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Faculty Snapshot*
7572 students
1857 postgraduate coursework students
457 higher degree research students

UTS at a Glance
36,357 students
9469 international students
23,973 undergraduate students
11,036 postgraduate coursework students
1348 higher degree research students
3068 staff

UTS Student Diversity
50% female students
50% male students
40% are 25 or older
140+ languages other than English are spoken by the UTS student body

* As at 31 December 2012

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RIGOROUS, INDUSTRY-RELEVANT AND HIGHLY PRACTICAL, UTS: ENGINEERING WILL TAKE YOUR CAREER TO THE NEXT LEVEL.

WHETHER YOU WANT TO MOVE UP THE MANAGEMENT LADDER, DEEPEN YOUR TECHNICAL SKILLS, OR BOTH, UTS OFFERS A WIDE RANGE OF MASTER’S DEGREES, AND GRADUATE CERTIFICATES TO SUIT YOUR NEEDS.

BY ENGINEERS, FOR ENGINEERS
All UTS: Engineering courses are reviewed regularly by our Industry Advisory Network which ensures that they remain completely in line with current industry practice. Our postgraduate management courses are designed by professionals and academics with a thorough knowledge of management in technical environments. People who understand the industry teach subjects using real-life examples relevant to your profession.

INTERNATIONAL COLLABORATION
UTS: Engineering is actively engaged with institutions around the world, such as MIT, through adjunct professors, collaborative research and technology sharing. This means that our teaching is always up-to-date with the latest developments in the field, nationally and internationally.

INDUSTRY-CONNECTIONS AND ACCREDITATION
Our industry collaborations include an ongoing relationship with global telecommunications leader, Alcatel-Lucent since 2000. You can obtain a globally recognised industry certification as part of your UTS: Engineering degree.

OUTSTANDING FACILITIES
In 2010, Alcatel-Lucent chose UTS as its first co-located higher education partner in the world, giving you access to a state-of-the-art million dollar carrier-class networking laboratory located on the UTS campus.
In addition, a new A$229 million, environmentally friendly building to house the Faculty of Engineering and Information Technology is currently under construction and is scheduled for completion in 2014.

STRIKE A WORK-LIFE BALANCE
Benefit from classes scheduled to minimise disruption to your professional commitments. All courses are available part or full-time, and you can vary the number of subjects you take per semester if you have more or less time available to study.
Courses are delivered through a combination of distance, block and weekly attendance and most classes are held during the evening.

RECOGNITION OF YOUR PREVIOUS STUDIES...
If you have completed an engineering or general postgraduate degree prior to embarking on a UTS: Engineering postgraduate course, you can apply to have up to 12 credit points – two subjects – credited towards your qualification.
UTS Bachelor of Engineering graduates who completed postgraduate subjects as part of their bachelor’s degree can apply for up to 18 credit points to be credited towards their master’s.

1. Classes are held during the evening.
2. Credit limits vary depending on your previous studies.
...AND EXPERIENCE

UTS recognises that you may have developed your skills through on-the-job training, vocational training or a combination of both. In this case, your prior learning can still be taken into account. Your likely pathway is to begin with a graduate certificate, articulating into a master’s program with no time lost.

ARTICULATED PROGRAMS TO FIT YOUR NEEDS

The majority of our courses are fully articulated, meaning that you can begin with a four subject (24 credit point) graduate certificate and apply to have your points credited towards an appropriate master’s degree. Or, if you complete the first 24 credit points of the master’s and choose not to continue with your studies, you may still graduate with a graduate certificate.

UNBEATABLE LOCATION

The UTS City campus is in the heart of Sydney. Just five minutes’ walk from Central Station, it’s close to the CBD and easily accessible by bus and train. There are also a number of parking stations close to campus that offer discounted student rates.

¹ Note that delivery options vary by subject, and not all delivery modes are available for all subjects.
² On the condition that the subjects for which credit is granted are appropriate for the award being studied.
The University of Technology, Sydney is in the midst of a $1 billion City campus redevelopment, and our purpose-built, Broadway building is at its epicentre. This new Engineering and IT building is the single largest in our City campus Master Plan and will be ready for you in July 2014.

Filled with state-of-the-art teaching spaces, cutting-edge environmental features and collaborative student spaces, the Broadway 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.

Features include:

> A dedicated Student Resource Hub - a rich learning environment for all students, offering group study areas, resources and tool kits to foster authentic workplace experiences and active learning;

> A unique Software Design Studio, using technology and industry to facilitate peer learning. Students will participate in industry-mentored projects throughout their degree, taking advantage of symbiotic learning spaces and agile design techniques that enable collaboration at UTS and beyond;

> A 3D Data Visualisation Arena, showcasing the latest in immersive technology. Built on the ground level of the Broadway building, students will experience being “in the middle of a hologram”;

> Collaborative lecture theatres facilitating multiple forms of engagement, including lecture presentations, collaborative group work and technology-enabled activities.

The Broadway 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.

Read more about your new Broadway building here: [http://uts.ac/139d6Ob](http://uts.ac/139d6Ob)
A WORLD-CLASS CAMPUS

UTS is creating a vibrant campus of the future. Embracing visionary teaching and learning paradigms, the UTS City Campus Master Plan will revitalise the campus environment with new buildings, renovated facilities and increased public spaces to encourage collaboration for the UTS community.

ENGINEERING & IT BUILDING

The single largest proposed under the Master Plan will also be the first major building to open in early 2014. It will deliver state-of-the-art facilities for the Faculty of Engineering and IT.
If you are a Business student in 2014, you will study in Australia’s first Frank Gehry designed building, a physical embodiment of the unique and innovative approach to education at UTS Sydney. The building, most distinctive project since the Opera House, inside resembles a tree house to encourage a sense of “creative play”.

The building will be completed in August 2014.

LEADING-EDGE HEALTH AND SCIENCE PRECINCT

Overlooking Alumni Green, this building will deliver new teaching, learning and research spaces for the Faculty of Science and Graduate School of Health when it opens in late 2014.

UTS LIBRARY

A natural hub for your study the UTS library provides a mix of spaces to best meet your study and research needs. These include people-focused spaces such as group study areas, silent rooms and a dedicated international Cultural and News Centre.

By 2014 a highly sophisticated underground robotic retrieval system will be ready to hold 75% of the UTS Library collection, the first step in delivering the library of the future.
“The MEM has a very strong reputation in industry. The course has been established for over 20 years and the teaching staff, on average, have over 18 years of industry experience to draw on.”

Associate Professor Tom Anderson

**School of Systems, Management and Leadership**

Tom Anderson is a lecturer in the Master of Engineering Management (MEM). He was appointed directly from industry in 1987, where he had spent 17 years with the RTA (now RMS) as a design engineer, construction project manager and contract administrator. He co-developed the AUSTROADS range of standard PSC Trough Girders and was directly responsible for supervising the contract for the Mooney Mooney Creek twin bridges – at the time the second-longest cantilever box-girders in the world.

Once appointed to UTS: Engineering, Tom modernised and streamlined all of the postgraduate coursework programs, which improved integration between courses, enhanced the teaching program and dramatically improved their popularity.

He has since introduced the Master of Engineering Management (MEM) into China and Taiwan and has led the development of the Bachelor of Engineering Science in Hong Kong, articulating it from a higher diploma to an undergraduate degree.

Tom is the recipient of a number of teaching excellence awards, including the Australian National Award for university teaching and the IEAust (Engineers Australia) Excellence Award for Engineering training.
MASTER OF ENGINEERING MANAGEMENT (MEM)

Course Code: C04094  
CRICOS Code: 008685A  
Study load: 8 subjects (48 credit points)  
Duration: 1 yr full-time, 2 yrs part-time  
Admission requirements: A recognised bachelor’s degree.

The Master of Engineering Management (MEM) is a course specifically designed for engineers, technical specialists and others who want to develop their management capability in a technical environment.

The course is well established, having run for over 20 years. It is popular and highly regarded in industry, both locally and internationally. It is rigorous, industry-relevant and taught by experienced professionals.

Our flexible approach to course delivery means that you can select subjects that fit your career aspirations, and a mode of delivery that suits your schedule. The program is structured for evening attendance or distance learning, and some subjects may be offered through intensive block or summer session classes.

COURSE STRUCTURE

Choose six of the following subjects (36 cp)  
> Accounting for Managerial Decisions  
> Economic Evaluation  
> Engineering Financial Control  
> Judgement and Decision Making  
> Leadership and Responsibility  
> Managing Work and People  
> Managing Projects  
> Quality Planning and Analysis  
> Systems Engineering for Managers  
> Value Chain Engineering Systems  
+ Two electives (12 cp)

GRADUATE CERTIFICATE IN ENGINEERING MANAGEMENT (GRAD CERT EM)

Course Code: C11054  
CRICOS Code: 024395M  
Study load: 4 subjects (24 credit points)  
Duration: 0.5 yr full-time, 1 yr part-time  
Admission requirements: A recognised bachelor’s degree, or equivalent or higher qualification.

Applicants without a degree who have a TAFE Diploma or equivalent with relevant work experience in the field may also apply.

This course will enable you to extend the knowledge and skills gained in your first degree, and is ideal for working engineers and technologists who wish to update their knowledge with recent advances in engineering, technology and business practice.

You can tailor the course to fit your needs, selecting three core subjects (18 cp) plus either another core subject or one elective subject.

All subjects in the GradCertEM are taken from the Master of Engineering Management (MEM), which means that this course can be fully credited towards completion of the MEM, should you wish to continue your studies (provided you meet the entry requirements of the master’s and have attained the required level of performance).

COURSE STRUCTURE

Choose three of the following subjects (18 cp)  
> Accounting for Managerial Decisions  
> Economic Evaluation  
> Engineering Financial Control  
> Judgement and Decision Making  
> Leadership and Responsibility  
> Managing Work and People  
> Managing Projects  
> Quality Planning and Analysis  
> Systems Engineering for Managers  
> Value Chain Engineering Systems  
+ One elective (6 cp)

Choose one elective from the list of UTS: Engineering postgraduate subjects, see the Handbook www.handbook.uts.edu.au/eng/pg.
COURSES CONTINUED

DOUBLE YOUR DEGREE
MASTER OF ENGINEERING MANAGEMENT (MEM)/ MASTER OF BUSINESS ADMINISTRATION (MBA)

MEM Course Code: C04094
MEM CRICOS Code: 008685A
MBA Course Code: C04018
MBA CRICOS Code: 025004A

Study load: 16 subjects (96 credit points)
Duration: 2 yrs full-time, 4 yrs part-time

MEM Admission requirements:
A recognised bachelor’s degree.

If your career is moving into management, your completed Master of Engineering Management can be used as credit towards a Master of Business Administration (Technology Management).

In collaboration with the UTS Business School we have developed a unique pathway which provides both the advantage of a generalist MBA and our flagship MEM.

By undertaking a specific set of subjects in the MEM, you can maximise your credit (8 subjects, or 48 credit points) towards the Master of Business Administration (Technology Management), and complete the degrees back to back and in the same time as an MBA alone.

MEM/MBA

MEM

36 CPS
6 Compulsory MEM subjects

+ 12 CPS
Choice of 2 other MEM subjects

MBA

36 CPS
6 Compulsory MBA subjects

+ 12 CPS
Choice of 2 MEM subjects

COURSE STRUCTURE

Choose the following MEM subjects (36 cp)
> Accounting for Managerial Decisions
> Judgement and Decision Making
> Managing Work and People
> Managing Projects
> Quality Planning and Analysis
> Systems Engineering for Managers

Choose the following MBA subjects (36 cp)
> Economics for Business
> Financial Management
> Management and Organisations
> Marketing Management
> Organisational Dialogue: Theory and Practice
> Strategic Management

+ Two of the following subjects for the MEM and another two for the MBA (24 cp)
> Managing Information Technology in Engineering
> Risk Management in Engineering
> Quality and Operations Management Systems
> Technology and Innovation Management

Monica Yee
Masters of Engineering Management
Civil Engineer, Opus International Consultants

“I decided to undertake a postgraduate engineering degree because I am aiming for chartered engineering status. I did my undergraduate engineering at UTS and felt that they employed effective teaching techniques. Studying the Masters of Engineering Management degree gave me a broader understanding of engineering management techniques which are applicable across various industries. Most of all, the leadership skills I gained have helped me appreciate the non-technical side of engineering which is critical for the overall success of any project.

As many postgraduates do, I worked full-time while studying via correspondence which is challenging and requires precise time management, personal management and the need to keep on track with achieving your goals.

To get the most out of the degree, I feel that it is advisable to do postgraduate studies right after an undergraduate degree, but essentially, the most important thing that I can advise future students is to remember that what you put in is what you get out.”
MASTER OF ENVIRONMENTAL ENGINEERING MANAGEMENT (MEEM)

Course code: C04098
CRICOS Code: 027917K
Study load: 8 subjects (48 credit points)
Duration: 1 yr full-time, 2 yrs part-time
Admission requirements: An engineering or other technological/applied science degree from a recognised tertiary institution.

This course is designed for engineers and technical specialists who want to take a leadership role in the area of environmental engineering. It combines key environmental subjects with management and policy subjects to enable you to lead multidisciplinary teams working in environmental engineering, within government agencies, private corporations or as an external consultant.

The course is offered part or full-time, by a mixture of on-campus classes, block or distance mode.

COURSE STRUCTURE

Choose six of the following subjects (36 cp)

- Advanced Water and Wastewater Treatment
- Air and Noise Pollution
- Contaminated Site and Waste Remediation
- Ecology and Sustainability
- Environmental Assessment and Planning
- Environmental Management of Land
- Engineered Natural Water Treatment Systems
- Environmental Risk Assessment
- Geographic Information Systems
- Decentralised Water and Wastewater Treatment
- Waste and Pollution Management

+ Two of the following subjects (12 cp)

- Economic Evaluation
- Judgement and Decision Making
- Local Government Powers and Practice
- Managing Projects

COURSE STRUCTURE

\[
\begin{align*}
48_{\text{CPS}} &= 36_{\text{CPS}} + 12_{\text{CPS}} \\
\text{MEEM} &\quad 6 \text{ Environmental subjects} & 2 \text{ Engineering Management subjects}
\end{align*}
\]
GRADUATE CERTIFICATE IN ENVIRONMENTAL ENGINEERING MANAGEMENT (GRAD CERT EEM)

Course Code: C11051
CRICOS Code: 025809G

Study load: 4 subjects (24 credit points)
Duration: 0.5 yr full-time, 1 yr part-time

Admission requirements: A recognised bachelor’s degree, or equivalent or higher qualification. Previous qualifications in engineering, science, design, architecture, building, surveying or planning are considered. Applicants without a degree who have a TAFE Diploma or equivalent with relevant work experience in the field may also apply.

This course will enable you to develop a background and competence in environmental management to address issues that are high on the political and professional agenda.

The course is relevant to practising professionals in engineering science, architecture, building, health, law, planning and surveying.

This course can be fully credited towards completion of the Master of Environmental Engineering Management, should you wish to continue your studies (provided you meet the entry requirements of the master’s and have attained the required level of performance).

The course is offered part or full-time, by on-campus classes, block or distance mode.

COURSE STRUCTURE

Choose three of the following subjects (18 cp)
> Advanced Water and Wastewater Treatment
> Air and Noise Pollution
> Contaminated Site and Waste Remediation
> Ecology and Sustainability
> Engineered Natural Water Treatment Systems
> Environmental Assessment and Planning
> Environmental Management of Land
> Environmental Risk Assessment
> Geographic Information Systems
> Decentralised Water and Wastewater Treatment
> Waste and Pollution Management

+ One of the following subjects (6 cp)
> Economic Evaluation
> Judgement and Decision Making
> Local Government Powers and Practice
> Managing Projects

Katrina Moore

Master of Environmental Engineering Management

“In considering my career goals, I wanted to undertake further study that aligned with my interest in resource management and sound sustainability decision making, to complement my Bachelor of Business [Marketing]/Bachelor of Laws degree from UTS and my commercial litigation skills as a practising lawyer in this field.

One of the many reasons I liked this degree was the breadth and diversity of the subjects. The course has provided me with practical, relevant environmental engineering knowledge and a technical understanding of a range of environmental issues encountered by organisations and the community, many of which were dealt with on a regular basis in the Land and Environment Court.

I enjoyed the flexibility of being able to study most of the course by distance mode as I was living in Japan when I started, and I can’t speak highly enough of the support and nurturing given to me by my lecturers who have practical professional experience, and are experts in their fields.

My degree is already taking me on the career path I wanted because I will be shortly starting my dream job where my legal and analytical skills, environmental engineering knowledge and keen interest in sustainable strategic decisions are combined.”
MASTER OF ENGINEERING STUDIES (MEStud)

Course code: C04097
CRICOS Code: 028689J
Study load: 8 subjects (48 credit points)
Duration: 1 yr full-time, 2 yrs part-time
Admission requirements: An engineering or other technological/applied science degree from a recognised tertiary institution.

The Master of Engineering Studies (MEStud) is a flexible postgraduate course that will enable you to both deepen the technical knowledge gained in your first degree and expand your managerial and policy knowledge. You will study a combination of eight technical and non-technical broadening subjects.

This will be determined by your major of which there are 19 to choose from. Detailed course information can be found by visiting the online handbook: www.handbook.uts.edu.au/eng

The MEStud can also be taken with no specified major, allowing you to combine subjects that fit with your specific role or career aims. The course is aimed at technical specialists and recent graduates.

This course is offered part or full-time, by on-campus classes or distance mode (distance mode available in the management subjects only).

Some majors in the MEStud have compulsory subjects.

For a list of available majors and subjects see pages 20-25.

TECHNICAL COURSES

COURSE STRUCTURE With Major:

48\text{CPS} = 18_{\text{CPS}} + 24_{\text{CPS}} + 6_{\text{CPS}}

| Master of Engineering Studies | 3 Non Technical Broadening subjects | 4 subjects from 'major' list | 1 Elective subject or subject from 'major' list |

Non Technical Broadening subjects:
> Judgement and Decision Making
> Managing Information Technology in Engineering
> Technology and Innovation Management
> Quality and Operations Management Systems

Note for the following majors, all 8 subjects (48 cp) are taken from the major:
> Civil and Geotechnical Engineering
> Civil Engineering and Structural Engineering
> Energy Planning and Policy
> Integrated Logistic Support and Engineering Management
> Local Government Engineering and Environmental Engineering
> Operations
> Telecommunications Engineering and Telecommunication Networks

COURSE STRUCTURE No Specified Major:

48\text{CPS}

Any 8 subjects from Postgraduate Engineering*

A study plan of intended subjects* should be submitted when applying for the no specified major.

*Provided you have pre-requisite knowledge and subject to approval.

# You can gain an Alcatel-Lucent certification in conjunction with the Master of Engineering Studies degree. See page 26 for more information about majors and additional certification activities.
MASTER OF ENGINEERING (ME)

Course code: C04090
CRICOS Code: 017900B
Study load: 60 credit points
Duration: 1.5 yrs full-time, 3 yrs part-time
Admission requirements: An engineering or other technological/applied science degree from a recognised tertiary institution plus two years of relevant work experience.

The Master of Engineering (ME) is a flexible postgraduate course that will enable you to deepen and expand the technical knowledge gained in your first degree. The degree offers 16 majors, achieved by completing four core subjects (24 cp) and an approved research project (18-30 cp) within a particular major, supervised by an experienced academic in that field, and electives with relevant credit points.

Management majors are also offered, allowing you to add some management knowledge to supplement your technical expertise. The ME can also be taken with no specified major, allowing you to combine subjects that fit with your specific role or career aims. The course is aimed at professional engineers with a minimum of two years of relevant work experience.

This course is offered part or full-time, by on-campus classes (typically in the evenings), block or distance mode (distance mode available in the management subjects only).

A minimum of 4 subjects must be completed within the particular Postgraduate Program Major as described on pages 21-24, together with an approved Graduate Project in the Major of your choice between 18-30 credit points and electives with relevant credit points. Some majors in the ME have compulsory subjects.

For a list of available majors and subjects see pages 21-24.

Graduate Project

The project is a course requirement taken over one or two semesters or, in exceptional circumstances, three. It is undertaken on an individual basis, except in special circumstances approved in advance by the Faculty Board, and provides opportunity for the integration and application of advanced skills and knowledge gained in part through other subjects taken during the course.

The depth and extent of the project varies with credit point requirements. These are set on the basis of an agreed project plan submitted by the student to the supervisor, and approved by the Director, Postgraduate Coursework Programs.

The project may involve:
> the development of new technology (hardware and/or software)
> the application of technology
> research addressing a significant technical or engineering management issue and/or
> a critical review in the area of the major, describing key contributions in the field covered by the project work undertaken, results achieved and a discussion of their significance and implications

For further information please visit the UTS:Engineering Handbook: www.handbook.uts.edu.au/eng

UTS:Engineering also offers a Master of Engineering by research (see page 28).

“My Master of Engineering degree has complemented my existing qualifications, training and experience to put me in the position to undertake future projects in this field.” Alex Pelser
**COURSE STRUCTURE**  MASTER OF ENGINEERING (60CP) With Major:

1. **24**<sub>CPS</sub> + 6<sub>CPS</sub> + 30<sub>CPS</sub>
   - 4 subjects from ‘Major’ list
   - 1 Elective subject or from ‘Major’ list
   - Graduate Project

2. **24**<sub>CPS</sub> + 12<sub>CPS</sub> + 24<sub>CPS</sub>
   - 4 subjects from ‘Major’ list
   - 2 Elective subjects or from ‘Major’ list
   - Graduate Project

3. **24**<sub>CPS</sub> + 18<sub>CPS</sub> + 18<sub>CPS</sub>
   - 4 subjects from ‘Major’ list
   - 3 Elective subjects or from ‘Major’ list
   - Graduate Project

Graduate Project must be in the broad area of the major.
Elective subjects are taken from postgraduate level faculty subjects.
Some majors may have compulsory subjects.

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**Alex Pelser**

**Master of Engineering**
(Civil Engineering)
**Director, Luke and Company**

“As a north coast resident, I preferred to do my masters by distance and I commend UTS on the ease of delivering this, especially technical courses such as engineering, as well as the excellent academics who provide the theory, have a great understanding of the commercial realities, and explain how this often impacts on key industry decisions.

The company I’m now working for has been investigating a toxic contaminant and through studying this degree, I have been able to confidently tackle engineering problems associated with this. Contaminated sites are becoming a major issue worldwide and remediation is generally very expensive and often left to others to clean up. As such, this is an emerging discipline that will need many trained and experienced engineers in the future, and my degree has helped develop my expertise in this field.

I’m looking forward to being more involved in sustainability and how this can be integrated into engineering practices. My Master of Engineering degree has complemented my existing qualifications, training and experience to put me in the position to undertake future projects in this field.”

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**Alcatel-Lucent**

# You can gain an Alcatel-Lucent certification in conjunction with the Master of Engineering Studies degree.
See page 26 for more information about majors and additional certification activities.
**GRADUATE CERTIFICATE IN ENGINEERING (GCE)**

Course Code: C11048  
CRICOS Code: 01693SK  
Study load: 4 subjects (24 credit points)  
Duration: 0.5 yr full-time, 1 yr part-time  
Admission requirement: An engineering or other technological/applied science degree from a recognised tertiary institution. Applicants without a degree who have a TAFE Diploma or equivalent with relevant work experience in the field may also apply.

The Graduate Certificate in Engineering will enable you to extend your engineering knowledge and update your skills. If you are a graduate of a cognate discipline, this course allows you to undertake formal study in engineering. The course structure and details vary with the major you choose. The degree offers 15 technical or management majors, achieved by completing three subjects (18 cp) within a particular major. The course can also be taken with no specified major, allowing you to combine subjects that fit with your specified role or career aims.

This course can be fully credited towards completion of the Master of Engineering or the Master of Engineering Studies, should you wish to continue your studies provided you meet the entry requirements of the master’s and have attained the required level of performance.

Some postgraduate program majors may require students to complete a number of prescribed subjects with or without an opportunity for electives. This course is offered part or full-time, by on-campus classes or distance mode (distance mode available in the management subjects only).

For a list of available majors and subjects see pages 21-24.

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**COURSE STRUCTURE GRADUATE CERTIFICATE IN ENGINEERING (24CP)**

An example - Civil Engineering major

<table>
<thead>
<tr>
<th>18&lt;sub&gt;CPS&lt;/sub&gt;</th>
<th>6&lt;sub&gt;CPS&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 subjects from 'Civil Engineering major' list</td>
<td>1 Elective subject or from 'major' list</td>
</tr>
</tbody>
</table>

Elective subjects are taken from postgraduate level faculty subjects*.  
*Provided you have pre-requisite knowledge and subject to approval.

No Specified Major: #

<table>
<thead>
<tr>
<th>24&lt;sub&gt;CPS&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any 4 subjects from Postgraduate Engineering</td>
</tr>
</tbody>
</table>

A study plan of intended subjects should be submitted when applying for the no specified major.

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*You can gain an Alcatel-Lucent certification in conjunction with the Master of Engineering Studies degree. See page 26 for more information about majors and additional certification activities.*
“I found the UTS degree a perfect fit. I started with the UTS Graduate Certificate in Engineering and then progressed to the masters degree.”

Brian Doyle

Master of Engineering Studies
Technical Expert, Telstra Australia

“I work as a technical expert at Telstra with cellular mobile platforms. I started with this company in 1982 as a trainee technical officer, so felt a need to pursue further studies to extend my knowledge with up-to-date practical information. I found the UTS degree a perfect fit. I started with the UTS Graduate Certificate in Engineering and then progressed to the masters degree program, finding the transition far less onerous than I expected! I’ve been able to apply what I learnt in the course to my job and workplace. One subject studied, Communication Protocols, has been particularly useful in my investigative role into data throughput issues in wireless networks.

I was able to balance work, study and family commitments by studying one subject per semester and had support from my family, Telstra and my manager. I was also surprised that I found there were no barriers as a result of the long gap between my studies aided by excellent support from approachable and knowledgeable lecturers.”
### MAJORS

<table>
<thead>
<tr>
<th>Major / Course</th>
<th>ME (C04090)</th>
<th>MEStud (C04097)</th>
<th>GCE (C11048)</th>
</tr>
</thead>
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<td>CBK90038</td>
<td>CBK90472</td>
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<td>Biomedical Engineering</td>
<td>MAJ03465</td>
<td>MAJ03466</td>
<td>MAJ03465</td>
</tr>
<tr>
<td>Civil Engineering</td>
<td>MAJ03455</td>
<td>MAJ03454</td>
<td>MAJ03453</td>
</tr>
<tr>
<td>Civil and Geotechnical Engineering</td>
<td>-</td>
<td>MAJ03459</td>
<td>-</td>
</tr>
<tr>
<td>Civil Engineering &amp; Structural Engineering</td>
<td>-</td>
<td>MAJ03456</td>
<td>-</td>
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<tr>
<td>Computer Control Engineering</td>
<td>MAJ03438</td>
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<td>MAJ03420</td>
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<td>Energy Planning and Policy</td>
<td>MAJ03439</td>
<td>MAJ03380</td>
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<td>Engineering Management</td>
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<td>Environmental Engineering</td>
<td>MAJ03416</td>
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<td>-</td>
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<td>Geotechnical Engineering</td>
<td>MAJ03461</td>
<td>MAJ03460</td>
<td>MAJ03458</td>
</tr>
<tr>
<td>Integrated Logistic Support &amp; Engineering Management</td>
<td>-</td>
<td>MAJ03452</td>
<td>MAJ03451</td>
</tr>
<tr>
<td>Local Government and Environmental Engineering*</td>
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<td>MAJ03443</td>
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<td>Local Government Engineering*</td>
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<td>MAJ03375</td>
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<td>Manufacturing Engineering and Management</td>
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<td>MAJ03415</td>
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<td>Operations</td>
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<tr>
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<td>Water Engineering</td>
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</table>

### Alcatel-Lucent

Eligible for Alcatel-Lucent industry certifications, in addition to external examinations and / or short courses. See page 26 for more information.
The following gives you an overview of some of the subjects available in each major. For detailed course structure and requirements for majors and degrees, visit the online handbook at handbook.uts.edu.au/eng

Please note, subject choice is limited for some majors in the masters and graduate certificate programs.

**BIOMEDICAL ENGINEERING**
**Available ME, MEStud, GCE**
- Advanced Robotics
- Biomedical Instrumentation
- BioNanotechnology
- Human Anatomy and Physiology
- Human Pathophysiology
- Medical Devices and Diagnostics
- Medical Imaging
- Neural Networks and Fuzzy Logic
- Physiological Bases of Human Movement
- Wireless Networking Technologies

**CIVIL ENGINEERING**
**Available ME, MEStud, GCE**
- Advanced Soil Mechanics and Foundation Design
- Advanced Water and Wastewater Treatment
- Application of Timber in Engineering Structures
- Applied Geotechnics
- Bridge Design
- Engineered Natural Water Treatment Systems
- Environmental Assessment and Planning
- Environmental Management of Land
- Facade Engineering
- Pavement Analysis and Design
- Prestressed Concrete Design
- Road Engineering Practice
- Traffic and Transportation
- Water Supply and Wastewater Management
- Local Government Powers and Practice
- Problematic Soils and Ground Improvement Techniques
- Waste and Pollution Management
- Concrete Technology and Practice
- Flood Estimation
- Geographic Information Systems
- Finite Element Analysis
- Contaminated Site and Waste Remediation
- Floodplain Risk Management in NSW
- Ecology and Sustainability
- Decentralised Water and Wastewater Treatment
- Structural Dynamics and Earthquake Engineering

**CIVIL AND GEOTECHNICAL ENGINEERING**
**Available MEStud**
MEStud non-technical broadening subjects do not apply to this major.
- Advanced Soil Mechanics and Foundation Design
- Applied Geotechnics
- Contaminated Site and Waste Remediation
- Pavement Analysis and Design
- Problematic Soils and Ground Improvement Techniques
- Road Engineering Practice
- Traffic and Transportation
- Geographics Information Systems
+ Any four subjects from Civil Engineering

**CIVIL ENGINEERING AND STRUCTURAL ENGINEERING**
**Available MEStud**
MEStud non-technical broadening subjects do not apply to this major.
- Advanced Soil Mechanics and Foundation Design
- Application of Timber in Engineering Structures
- Bridge Design
- Finite Element Analysis
- Prestressed Concrete Design
- Structural Dynamics and Earthquake Engineering
- Concrete Technology and Practice
+ Any four subjects from Civil Engineering

**COMPANY CONTROL ENGINEERING**
**Available ME, MEStud, GCE**
- Advanced Robotics
- Biomedical Instrumentation
- Fundamentals of Software Development
- Neural Networks and Fuzzy Logic
- Software Analysis and Design
- Systems Quality Management
- Web Technologies
- Wireless Networking Technologies

Disclaimer: not all subjects listed are offered every semester or year.
MAJORS CONTINUED

ENERGY PLANNING AND POLICY
Available ME, MEStud, GCE
MESStud non-technical broadening subjects do not apply to this major:
> Electricity Sector Planning and Restructuring
> Environmental Policy for Energy Systems
> Energy Modelling
> Evaluation of Infrastructure Investments
> Judgement and Decision Making
> Regulatory Economics
> Systems Engineering for Managers

Subjects offered when adequate demand:
> Energy and Environmental Economics
> Energy Demand Analysis and Forecasting
> Energy Resources and Technology
> Methods for Energy Analysis
> Policy and Planning of Energy Conservation

BIOMEDICAL ENGINEERING
Available ME, MEStud, GCE
> Advanced Robotics
> Biomedical Instrumentation
> BioNanotechnology
> Human Anatomy and Physiology
> Human Pathophysiology
> Medical Devices and Diagnostics
> Medical Imaging
> Neural Networks and Fuzzy Logic
> Physiological Bases of Human Movement
> Wireless Networking Technologies

CIVIL ENGINEERING
Available ME, MEStud, GCE
> Advanced Soil Mechanics and Foundation Design
> Advanced Water and Wastewater Treatment
> Application of Timber in Engineering Structures
> Applied Geotechnics
> Bridge Design
> Engineered Natural Water Treatment Systems
> Environmental Assessment and Planning
> Environmental Management of Land
> Facade Engineering
> Pavement Analysis and Design
> Prestressed Concrete Design
> Road Engineering Practice
> Traffic and Transportation
> Water Supply and Wastewater Management
> Local Government Powers and Practice
> Problematic Soils and Ground Improvement Techniques
> Waste and Pollution Management
> Concrete Technology and Practice
> Flood Estimation
> Geographic Information Systems
> Finite Element Analysis
> Contaminated Site and Waste Remediation
> Floodplain Risk Management in NSW
> Ecology and Sustainability
> Decentralised Water and Wastewater Treatment
> Structural Dynamics and Earthquake Engineering

CIVIL AND GEOTECHNICAL ENGINEERING
Available MEStud
MESStud non-technical broadening subjects do not apply to this major:
> Advanced Soil Mechanics and Foundation Design
> Applied Geotechnics
> Contaminated Site and Waste Remediation
> Pavement Analysis and Design
> Problematic Soils and Ground Improvement Techniques
> Road Engineering Practice
> Traffic and Transportation
> Geographics Information Systems
> Any four subjects from Civil Engineering

CIVIL ENGINEERING AND STRUCTURAL ENGINEERING
Available MEStud
MESStud non-technical broadening subjects do not apply to this major:
> Advanced Soil Mechanics and Foundation Design
> Application of Timber in Engineering Structures
> Bridge Design
> Finite Element Analysis
> Prestressed Concrete Design
> Structural Dynamics and Earthquake Engineering
> Concrete Technology and Practice
> Any four subjects from Civil Engineering

COMPUTER CONTROL ENGINEERING
Available ME, MEStud, GCE
> Advanced Robotics
> Biomedical Instrumentation
> Fundamentals of Software Development
> Neural Networks and Fuzzy Logic
> Software Analysis and Design
> Systems Quality Management
> Web Technologies
> Wireless Networking Technologies

Disclaimer: not all subjects listed are offered every semester or year.
ENGLISH PLANNING AND POLICY
Available ME, MEStud, GCE
MEStud non-technical broadening subjects do not apply to this major.
> Electricity Sector Planning and Restructuring
> Environmental Policy for Energy Systems
> Energy Modelling
> Evaluation of Infrastructure Investments
> Judgement and Decision Making
> Regulatory Economics
> Systems Engineering for Managers

Subjects offered when adequate demand:
> Energy and Environmental Economics
> Energy Demand Analysis and Forecasting
> Energy Resources and Technology
> Methods for Energy Analysis
> Policy and Planning of Energy Conservation

ENGINEERING MANAGEMENT
Available ME
> Economic Evaluation
> Engineering Financial Control
> Judgement and Decision Making
> Leadership and Responsibility
> Managing Projects
> Quality and Operations Management Systems
> Quality Planning and Analysis
> Risk Management in Engineering
> Technology and Innovation Management
> Value Chain Engineering Systems

ENVIRONMENTAL ENGINEERING
Available ME
> Advanced Water and Wastewater Treatment
> Ecology and Sustainability
> Engineered Natural Water Treatment Systems
> Environmental Assessment and Planning
> Environmental Management of Land
> Environmental Risk Assessment
> Geographic Information Systems
> Decentralised Water and Wastewater Treatment
> Waste and Pollution Management
> Water Supply and Wastewater Management
> Urban Stormwater Design
> Flood Estimation
> Contaminated Site and Waste Remediation
> Floodplain Risk Management in NSW
> Catchment Modelling
> Emergency Management

GEOTECHNICAL ENGINEERING
Available ME, MEStud, GCE
> Advanced Soil Mechanics and Foundation Design
> Applied Geotechnics
> Contaminated Site and Waste Remediation
> Environmental Management of Land
> Geographic Information Systems
> Pavement Analysis and Design
> Problematic Soils and Ground Improvement Techniques
> Road Engineering Practice
> Traffic and Transportation

INTEGRATED LOGISTIC SUPPORT AND ENGINEERING MANAGEMENT
Available ME, MEStud, GCE
MEStud non-technical broadening subjects do not apply to this major.
> Engineering Financial Control
> Integrated Logistic Support
> Judgement and Decision Making
> Leadership and Responsibility
> Quality Planning and Analysis
> Reliability, Availability and Maintainability
> Systems Engineering for Managers
> Value Chain Engineering Systems

LOCAL GOVERNMENT ENGINEERING*
Available ME, MEStud, GCE
> Environmental Assessment and Planning
> Local Government Powers and Practice
> Road Engineering Practice
> Traffic and Transportation
> Pavement Analysis and Design
> Floodplain Risk Assessment in NSW
> Environmental Risk Assessment

Disclaimer: not all subjects listed are offered every semester or year.
MAJORS CONTINUED

LOCAL GOVERNMENT AND ENVIRONMENTAL ENGINEERING*

Available ME, MEStud, GCE

MEStud non-technical broadening subjects do not apply to this major.
> Advanced Water and Wastewater Treatment
> Air and Noise Pollution
> Ecology and Sustainability
> Engineered Natural Water Treatment Systems
> Environmental Assessment and Planning
> Environmental Management of Land
> Environmental Risk Assessment
> Local Government Powers and Practice
> Decentralised Water and Wastewater Treatment
> Road Engineering Practice
> Traffic and Transportation
> Urban Stormwater Design
> Waste and Pollution Management

MANUFACTURING ENGINEERING AND MANAGEMENT

Available ME, MEStud, GCE

> Advanced Flow Modelling
> Air and Noise Pollution
> Airconditioning
> Computer Aided Mechanical Design
> Design Optimisation for Manufacturing
> Energy Conversion
> Internal Combustion Engines
> Managing Projects
> Materials Handling
> Turbomachines

OPERATIONS

Available ME, MEStud, GCE
> Managing Projects
> Quality and Operations Management Systems
> Quality Planning and Analysis
> Operations Engineering
> Judgment and Decision Making
> Systems Engineering for Managers
> Risk Management in Engineering
> Technology and Innovation Management
> Leadership and Responsibility
> Integrated Logistic Support
> Reliability Availability and Maintainability
> Value Chain Engineering Systems

SOFTWARE ENGINEERING

Available ME, MEStud, GCE

> Managing Projects
> Software Analysis and Design
> Systems Quality Management
> Fundamentals of Software Development
> Wireless Sensor Networks
> Web Technologies

SYSTEMS ENGINEERING

Available ME, MEStud, GCE

MEStud non-technical broadening subjects do not apply to this major.
> Economic Evaluation
> Enterprise Business Requirements
> Integrated Logistics Support
> Judgement and Decision Making
> Managing Projects
> Systems Engineering for Managers

STRUCTURAL ENGINEERING

Available ME, MEStud, GCE

> Advanced Soil Mechanics and Foundation Design
> Application of Timber in Engineering Structures
> Applied Geotechnics
> Concrete Technology and Practice
> Wind Engineering
> Façade Engineering
> Finite Element Analysis
> Managing Projects
> Prestressed Concrete Design
> Problematic Soils and Ground Improvement Techniques
> Structural Dynamics and Earthquake Engineering
> Bridge Design

TELECOMMUNICATIONS ENGINEERING#

Available ME, MEStud, GCE

> GSM, GPRS & EDGE Technologies
> Integrated Services Networks
> Satellite Communication Systems
> Telecommunications Industry Management
> Telecommunications Signal Processing
> Transmission Systems
> Wireless Networking Technologies
> 3G Mobile Communication Systems

* This major is not available to international students.

Disclaimer: not all subjects listed are offered every semester or year.
## Telecommunications Engineering and Telecommunication Networks

**Available MESTud**

MESTud non-technical broadening subjects do not apply to this major:

- Communication Protocols
- Fundamentals of Software Development
- GSM, GPRS and EDGE Technologies
- Integrated Services Networks
- Interior Routing and High Availability
- Multi Protocol Label Switching
- Satellite Communication Systems
- Enterprise Software Architecture and Middleware
- Telecommunications Industry Management
- Telecommunication Networks Management
- Telecommunications Signal Processing
- Transmission Systems
- Web Technologies
- Wireless Networking Technologies
- 3G Mobile Communication Systems

## Telecommunication Networks

**Available ME, MESTud, GCE**

- Communication Protocols
- Integrated Services Networks
- Interior Routing and High Availability
- Fundamentals of Software Development
- Mobile Commerce Technologies
- Mobile Communications and Computing
- Multi Protocol Label Switching
- Enterprise Software Architecture and Middleware
- Telecommunications Industry Management
- Telecommunication Networks Management
- Telecommunications Signal Processing
- Web Technologies
- Wireless Networking Technologies
- 3G Mobile Communication Systems

## Water Engineering

**Available ME, MESTud, GCE**

- Advanced Water and Wastewater Treatment
- Catchment Modelling
- Ecology and Sustainability
- Engineered Natural Water Treatment System
- Flood Estimation
- Floodplain Risk Management in NSW
- Urban Stormwater Design
- Watersupply and Wastewater Management
- Geographic Information Systems
- Decentralised Water and Wastewater Treatment

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**Disclaimer:** not all subjects listed are offered every semester or year.

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# You can gain an Alcatel-Lucent certification in conjunction with the Master of Engineering Studies degree. See page 26 for more information about majors and additional certification activities.
"We’ve developed subjects in conjunction with Alcatel-Lucent that are equivalent to modules from their own training program. It really is about industry relevance."

Anthony Kadi

Senior Lecturer, School of Computing and Communications

Anthony Kadi worked in medical diagnostic ultrasonics research with the CSIRO for six years prior to joining UTS as a full-time member of academic staff. His research interests include telecommunication engineering and networks, signal processing, and engineering practice. He is the course coordinator for postgraduate coursework courses in telecommunication engineering and has previously held the roles of Director of Postgraduate Coursework Programs for the Faculty of Engineering and Coordinator of International and Enterprise Development. Anthony is a member of the Australasian Association for Engineering Education.

"Alcatel-Lucent chose UTS as the first University partner in the world for the SRC program, so it’s pretty exciting. For students, it not only means they have access to a state-of-the-art facility, but they’ll be working towards industry certification. We’ve developed subjects in conjunction with Alcatel-Lucent that are equivalent to modules from their own training program and students can take these as part of the Master of Engineering Studies in Telecommunication Networks. It really is about industry relevance."
ALCATEL-LUCENT CERTIFICATION

UTS is the first University in the world to offer the Alcatel-Lucent industry certifications in conjunction with a UTS:

> Master of Engineering Studies (C04097) majoring in:
  – Telecommunication Networks (MAJ03385)
  – Telecommunications Engineering and Telecommunication Networks (MAJ03431)
> Master of Engineering [C04090] majoring in Telecommunication Networks (MAJ03434)

You will have access to a multi-million dollar state-of-the-art carrier grade lab facility during your course.

The certifications are ideal for those wanting to work with the most advanced carrier grade IP networks in the world, including the National Broadband Network (NBN) company in Australia. Programs are based on the latest technologies being deployed in industry such as the 7750 IP/MPLS Service Router and LTE Mobile networks.

For more information on the Service Router Certification (SRC) program, visit [www.alcatel-lucent.com/src](http://www.alcatel-lucent.com/src)

To gain the various certifications at UTS, you need to enrol in specific UTS: Engineering subjects as part of your major and complete additional activities below:

<table>
<thead>
<tr>
<th>ALCATEL-LUCENT CERTIFICATION</th>
<th>UTS SUBJECT TO BE COMPLETED</th>
<th>ADDITIONAL ACTIVITY REQUIRED FOR CERTIFICATION</th>
</tr>
</thead>
</table>
| Networking Routing Specialist 1 (NRS1) | 49202 Communication Protocols (Scalable IP Networks) | > Attend a 2 day Short Course [SC1]  
> Complete external Alcatel-Lucent exam 4A0-100 |
| Networking Routing Specialist 2 (NRS2) | 49202 Communication Protocols (Scalable IP Networks) | > Attend a 2 day Short Course [SC1]  
> Complete external Alcatel-Lucent exam 4A0-100 |
|                               | 49201 Integrated Services Networks (Services Architecture) | > Attend a 2 day Short Course [SC2]  
> Complete external Alcatel-Lucent exam 4A0-104 |
|                               | 42902 Interior Routing and High Availability | > Complete external Alcatel-Lucent exam 4A0-101 |
|                               | 42903 Multi-Protocol Label Switching | > Complete external Alcatel-Lucent exam 4A0-103 |
| Certified Network Associate in LTE Networks | 42890 4G Mobile Technologies | > External Alcatel-Lucent exam |

**ABOUT ALCATEL-LUCENT**

Alcatel-Lucent is a global leader in telecommunications today. Headquartered in Paris France, they have operations in over 130 countries, including the famous Bell Labs in the USA. They hold 27,500 active patents and have secured 7 Nobel prizes in physics. They are market leaders in mobile and fixed networking, IP, optics technologies as well as applications and services.

They have their own accredited* corporate university, the Alcatel-Lucent University, with major centres in 18 countries including Sydney, Australia (which forms part of the Asia-Pacific headquarters for the Alcatel-Lucent University).

Alcatel-Lucent Exams (SRC Only)

External Alcatel-Lucent exams can be completed at any global Prometric testing centre.

They are multiple choice online exams (In 2012 approximate cost $168 per exam). The 3½ hour NRS2 lab exam is conducted by Alcatel-Lucent and can be arranged through UTS at no additional cost.

UTS runs two-day Short Courses [SC1 and SC2]. In 2012, the approximate cost was $500 per course.

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* Alcatel-Lucent University is accredited by the European Foundation for Management Development under the CLIP (Corporate Learning Improvement Program). Refer to [http://www.efmd.org/index.php/accreditation-main/clip/accredited-companies](http://www.efmd.org/index.php/accreditation-main/clip/accredited-companies)
PhD – a Doctor of Philosophy (PhD) is a UTS-wide degree which involves an intense period of supervised study and research, culminating in the submission of a thesis. Students must, through original investigation, make a distinct and significant contribution to knowledge in their field of specialisation.

MASTER’S BY RESEARCH – enables students to extend and deepen their knowledge of a specialised area of computing/information technology by undertaking research under the supervision of a member of academic staff.

Our Research strengths:

Building on 15 years of strong cross-disciplinary research in electrical machines and power electronics at UTS, the Centre for Intelligent Mechatronic Systems (CIMS) integrates the disciplines of mechanical, electrical and electronics engineering and computer systems. Its four main research directions are: autonomous robots (operating in unstructured environments and for infrastructure maintenance, search and rescue, health care and road vehicles); electrical machines (new materials and topologies, system optimisation, variable speed control and compact, low temperature fuel cells); automotive systems (performance, comfort, fuel efficiency, road safety and emission control); and human factors (physiological and psychological aspects of human-machine and human-environment interaction).

The Centre for Technology in Water and Wastewater (CTWW) undertakes research to ensure the sustainable management of our water resources in both urban and rural environments, here in Australia and internationally. This collaborative research centre links researchers, government, industry and community partners through its research programs, which include:

> solid liquid separation and filtration technologies in water treatment
> innovative biological treatment systems for wastewater treatment
> membrane hybrid and nano-technology systems in water, wastewater, and stormwater treatment, water reuse, and desalination
> in-situ barrier and other systems for treatment of groundwater, surface and ground water hydrology
> bio solid and waste management
> urban water cycles
> soil/aquifer management and modification
> flood management and catchment modelling for flood prediction.

The Centre for Energy Policy (CEP) addresses contemporary energy and environmental policy issues in national and international contexts. Energy market reforms, environmental policy options, and energy-economy interactions are key areas of focus. Research undertaken in the centre is policy-oriented, applied, and cross-disciplinary, emphasising the weaving together of technical, business, economic, legal, social, political and philosophical dimensions of energy, environmental and economic policies. The interdisciplinary research skill-base brought together in the Centre for Health Technologies (CHT) is unique in Australia in the development of medical devices and systems. The CHT has two research streams: biomedical devices and biotechnology science. Its focus is 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 research has already produced several new device technologies which are at the cutting edge of biomedical engineering and science.

The Centre for Real-Time Information Networks (CRIN) seeks to apply real-time information and communication technologies to engineering systems that are designed to provide social benefit in Australia. The centre’s areas of interest include national security, healthcare diagnosis and monitoring, environmental and resource monitoring and the smart use of the internet and the web in supporting industry. Its five primary research themes are: real-time web engineering; networked sensor information processing; wireless communication networks; network management; and architecture-based engineering.

Established in 1996, the Centre for Built Infrastructure Research (CBIR) is one of the earliest research centres in UTS. The centre, aiming at addressing emerging needs of Australia relating to infrastructure, has four main research strengths:

1) Dynamic and structural engineering (structural health monitoring, smart materials/structures, sensing technology, wind/earthquake engineering)
2) Timber engineering (timber-concrete composite flooring systems, stress-laminated timber bridge decks)
3) Geotechnical engineering (pavement engineering, ground improvement techniques, remediation of landfill sites)
4) Materials engineering (innovative construction materials, enhanced sustainability, serviceability & durability).

CBIR is the only research centre in Australia that has the state-of-the-art large capacity shaker table facility.

For more information, please visit: www.feit.uts.edu.au/research/centres
<table>
<thead>
<tr>
<th>Master of Engineering (Research)</th>
<th>Doctor of Philosophy (PhD)</th>
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<tbody>
<tr>
<td>Course Code: C03017</td>
<td>Course Code: C02018</td>
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<tr>
<td>CRICOS Code: 009468B</td>
<td>CRICOS Code: 036570B</td>
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<table>
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<tr>
<th>Duration</th>
<th>2 years full time</th>
<th>4 years full time</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>4 years part time</td>
<td>8 years part time</td>
</tr>
</tbody>
</table>

| Overview              | Individual program of supervised work culminating in a thesis embodying the results. A number of candidates undertake topics with the active support of an industry partner. The ME provides practising engineers with the opportunity to solve an engineering problem in depth beyond the scope of a bachelor’s degree. There are no coursework subjects in this course but one or two subjects can be added if required. There is a formal assessment of progress at the end of the first two semesters. | A university-wide degree involving an intense period of supervised study and research, culminating in the submission of a thesis that makes an original, distinct and significant contribution to knowledge in the candidates chosen field. |

| Admission Requirements | Completed a UTS recognised bachelor’s degree OR an equivalent or higher qualification OR submitted other evidence of general and professional qualifications that demonstrates potential to pursue graduate research studies | A UTS recognised master’s degree (with research component) OR bachelor’s degree with first or second class honours (division 1) OR an equivalent or higher qualification, OR submitted other evidence of general and professional qualifications that demonstrates potential to pursue graduate research studies |

| Fees and scholarships | Full fees apply unless a research scholarship or sponsored place is secured. Government funded places are available for Australian and New Zealand Citizens and Permanent Residents. For further information visit: www.feit.uts.edu.au/research |

| 2014 Course intake | Autumn Semester applications close: 25 October 2013 Spring Semesters applications close: 31 May 2014 |

For a list of current research areas and academic research supervisors, visit www.feit.uts.edu.au/research

Enquiries
Email: feit.research@uts.edu.au
Web: www.feit.uts.edu.au/research
Research in the UTS Faculty of Engineering and Information Technology is highly advanced, industry focused and part of the lively and rigorous research culture at the university.

UTS research is focused on ‘practical innovation’, pioneering research solutions with real-world impact. Our researchers are recognised leaders in their fields, responsible for delivery of cost effective innovative solutions to current national and international challenges.

The Faculty of Engineering and Information Technology is a major force in many of the university’s research strengths, such as:

- intelligent mechatronic systems
- quantum computation and intelligent systems
- innovation in IT services and applications
- human-centred technology design
- real-time information networks
- sustainable futures, built infrastructure
- technology in water and wastewater.

The Master of Engineering (Research) and PhD candidates are supervised by academic research staff with expertise in the candidate’s chosen field. With a focus on industry collaboration, proposals that involve direct working relationships with industry professionals are strongly encouraged.

DOCTORAL EDUCATIONAL FRAMEWORK

The recently developed UTS Framework for Doctoral Education is a structured researcher support program for PhD students. It is aimed at developing well-rounded, workforce ready researchers who have a range of research and professional skills. Through the framework, you will work with your supervisor/s to develop a doctoral study plan (DSP) that is individually tailored to your knowledge and development needs. The DSP maps out your studies for the duration of your PhD, specifies timeframes for progression and identifies which researcher development modules you intend to undertake.

The researcher development modules include a range of subject areas and research skills that are relevant to your research focus. It covers disciplinary knowledge and research methods, as well as research practice.

The framework puts a focus on the collaborative aspects of research. It facilitates your development as a researcher through participation in and contribution to UTS and the research community.

HDR application dates
(for domestic students)

Spring semester 2014: 31 May, 2014
Autumn semester 2015: 24 October 2014

RESEARCH DEGREES CONTINUED
“I believe engineering should have an influence on the real lives of other people. I am extremely happy to see my efforts helping others.”

Vahid Vakiloroaya

Vahid Vakiloroaya

PhD student in the Green Automation research team led by Associate Professor Quang Ha, in the School of Electrical, Mechanical and Mechatronic Systems.

This year, Vakiloroaya has won an award for IT Innovation in the 2013 NASSCOM Innovation Student Awards with ‘Ultra Cooler’, a hybrid air conditioning system that reduces monthly energy consumption of solar air conditioners by 25-42%.

The Ultra Cooler system regulates the flow rate of refrigerant passing through the air conditioner resulting in an increased refrigeration effect. This allows the compressor in the air conditioning unit to remain off for longer periods thereby reducing energy consumption.

Vakiloroaya’s inspiration for his Ultra Cooler project was to address the problem of reducing energy consumption and greenhouse gas emissions in buildings.

“I believe engineering should have an influence on the real lives of other people. I am extremely happy to see my efforts helping others.”

The 2013 NASSCOM Innovation Student Awards drew nominations from across Australia, with winners chosen based on research with real user benefits and world-wide potential.

For more, visit http://uts.ac/1ajveK9
KEY DATES FOR 2014 POSTGRADUATE APPLICATIONS

Applications open: 5 September 2013
Main application closing dates:
- Summer semester (limited course offerings): 31 October 2013
- Autumn semester (Semester one): 31 October 2013
- Spring semester (Semester two): 30 May 2014

Applications made after the main closing date for each intake will be considered and offers made to suitable applicants subject to the availability of places.

Final application closing dates:
- Summer semester (limited course offerings): 31 October 2013
- Autumn semester: 31 January 2014
- Spring semester: 30 June 2014

Offers are made progressively from late September 2013.

FOR FURTHER INFORMATION
visit www.eng.uts.edu.au
www.handbook.uts.edu.au/eng/pg

Come to our UTS Postgraduate Engineering Info Session, register at www.eng.uts.edu.au
www.pg.uts.edu.au

ENGLISH LANGUAGE PROFICIENCY
If your previous studies were undertaken in an overseas country you may need to provide evidence of English proficiency.
For details please visit www.uts.edu.au/future-students/postgraduate/essential-info/applying-uts

CREDIT RECOGNITION
Exemptions are granted on the basis of the successful completion of equivalent subjects at an equivalent level at a tertiary institution. Conditions apply. Application for credit recognition can be made during enrolment.
Credit recognition is not granted on the basis of work experience.

LOCAL APPLICANTS
Applications for postgraduate coursework can be submitted:
> online through the Universities Admissions Centre (UAC).
> in-person at one of our Postgraduate Information Sessions held in April, June, September, November and January, register at www.eng.uts.edu.au

To apply through UAC please visit www.uac.edu.au or call (02) 9752 0200

FEES
All UTS: Engineering postgraduate coursework programs are fee paying.
For further information on fees for postgraduate students at UTS, visit www.fees.uts.edu.au

FEE-HELP
FEE-HELP is a government loan scheme that assists eligible local students to pay their tuition fees.
Using FEE-HELP means you do not have to pay for your tuition fees up front. You can inform your employer that you have a FEE-HELP loan and they will withhold your payments through the PAYG tax system.
If your postgraduate degree is related to your employment, your tuition fees may be tax deductible.

For more information, contact your financial adviser or the Australian Tax Office (ATO) www.ato.gov.au
For more information about FEE-HELP visit http://studyassist.gov.au or call 1800 020 108.

NON-AWARD STUDY
Non-award study refers to the enrolment of specific subjects, without the commitment of a formal degree at UTS. This type of study may be undertaken out of personal interest, or to upgrade skills or knowledge in a specific area.
For more information about non-award study, please visit: www.sau.uts.edu.au/applying/non-award.html

MODE OF STUDY
> Distance learning normally requires no attendance on campus. Contact and assessment is by email, fax, phone or UTSonline.
> Block attendance normally means you will attend campus for a block of full-day study, usually three blocks of 1.5 days per semester per subject.
> Internal mode normally means you will attend campus weekly for one class of two or three hours per subject per semester. Most classes are held during the evening.

All courses are available part or full-time, and you can vary the number of subjects you take per semester if you have more or less time available to study.
Note delivery options vary by subject, and not all delivery modes are available for all subjects.
Visit timetable.uts.edu.au for subject availability and subject study modes offered.
Semester dates:
Autumn Semester
24 February – 27 June 2014
Spring Semester
28 July – 28 November 2014
Summer Session
December – February

Research applicants
Applications for postgraduate research are made through the UTS Graduate Research School, for more information visit www.gradschool.uts.edu.au
Before submitting your application, it is essential that you consider the area of research you want to pursue, draft a research proposal and secure a Research Academic Supervisor.

For further information visit www.feit.uts.edu.au/research

INTERNATIONAL APPLICANTS
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 www.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.

Free call within Australia: 1800 774 816
Tel outside Australia: (+61 3) 9627 4816
Email: international@uts.edu.au
Web: www.uts.edu.au/international

Application closing dates
First semester 2014 – 15 December 2013
Second semester 2014 – 15 June 2014

For further information, please contact UTS International:
Tel outside Australia: (+61 3) 9627 4816
Freecall within Australia: 1800 774 816
Email: international@uts.edu.au
Web: www.uts.edu.au/international

SINGLE SUBJECT STUDY
Engineering subjects are also offered on a non-award basis – enrolling into a single subject. Successful completion of these subjects may be recognised in future study. To apply, visit www.sau.uts.edu.au/applying/non-award.html

ADMISSION INFORMATION BY COURSE
Please refer to this link for admission information: www.uts.edu.au/future-students/postgraduate/essential-info/applying-uts

If you have not completed a bachelor degree, master’s degree, graduate diploma or graduate certificate (or overseas equivalent), you must provide:
> an up to date and complete CV, and
> a letter from your current or most recent employer with a short position description.

In addition, for:

MAster of EnviRonmental EnGiNeering Management
You must have a degree in engineering or other technological or applied science field.

If you are not a graduate of the UTS Bachelor of Engineering Diploma in Engineering Practice you must have an engineering degree from a recognised tertiary institution as well as two years relevant work experience.

All applicants must provide an up-to-date and complete CV outlining a minimum of two years work experience gained after completing a bachelor degree.

In addition for:

MaSTer of ENGiNeering (No Specified MAJOR)
You must also submit a proposed list of subjects as part of your study plan. For course structure and a list of subjects see the UTS Handbook at www.handbook.uts.edu.au/eng/pg
MASTER OF ENGINEERING STUDIES

You must have a degree in engineering or other technological or applied science field.

If you have not completed a degree, but have suitable experience and a TAFE diploma, you may apply for the graduate certificate program and, provided performance is satisfactory, later apply to transfer to the masters course with full credit for completed subjects.

In addition for:

MASTER OF ENGINEERING STUDIES (NO SPECIFIED MAJOR)

You must also submit a proposed list of subjects as part of your study plan. For course structure and a list of subjects see the UTS Handbook at www.handbook.uts.edu.au/eng/pg

GRADUATE CERTIFICATE IN ENGINEERING (NO SPECIFIED MAJOR)

You must also submit a proposed list of subjects as part of your study plan. For course structure and a list of subjects see the UTS Handbook at www.handbook.uts.edu.au/eng/pg

GRADUATE CERTIFICATE IN ENGINEERING MANAGEMENT

If you have a completed degree in any field you do not need to provide additional documentation.

Applicants applying on the basis of a completed TAFE diploma must submit an up to date and complete CV.

Submitting additional application requirements

Provide your CV and employer’s letter and proposed list of subjects, if required, to UAC as one PDF file (maximum file size 3MB) using the UAC upload facility immediately after you apply through UAC.

For information about the UAC upload facility refer to the UAC website: www.uac.edu.au/postgraduate/faq/upload.shtml

CONTACT US

UTS Student Centre
Tel: 1300 ASK UTS
(option 4 for Engineering)

UTSFIT
Online enquiry: www.ask.uts.edu.au
For further information visit our website www.eng.uts.edu.au or the handbook www.handbook.uts.edu.au/eng/pg

City campus

Disclaimer: Courses and electives are offered subject to numbers. The information in this brochure is provided for Australian and New Zealand Citizens and Australian Permanent Residents. If you are an international student, please consult the International Course Guide available from UTS International. Information is correct at time of printing (August 2013) and is subject to change without notice. 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.