what your degree will cost at uts.edu.au/tuition-fee-calculator
For postgraduate research degrees, you will need to either pay a fee or, if you’re eligible for the Research Training Program, the Australian Government will cover the cost for you. To find out more visit uts.edu.au/domestic-hd-fees

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

<table>
<thead>
<tr>
<th>TYPE OF STUDY PROGRAM</th>
<th>IELTS (ACADEMIC)</th>
<th>TOEFL IBT</th>
<th>PTE (ACADEMIC)</th>
<th>CAE</th>
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<tr>
<td>Postgraduate coursework and research</td>
<td>6.5 overall with a writing score of 6.0</td>
<td>79-93 overall with a writing score of 21</td>
<td>58-64</td>
<td>176 overall with a writing score of 169</td>
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</tbody>
</table>
A postgraduate degree at UTS gives you the skills to advance your career in IT and meet the evolving demands of industry.