“Innovation in action,” describes us – we’re an international pioneer in solar cells, quantum computing, artificial intelligence and bioengineering. We hold the world record for solar cell efficiency at 40%, created the first ever two qubit logic gate in silicon, have won a record five RoboCup World Championship trophies, and we are recognised leaders in chip-scale implantable bionics. It is the creators of these technologies and many like them who teach our students.

But a university’s greatness is best determined by the impact of its graduates. And here the rubber really hits the road: UNSW graduates more engineers and has more engineering alumni than any other Australian institution. UNSW Engineering is number one.

Their impact is profound: in business, in research, in civil society. It’s in the hard work of making all of our lives better and our economy richer. UNSW is ranked number one in Australia for producing millionaires, and for producing graduates who create technology start-ups – like Atlassian, founded by two UNSW alumni, which was floated for six billion dollars this past December.

Our graduates also have a social impact, working in developing countries to create clean drinking water or building devices to allow the deaf to hear. It’s no accident that our graduates dominate Engineers Australia’s Top 100 Most Influential Engineers list every year – UNSW had 22 researchers and alumni appear in 2015. That’s because our graduates work at the very heart of our modern technological society. Their labour creates the fabric of our community; the buildings we live and work in, the energy that powers our world, and the transport networks we use every day.

Engineering creates real-life solutions using technology, design and teamwork. It applies the principles of science and mathematics to fashion solutions to technical problems, whether for commercial applications or societal and consumer needs.

Our students are driven by lateral thinking and a passion for improving the lives of others. These are the skills we instil in our students, and which we hope they will take out into the world.

So far, we’ve been nothing but impressed with the results.

Professor Mark Hoffman
Dean of Engineering

There is no better way to measure the value of studying at UNSW, or any institution, than the achievements of our graduates. Their success speaks for itself.

Yes, we can be justifiably proud of the education excellence in the Faculty, having achieved a five-star rating for teaching and employability for the past three years straight. We can be sure of strong demand for our postgraduate courses given the exceptional opportunity that is provided by the largest program and widest range of specialisations in Australia. From Biomedical to Mining Engineering, from Computer to Food Science. And some – like Nuclear Engineering and Geospatial Engineering – that are only found at UNSW.

And yes, we can acknowledge that UNSW Engineering is a powerhouse of real-world innovation. Our slogan, *TOP CHOICE
UNSW graduates were the most hired by LinkedIn’s top 30 most in-demand employers of 2015*

*GLOBALLY RECOGNISED DEGREES
Our Master of Engineering degrees are accredited with Engineers Australia and recognised through the Washington Accord*

*RELEVANT INDUSTRY TRAINING
In our Master of Engineering programs, students are required to complete 60 days of relevant industry training. Students have the flexibility to train in Australia or overseas*

*THE MOST POSTGRADUATE SPECIALISATIONS
We offer more engineering opportunities than any other Australian uni, allowing students to develop career paths in multiple industries*

*UNSW AUSTRALIA IS NOW 46 IN THE WORLD
According to the QS World University Rankings for 2015*

*THE UNSW ENGINEERING faculty is ranked No. 21 in the world **

*ROCK STARS OF THE NEW ECONOMY
4 UNSW Engineering researchers and alumni appear among the newly minted 2015 Knowledge Nation 100 – “the visionaries, intellects, founders and game changers”*

*THE No.1 Engineering faculty in Australia *

*5 ENGINEERING DISCIPLINES IN THE 2015 WORLD’S TOP 40 QS RANKINGS
Civil, Chemical, Computer Science, Electrical and Mechanical Engineering*

*According to the 2015 ARWU/SJTU rankings
** According to the 2015/16 QS rankings*
First choose the right program

What best describes you?

I already have a four-year accredited engineering degree and now I wish to broaden my job prospects through cross-training, re-training or specialisation.

Master of Engineering Science
- Takes 1 to 2 years, depending on your background
- 25 specialisations on offer
- A non-accredited program
- No industrial training involved
- Flexible learning

TYPICAL PROGRAM STRUCTURE
4 x Disciplinary Knowledge Courses
5 x Advanced Disciplinary Courses
2 x Research Courses
2 x Elective Courses
16 courses

I don’t have an accredited engineering degree, but I do have either a non-accredited engineering degree, or I have completed three-years of accredited engineering coursework.

Master of Engineering
- Takes 2 years
- 6 specialisations offered (Civil, Electrical, Mechanical, Environmental or Telecommunications Engineering)
- Accredited by Engineers Australia*
- Industrial training included
- Civil, Mechanical and Environmental are currently provisionally accredited

TYPICAL PROGRAM STRUCTURE
6 x Disciplinary Knowledge Courses
5 x Advanced Disciplinary Courses
2 x Engineering & Technical Management Courses
1 x Design Course
2 x Research Project Courses
16 courses

Need a stepping stone?

Graduate Diploma of Engineering Science
Suitable for graduate engineers who want to retrain or undertake a shorter program of specialised study. It’s also a starting point for a Masters. The graduate diploma runs for one year.

Graduate Certificate of Engineering
This program is for engineers who already have professional experience, but are seeking formal qualifications, and graduate engineers who want to retrain or specialise in a specific discipline. It’s a great step into postgraduate study. The graduate certificate runs for six months.

Then choose a degree

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36 > Mechanical Engineering
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42 > Nuclear Engineering
44 > Petroleum Engineering
46 > Photovoltaics & Renewable Energy
48 > Project Management
50 > Satellite Systems Engineering
52 > Structural Engineering
54 > Sustainable Systems
56 > Telecommunications
58 > Transport Engineering
60 > Water Engineering
62 > Water, Wastewater & Waste Eng
Why choose Sydney

When you make your choice to study at UNSW, you are not just choosing a campus, but a location. Sydney is a breathtaking mix of modern city living and a cruisy beach lifestyle. A thriving metropolis of sport, entertainment, fashion and socialising. Come and find out why it made the Top 25 in TripAdvisor’s 2016 Travellers’ Choice awards for best destination in the world.

Did you know?

8min  The time it takes to get to the beautiful, 189-hectare nature reserve that is Centennial Park.
12min  Is all it takes to get to the world-famous icon, Bondi Beach.
15min  And you’re in Sydney’s CBD, which is home to Australia’s tallest free-standing building, Sydney Tower.

20min  By now you will be crossing the Sydney Harbour Bridge – the widest long-span bridge and tallest steel arch bridge in the world – gazing down on the beloved Opera House.

30min  To Taronga Zoo, which gives its animals some of the city’s best views of Sydney Harbour.
40min  To Homebush, location of the 2000 Sydney Olympic Games, and now a destination for international sport teams, touring musicians and big events.

60min  In just an hour you’ll be climbing into the Blue Mountains, a UNESCO World Heritage Area and a paradise full of bushwalks, camping grounds, caves, abundant wildlife and more.

10 fun facts about Sydney

1. The oldest building in Sydney is the Mint, which was built in 1811.
2. Sydney Tower is 1,008feet tall, the second highest observation tower in the Southern Hemisphere.
3. The main languages spoken in Sydney are English, Arabic, Cantonese, Mandarin, Greek and Vietnamese.
4. In summer, surfing and cricket are the main sports, and in winter it’s rugby league and soccer.
5. The Sydney Fish Market is the largest in the Southern Hemisphere and third largest in the world.
6. Indigenous Australians have been living in Sydney for at least 30,000 years.
7. Sydney has the deepest natural harbour in the world, holding 504,000 mega litres of water.
8. 60% of Australia’s top 100 companies have their headquarters in Sydney.
9. Indigenous Australians have been living in Sydney for at least 30,000 years.
10. 31.7% of Sydney’s population was actually born outside Australia.

Why choose UNSW

Did you know that UNSW Engineering graduates make up 20% of the top 100 most influential engineers in Australia? Or that our links to the industry, government and community are truly unrivalled? What about the fact we have more specialisations than any other university in the land? These are just a few great reasons to choose UNSW, and here are some more...

A culture of innovation

Following its grand opening in 2015, the Michael Crouch Innovation Centre (MCIC) has become a platform for creation at UNSW and the first of its kind in Australia. The Centre boasts a range of facilities, including an innovation hall and a maker space complete with multifunctional workspaces, 3D printers and laser cutters.

Students are encouraged to design, experiment and build physical prototypes in the MCIC, which runs a co-curricular program focused on foundational and experiential learning, led by experts and corporate partners.

The Centre boasts a variety of sporting clubs to cater for all interests, from tennis and squash courts, and offers a variety of sporting clubs to join.

Sports and fitness

The UNSW Sport and Recreation Centre is equipped with an indoor heated pool, steam room, gym, various fitness and training studios, tennis and squash courts, and offers a variety of sporting clubs to join.

Location, location, location

UNSW is located right in the heart of Sydney, wedged between the famous beaches, the stunning CBD and the wide expanse of Centennial Park. All are just a small bike or bus ride away and easy to get to. For information on getting to and from UNSW, visit: sydneybuses.info/routes

Facilities

On campus you will find cafes, eateries, bars, banks, a bookshop, supermarket, newsagency, post office and plenty more. There are also medical and dental centres, a pharmacy and free counselling.

Recreation

Why not join one of more than 100 clubs and societies supported by Arc, UNSW’s student organisation. It’s a great way to make new friends and to broaden your creative horizons.

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World-leading research

UNSW Engineering researchers are striving to solve the world’s biggest issues. Our stellar international reputation has been enhanced through discoveries in quantum computing, mining safety equipment and techniques, geology mapping, photovoltaics, hybrid energy storage systems and the bionic eye. Here are just three of the UNSW researchers at the forefront of engineering science.

Associate Professor Dr Alice Lee
Co-director, ARC Training Centre for Advanced Technologies in Food Manufacture (ATFM)

■ Associate Professor Dr Alice Lee is passionate about improving the quality and safety of our food. ATFM explores ways to improve Australian food products while training the next generation of food scientists. Alice’s ultimate goal is to advance our understanding of how chemical and biological agents affect our health, and use it to develop effective and practical management solutions.

She is currently working on a range of allergens significant to Australia such as those from Southern Hemisphere fish species, cashews, lupin and macadamia nuts. Her research has already led to affordable and high-throughput immunodiagnostics capability for food quality and safety assessment in Australia. She is also involved in developing a new nanoparticle-based rapid-test platform, which could be adopted by the food industry to manage product safety.

Scienzia Professor Andrew Dzurak
Director, Australian National Fabrication Facility (NSW)

■ Professor Andrew Dzurak wants to harness the almost limitless potential of nanotechnology, which has revolutionised communications and improved everything from our health to the way we look after the environment.

Already a leading expert in nanoelectronics and quantum computing technologies, Andrew is director of the NSW node of the Australian National Fabrication Facility (ANFF). It’s a network of researchers at university-based laboratories.

ANFF researchers have already created the world’s first single-atom quantum-bit for super-powerful silicon quantum computers. These computers will be able to solve problems that are well beyond the capacity of today’s fastest machines, allowing for the efficient design of pharmaceuticals, medicines and more.

Scienzia Professor Martin Green AM
Director, Australian Centre for Advanced Photovoltaics

■ Scienzia Professor Martin Green’s challenge sounds simple enough: produce better and cheaper solar power cells so that we depend less on polluting fossil fuels.

Martin and his team from the UNSW School of Photovoltaic and Renewable Energy Engineering already lead the world in silicon solar-cell development. In 2008 they produced the first 26% efficient silicon solar cell.

The team’s latest ambitious goal is to improve the efficiency of these multi-layered cells. UNSW’s solar researchers recently converted over 40% of the sunlight hitting a photovoltaic system into electricity—which was a world efficiency record. Reaching such high efficiency will transform the economics of power generation and help combat the threat of climate change facing our world.

Introduction to degrees

Over the following 55 pages we will take you through the details specific to all the postgraduate options available through UNSW Engineering. Before you start, however, here is a quick guide to elements of your degree that are consistent across the subjects.

How is your study structured?
UNSW has two main semesters per year and full-time students study four courses per semester. Each course requires students to study approximately ten hours per week, including face-to-face classes and independent, self-directed study.

What are the Disciplinary Knowledge Courses?
These courses are designed to develop foundation knowledge and skills in a specialisation, and prepare students for the Advanced Disciplinary Knowledge Courses.

If a student is moving from a different discipline, these courses are particularly valuable. On the other hand, a student holding an undergraduate degree in a similar discipline may be granted advanced standing for some of these courses.

What are the Advanced Disciplinary Knowledge Courses?
These courses are at the core of your postgraduate specialisation. They enhance a student’s knowledge and problem-solving skills in the discipline, and directly prepare graduates so they can make a very significant difference in their career from day one.

How do electives work?
Students can choose four courses (with approval) from a wide selection in which they have a passionate interest, and which reflect their future career or research choices.

At least one course must cover Engineering and Technical Management. For more info visit; unsw.to/engtechcourses.

What research is required?
Research is an essential part of the Masters program at UNSW Engineering. It allows students to build skills for further studies or professional practice through a research project guided by an academic supervisor.

Can you receive any exemptions or advanced standing?
Students may be granted credit for some courses. Those with a degree or extensive professional experience in a related area can apply for credit of up to 50% of a program.
Biomedical Engineering

This discipline focuses on the adaptation and application of engineering principles to biomedicine. Graduates solve problems in a range of healthcare-related fields such as implantable bionics, drug-delivery systems, medical imaging, radiotherapies, orthopaedic devices, telemedicine, robotic surgery, and cell and tissue engineering. They’re also involved in records management and physical rehabilitation.

Master of Engineering Science (Biomedical Engineering)

This program is ideal for graduate engineers looking to extend their knowledge into the field of Biomedical Engineering. Students select up to four courses from relevant disciplines such as Electrical, Chemical and Mechanical Engineering. In addition, students choose up to two foundational courses to provide necessary background (following program-authority approval).

DISCIPLINARY KNOWLEDGE COURSES

Choose up to two courses from:
- Fundamentals of Anatomy
- Principles of Physiology A
- Principles of Physiology B

Choose at least five courses from:
- Medical Imaging
- Biocompatibility
- Cellular & Tissue Engineering
- Introductory Polymer Chemistry
- Clinical Information Systems
- Biomechanics of Physical Rehabilitation
- Mechanical Properties of Biomaterials
- Biomedical Instrumentation
- Biosensors & Transducers
- Implantable Bionics
- Dynamics of the Cardiovascular System
- Modelling Organs, Tissues & Devices
- Biological Signal Analysis
- Mass Transfer
- Regulatory Requirements
- Clinical Laboratory Science
- Mechanics of the Human Body

Electives

Students can take up to four electives, please refer to page nine for more details.

Research

Students must complete a research component that is equivalent to at least three courses; please refer to page nine for details.

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“I love being able to apply my interest in biology and medicine to the engineering and technology fields, and have enjoyed furthering my career opportunities via this degree. In the future I would love to start my own biomedical devices company as there are so many applications for this type of engineering in our future. Especially providing at home medical devices to elderly and rural communities.”

– JESSICA DRUMMOND

---

Master of Biomedical Engineering

This flexible program is designed for students with either a medical or biological science background, or with an engineering or physical science background, who wish to further their education in Biomedical Engineering.

You must complete 12 courses in total, including at least eight from the list below:

Semester 1*
- Mass Transfer in Medicine
- Biocompatibility
- Cellular & Tissue Engineering
- Biomechanics of Physical Rehabilitation
- Biological Signal Analysis

Semester 2*
- Medical Imaging
- Biomedical Systems Analysis
- Regulatory Requirements of Biomed Technology
- Clinical Laboratory Science
- Introductory Polymer Chemistry
- Clinical Information Systems
- Mechanics of the Human Body
- Mechanical Properties of Biomaterial
- Biosensors & Transducers
- Implantable Bionics
- Biomedical Instrumentation
- Dynamics of Cardiovascular Systems
- Engineering Statistics

* Please note, semester offerings may vary.

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CONTACT US

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FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

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PROGRAM OPTIONS

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<thead>
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<th>PROGRAM OPTIONS</th>
<th>PROGRAM CODE</th>
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<th>BEGINS</th>
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<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
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<tr>
<td>Master of Biomedical Engineering</td>
<td>8660</td>
<td>18 MONTHS</td>
<td>FEB &amp; JULY</td>
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<tr>
<td>Graduate Diploma of Biomedical Engineering</td>
<td>5449</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

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Master of Engineering Science (Chemical Process Engineering)

Through this program you will explore efficient design, as well as robust and objective analysis and monitoring of chemical plants, processes and operations. Your studies will include extensive coverage of current business and environmental issues in the chemical and food industries.

**DISCIPLINARY KNOWLEDGE COURSES**

Students must take:
- Topics in Polymer Technology

**ADVANCED DISCIPLINARY KNOWLEDGE SUBJECTS**

Students must take:
- Advanced Process Control
- Advanced Polymer Science & Research
- Complex Fluid Microstructure & Rheology

Plus one course from:
- Environmental Management
- Sustainability Assessment
- Managing Energy Efficiency
- Operational Energy Efficiency
- Sustainable Electrical Energy Tech Assessment
- Engineering Decisions
- Life Cycle Engineering
- Ethics & Leadership in Engineering
- Engineering Statistics
- Maintenance Engineering
- Quality & Quality Systems
- Quality in Engineering
- Project Management Framework
- Project Management
- Engineering Economics & Financial Management
- Engineering Economics

**Electives**

Take up to four electives; see page nine for details.

**Research**

Students complete an advanced thesis project across two semesters, guided by an academic.

---

“I wanted to develop a diverse skill set that would be transferable to a wide range of fields and I loved chemistry at school. But how could I apply scientific theory to the real world? When I met the engineering students and saw the state-of-the-art facilities, I knew UNSW was the place for me. The professors at UNSW invited me to get involved in their cutting-edge research, too, which gave me an amazing opportunity to work on the development of cool, new nanoparticles for cancer treatment.”

– ALEX DUNN
Civil Engineering

Civil Engineering is one of the oldest and largest fields in this discipline and it offers graduates the opportunity to get involved in projects that enhance humanity’s quality of life. As the broadest engineering discipline at UNSW, it also offers an incredible range of specialisation options, too.

Master of Engineering Science (Civil Engineering)

This flexible program has advanced study options across a wide range of Civil Engineering disciplines. It allows students to tailor their study in areas such as project management, transport engineering, water and wastewater, surveying and construction.

DISCIPLINARY KNOWLEDGE COURSES

Students moving from a different discipline, or those who have not completed appropriate undergraduate courses, will be advised to take courses that offer preparatory disciplinary knowledge. This will prepare them for the Advanced Disciplinary Knowledge courses.

Choose up to four courses:
- Problem Solving for Engineers
- Operations & Projects
- Engineering Contracts
- Sustainability in Construction
- Rock & Slope Engineering
- Advanced Topics in Geotechnical Engineering
- Ground Improvement & Monitoring Techniques
- Advanced Concrete Structures
- Structural Dynamics
- Deformation Monitoring Surveys
- Transport Systems – Part 1: Network Analysis
- Advanced Water Engineering
- Sustainable Infrastructure

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students may take courses from any postgraduate specialisation offered from the School of Civil and Environmental Engineering, subject to meeting the prerequisites requirements.

Choose at least four courses:
- Environmental Engineering
- Geotechnical Engineering & Engineering Geology
- Project Management
- Structural Engineering
- Transportation Engineering
- Water, Wastewater & Waste Engineering
- Water Resources (incl. Coastal Engineering courses)

Electives

At least one course must be taken from the approved list of Engineering and Technical Management courses, and three other electives may be chosen from across the Faculty, as long as the student is eligible.

We recommend at least one course from:
- Engineering Economics & Financial Management
- Design of Construction Operations
- Project Management Framework
- Environmental Management
- Sustainability Assessment & Risk Analysis

Research

Students who have not completed a four-year degree, which included a thesis, must complete a two-course Masters thesis research component to deepen their understanding of a topic they are passionate about. You’ll be supervised by an appropriate academic.

FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34
Master of Engineering (Civil Engineering)
The two-year Master of Engineering course is for students who want to develop their technical knowledge and skills, and enter the engineering profession with a degree accredited with Engineers Australia.* Students complete at least 16 courses – including professional development in engineering management, analysis and design – and they must meet the prerequisite requirements for each.

* Provisionally accredited

YEAR 1 – EIGHT PROFESSIONAL DEVELOPMENT COURSES
Choose at least two Management courses:
- Problem Solving for Engineers
- Operations & Projects
- Engineering Contracts

At least two Analysis and Design courses:
- Advanced Topics in Geotechnical Engineering
- Advanced Concrete Structures
- Advanced Water Engineering
- Transport Systems – Part 1

At least one Engineering and the Environment course:
- Planning Sustainable Infrastructure
- Sustainability in Construction

No more than two Electives from:
- Deformation Monitoring Surveys
- Rock & Slope Engineering
- Ground Improvement & Monitoring Techniques
- Structural Dynamics
- Fundamentals of Geomaterials (CVEN9525)**
- Fundamentals of Water Engineering (CVEN9625)**

** Students without a solid background in Geomaterials or Water Engineering should choose at least one of these courses.

YEAR 2 – EIGHT ADVANCED COURSES
This includes a compulsory design course and research project – Design Practice, Masters Project A or Masters Project B – and 60 days of industrial experience.

Choose five courses from:
Note: No more than three courses per discipline allowed

UNSW offers a world-class engineering program that has taken my understanding of Civil Engineering to the next level. My dream job would be to design transport networks for large cities so I can apply problem-solving skills on a big scale and produce solutions that save people time and money.

– GEORGE CHARD

UNSW offers a world-class engineering program that has taken my understanding of Civil Engineering to the next level. My dream job would be to design transport networks for large cities so I can apply problem-solving skills on a big scale and produce solutions that save people time and money.

– GEORGE CHARD
Electrical Engineering

Postgraduate study in Electrical Engineering allows students to consolidate a specialisation from an undergraduate degree, change direction to a new area within the field, or lay the foundation for a career in research and development. There are two Masters specialisations – Electrical Engineering and Systems and Control.

Master of Engineering Science (Electrical Engineering)

This program is designed for graduate engineers seeking to develop or enhance their careers through cross-training, re-training and specialisation. An extensive research component ensures students are armed with practical and analytical skills.

DISCIPLINARY KNOWLEDGE COURSES

Choose four or five courses from:

- Microelectronics
  - Digital & Embedded Systems Design
  - Microelectronics Design & Tech
  - Solid State Electronics
  - RF Electronics

- Energy Systems
  - Power System Equipment
  - Power System Analysis
  - Electrical Drive Systems
  - Power Electronics

- Signal Processing
  - Advanced Digital Signal Processing
  - Multimedia Signal Processing

- Control Systems
  - Continuous-Time Control System Design
  - Computer Control Systems
  - Real-Time Engineering

- Telecommunications
  - Optical Circuits & Fibres
  - Network Performance
  - Wireless Communication Technology
  - Mobile & Satellite Communication Systems

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Choose four or five courses from:

- Electrical Safety
- Digital Signal Processing Theory & Applications
- Digital Image Processing
- Speech Processing
- Robust & Linear Control Systems
- Analysis & Design of Non-linear Control Systems
- Real-Time Computing and Control
- Special Topics in Electrical Engineering 1
- Special Topics in Electrical Engineering 2

Master of Engineering (Electrical Engineering)

This degree is perfect for students who want to develop their technical knowledge and skills, and earn a degree accredited with Engineers Australia.

Choose six Disciplinary Knowledge courses from:

- Digital & Embedded System Design
- Microelectronic Design & Technology
- Solid State Electronics
- Power System Equipment
- Electrical Drive Systems
- Power Electronics
- Multimedia Signal Processing
- Computer Control Systems
- Real-Time Engineering
- Entrepreneurial Engineering

Five from Advanced Disciplinary Electives:

- Mixed Signal Microelectrical Design
- Radio Frequency Integrated Circuits
- Microsystems Design & Technology
- VLSI Technology
- Quantum Devices
- Advanced Power Electronics
- High Voltage Systems
- Digital Image Processing
- Speech Processing
- Robust & Linear Control Systems
- Analysis & Design of Non-Linear Control

Two from Engineering and Technical Management:

- Project Management
- Ethics & Leadership in Engineering
- Successful Innovation

Design

- Design Proficiency

Research

- ME Project A
- ME Project B

Work experience

Students must complete at least 60 days of approved industrial experience related to Electrical Engineering.

I wanted to be on the intersection of computing and the real world, and electrical engineers have a unique opportunity to use technological innovation to bring large-scale improvements to our interaction with the planet. The overall camaraderie at UNSW contributes to a tonne of incredible experiences, too. Most universities aim to produce high quality engineers, but UNSW is driven to produce graduates who will change the game.

– DOUGLAS GEORGE

Contact us

eet.unsw.edu.au / eet@unsw.edu.au / +61-2-9385-4000

For entry requirements, a fee guide and application instructions, see page 34
### Master of Engineering Science (Systems and Control)

This specialisation offers a broad range of theoretical and applications-based electives within the discipline of Control Systems Engineering.

**DISCIPLINARY KNOWLEDGE COURSES**
- Students must take:
  - Continuous-Time Control System Design
  - Computer Control Systems
  - Real-Time Engineering
- Plus, choose up to two courses from:
  - Digital & Embedded Systems Design
  - Microelectronic Design & Tech
  - Solid State Electronics
  - RF Electronics
  - Power System Equipment
  - Power System Analysis
  - Electrical Drive Systems
  - Power Electronics
  - Advanced Digital Signal Processing
  - Multimedia Signal Processing
  - Optical Circuits & Fibres
  - Network Performance
  - Wireless Communication Technologies
  - Mobile & Satellite Communication Systems

**ADVANCED DISCIPLINARY KNOWLEDGE COURSES**
- Students must take:
  - Robust & Linear Control Systems
  - Analysis & Design of Non-linear Systems
  - Real Computing and Control
- Plus, choose up to two courses from:
  - Computer Vision
  - Artificial Intelligence
  - Digital Signal Processing Theory & Applications
  - Smart Grids & Distribution Networks

**Electives and Research**
Electives and research options are the same for both Master degrees; see page nine for details.

### Master of Engineering Science (Energy Systems)

This program offers a broad range of theoretical and applications-based electives providing a deep, broad knowledge across several areas. Perfect for electrical engineers wishing to upgrade their skills.

**DISCIPLINARY KNOWLEDGE COURSES**
Please note, Graduate Diploma students have a slightly wider range to choose from – see the UNSW Handbook for details.
- Choose four or five courses from:
  - Microelectronic Design & Technology
  - Power System Equipment
  - Power System Analysis
  - Electrical Drive Systems
  - Power Electronics
  - Advanced Digital Signal Processing
  - Continuous-Time Control Systems
  - Optical Circuits & Fibres
  - Mobile & Satellite Communication Systems

**ADVANCED DISCIPLINARY KNOWLEDGE COURSES**
- Choose four or five courses from:
  - Power System Protection
  - Power Electronics for Renewable & Distributed Generation
  - High Voltage Systems
  - Industrial & Commercial Power Systems
  - Electricity Industry Planning
  - Electricity Industry Operation
  - Electrical Safety
  - Smart Grids & Distribution Networks

**Electives**
You can take up to four electives; see page nine for info.

**Research**
You must complete a research component equivalent to at least three courses; refer to page nine for details.

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**Energy Systems**

This discipline is undergoing a renaissance thanks to the introduction of intelligent power supply systems (aka smart grids). The growing need to interface renewable energy generation sources with the conventional electricity grid, and the increasing use of electric motors in everything from smartphones to hybrid cars and satellites, is also boosting job opportunities in Energy Systems.

---

The development of electricity was critical in the advancement of society, and its ever-growing demand and many applications means it is a very broad and versatile field. I chose UNSW as it offers the widest resources and world-leading facilities. I’ve also had the opportunity to work with world-leading researchers and explore the start-up environment, both of which have been invaluable to my career growth.

— NISHA PRADHAN

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For entry requirements, a fee guide and application instructions, see page 34.

### Program Options

<table>
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<tr>
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<td>Feb &amp; July</td>
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<td>Graduate Diploma of Engineering Science (Energy Systems)</td>
<td>ELECR55341</td>
<td>1 Year</td>
<td>Feb &amp; July</td>
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</tbody>
</table>
Environmental Engineering

This degree is concerned with the safe, ecological, sustainable and ethical development of urban infrastructure. It’s a fantastic discipline for students who want to move their career in the direction of Environmental Engineering or gain formal qualifications.

Master of Engineering Science (Environmental Engineering)

This discipline provides students with advanced study options in Environmental Engineering. It develops skills in analysis and design of sustainable urban infrastructure, ideally suited for practising engineers and recent graduates.

**DISCIPLINARY KNOWLEDGE COURSES**

Choose at least four courses from:
- Design Practice A
- Operations & Projects
- Engineering Contracts
- Sustainability in Construction
- Rock & Slope Engineering
- Deformation Monitoring Surveys

**ADVANCED DISCIPLINARY KNOWLEDGE COURSES**

Students must take:
- Environmental Management
- Sustainability Assessment & Risk Analysis
- Environmental Engineering Science 1
- Environmental Engineering Science 2

**Electives**

At least one course must be taken from the approved list of Engineering and Technical Management courses.

We recommend:
- Engineering Economics & Financial Management
- Project Management Framework

**Other options, subject to approval:**
- Solid Waste Management
- Hazardous Waste Management
- Water Treatment
- Wastewater Treatment
- Environmental Management
- Sustainability Assessment & Risk Analysis

**Program options**

<table>
<thead>
<tr>
<th>PROGRAM OPTIONS</th>
<th>PROGRAM CODE</th>
<th>DURATION</th>
<th>BEGINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Engineering Science (Environmental Engineering)</td>
<td>CVEN98338</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Graduate Diploma of Engineering Science (Environmental Engineering)</td>
<td>CVEN97341</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Master of Engineering (Environmental Engineering)</td>
<td>CVEN98621</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

Students must have completed a four-year degree, with a thesis, must complete a two-course Masters thesis component, supervised by an appropriate academic.

**Research**

Students without a solid background in Geomechanics or Water Engineering should choose at least one of these courses:
- Fundamentals of Water Engineering (CVEN9625)*
- Fundamentals of Geomechanics (CVEN9525)*

* Students without a solid background in Geomechanics or Water Engineering should choose at least one of these courses.

**YEAR 1 – EIGHT DISCIPLINARY KNOWLEDGE COURSES**

Choose at least two Management courses from:
- Problem Solving for Engineers
- Operations & Projects
- Engineering Contracts

Choose at least two Analysis and Design courses from:
- Advanced Topics in Geotechnical Engineering
- Environmental Management
- Sustainability Assessment & Risk Analysis
- Water & Wastewater Analysis
- Urban Transport Planning Practice
- Transport Modelling
- Transport Systems – Part 2
- Ground Improvement & Monitoring Techniques
- Fundamentals of Geomechanics
- Fundamentals of Water Engineering
- Water & Wastewater Analysis
- Urban Hydrology
- Urban Hydraulic
- Coastal Engineering
- Energy Efficiency in the Water Sector

**YEAR 2 – EIGHT ADVANCED COURSES**

This includes a compulsory design course and research project – Design Practice, Masters Project A or Masters Project B – and 60 days of industrial experience.

Choose at least two Electives from:
- Sustainability in Construction
- Deformation Monitoring Surveys
- Rock & Slope Engineering
- Ground Improvement & Monitoring Techniques
- Fundamentals of Geomechanics
- Fundamentals of Water Engineering

Choose three Environmental Engineering courses:
- Environmental Management
- Sustainability Assessment & Risk Analysis
- Water & Wastewater Analysis
- Solid Waste Management
- Hazardous Waste Management
- Water Treatment
- Wastewater Treatment

Choose two courses from any of the below disciplines:
- Environmental Economics & Financial Management
- Transport Planning & Control
- Human Resources Management
- Contracts Management

**Program options**

<table>
<thead>
<tr>
<th>PROGRAM OPTIONS</th>
<th>PROGRAM CODE</th>
<th>DURATION</th>
<th>BEGINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Engineering Science (Environmental Engineering)</td>
<td>CVEN98338</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Graduate Diploma of Engineering Science (Environmental Engineering)</td>
<td>CVEN97341</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Master of Engineering (Environmental Engineering)</td>
<td>CVEN98621</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

At least one Engineering and the Environment course:
- Planning Sustainable Infrastructure
- Environmental Frameworks, Economics & Law

**Contact us**

civeng.unsw.edu.au  /  cven.enquiries@unsw.edu.au  /  +61-2-9385-5033

* Students can select a range of courses, subject to satisfying prerequisite requirements.
Food Science and Technology (Food Process Engineering)
Our flexible, advanced options in Food Science and Technology provide students with a deeper understanding of the agifood business. At UNSW you’ll gain the strategies and tools to increase efficiency and performance, and the opportunity to learn alongside like-minded industry professionals.

Master of Engineering Science (Food Process Engineering)
This program is designed for engineers who want to specialise in the area of Food Process Engineering. It provides a thorough study of factors affecting the science, processes, operation technology and engineering of foods, and the life cycle of plants.

Students also study issues that may affect business decisions encountered in the food industry. Expect to learn alongside like-minded industry professionals.

Choose one course from:
- Environmental Management
- Sustainability Assessment
- Operational Energy Efficiency
- Engineering Decisions
- Life Cycle Engineering
- Ethics & Leadership in Engineering
- Maintenance Engineering
- Quality in Engineering
- Project Management Framework
- Engineering Economics

Electives
You can take up to four electives; details on page nine.

Research
Students must complete an advanced thesis project across two semesters, guided by an appropriate academic.

I’ve always found the engineering behind this degree fascinating because it takes you through the full food journey. You start with its production and go all the way through to its consumption. This degree has really helped me form a comprehensive idea of food sustainability and enabled me to meet a lot of interesting people with great personalities and beautiful minds.”

– FATMA BAHHAN AL MUKHAINI

Master of Food Science
This program is designed for students with a science background who wish to deepen their knowledge in food science and technology. It’s also for engineers who want to move into food science with a science-based perspective. Students have the opportunity to undertake an extensive research project.

Choose one course from:
- Food & Nutritional Toxicology
- Unit Operations in Food Processing

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Students must take:
- Advanced Process Control
- Advanced Processing Technologies
- Complex Fluid Microstructure & Rheology

Program Options
<table>
<thead>
<tr>
<th>Program Options</th>
<th>Program Code</th>
<th>Duration</th>
<th>Begins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Engineering Science (Food Process Engineering)</td>
<td>FOODNS8338</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
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<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
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<tr>
<td>Master of Food Science</td>
<td>8037</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Graduate Diploma of Food Science</td>
<td>5037</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

For entry requirements, a fee guide and application instructions, see page 34.
Geospatial Engineering

This specialisation provides students with advanced study options across a range of topics in Geospatial Engineering. This includes advanced surveying, modern geodesy and geopositioning, GPS/GNSS technology, geospatial image analysis, Geographic Information Systems (GIS) and remote sensing.

Master of Engineering Science (Geospatial Engineering)

The program provides critical knowledge about the science and practice of Geospatial Engineering. This knowledge is required for students who are moving into the industry or staying in the graduate program to pursue their PhD studies.

**DISCIPLINARY KNOWLEDGE COURSES**

Students must take:
- Geospatial Information Science

Students choose three courses from:
- Problem Solving for Engineers
- Deformation Monitoring Surveys
- Precise GPS Positioning
- Engineering Statistics
- Principles of Programming

**ADVANCED DISCIPLINARY KNOWLEDGE COURSES**

Students must take:
- Fundamentals of Geopositioning
- Remote Sensing

Students choose two courses from:
- Modern Geodesy & Applications
- Aerial & Satellite Imaging Systems
- Computer Vision
- Database Systems
- Microwave Remote Sensing

**Electives**

At least one course must be taken from the approved list of Engineering and Technical Management courses, pending eligibility. We recommend:
- Engineering Economics & Financial Management
- Project Management Framework
- Environmental Management

Other faculty options:
- Project Planning & Control
- Risk Management
- Transport Modelling
- Environmental Management
- Geomechanics
- Structural Stability
- Modern Geodesy & Applications
- Aerial & Satellite Imaging Systems
- Microwave Remote Sensing
- Transport Applications of GIS
- Database Systems
- Data Structures & Algorithms
- Computer Vision
- GIS for Built Environment

**Research**

If you have not completed a four-year degree that included a thesis, you must complete a Masters thesis research component.

**Program Options**

<table>
<thead>
<tr>
<th>Program Options</th>
<th>Program Code</th>
<th>Duration</th>
<th>Begins</th>
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</thead>
<tbody>
<tr>
<td>Master of Engineering Science (Geospatial Engineering)</td>
<td>CVENMT8320</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
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<tr>
<td>Graduate Diploma of Engineering Science (Geospatial Engineering)</td>
<td>CVENMT5341</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Graduate Certificate of Engineering Science (Geospatial Engineering)</td>
<td>CVENMT7320</td>
<td>6 MONTHS</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

**I chose this degree because of its varied work opportunities. I can be in the office one day viewing bushfire trends and out on a construction site surveying new buildings the next. My dream job would be to do surveying or geospatial analysis of other planets. I'd love to be the first person to map a new world. There have been many highlights, including a week long camp at Berry doing field exercises and processing the data that was a really awesome bonding experience.**

- TIMOTHY KERR

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**Geospatial Engineering facilities**

There are a number of specific Surveying and Geospatial Engineering facilities within the School at UNSW, including:
- State-of-the-art computing facilities essential to this very IT-intensive discipline
- A wide variety of GPS/GNSS equipment for tracking GPS, Glonass, Galileo, QZSS and Beidou
- Leica CS Laser scanner and its software
- Sensys Swinjet Unmanned Aerial Vehicle and software
- Spirent GSS660 GPS RF signal simulator with INS upgrade
- Two GPS software receivers: the DataFusion Matlab receiver, and the NordNav R30
- We have several Altera FPGA development systems
- A large number of GPS Software Development Kits, inertial navigation sensors, pseudolites, wireless comms and UHF radio equipment. Plus a range of ancillary equipment to support research into GPS and other wireless location technologies
- A range of GPS software systems (many developed in-house) as well as the GAMIT and the Bernese software packages
- Software for SAR and InSAR data processing (some of which are developed in-house), as well as the APP and EV InSAR (Atlantis, Canada), PUSAR (Phoenix Systems, UK), ROI-PAC (JPL, USA) and DORIS (Delft University of Technology, Netherlands)
- Two GPS software receivers: the DataFusion Matlab receiver, and the NordNav R30
- Software packages to aid teaching and research for field-to-finish surveying systems: Leica Geomatics Office, GEOCOMP, CIVILCAD and AUTOCAD
- Other software support, such as MATLAB, RTK- Lib, UAS/ UAV mapping systems and more
Geotechnical Engineering and Engineering Geology

For those seeking ways to expand their career options in Geotechnical Engineering and Engineering Geology, or those who would like to move their existing engineering career in a new direction, the Master of Engineering Science will provide the advanced skills and knowledge required.

Master of Engineering Science (Geotechnical Engineering and Engineering Geology)

This program helps practitioners enhance and deepen their practical and theoretical knowledge. Academic and industry experts teach courses with a one-week only attendance required for each course.

DISCIPLINARY KNOWLEDGE COURSES

Students choose four courses from:
- Design Practice A
- Operations & Projects
- Rock & Slope Engineering
- Advanced Topics in Geotechnical Engineering
- Ground Improvement & Monitoring Techniques
- Advanced Concrete Structures
- Structural Dynamics
- Deformation Monitoring Surveys
- Fundamentals of Geomechanics*  
  * Required for those without a background in Geomechanics

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students choose four courses from:
- Geotechnical Models
- Geomechanics
- Advanced Foundation Engineering
- Numerical Methods Geotechnical Engineering
- Slope Instability
- Rock Engineering
- Pavement Engineering
- Geotechnical Engineering of Dams

Electives

At least one course must be taken from the Engineering and Technical Management courses. We recommend:
- Engineering Economics & Financial Management
- Project Management Framework

PROGRAM OPTIONS

<table>
<thead>
<tr>
<th>PROGRAM CODE</th>
<th>PROGRAM NAME</th>
<th>DURATION</th>
<th>BEGINS</th>
</tr>
</thead>
<tbody>
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<td>CVENRT8338</td>
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<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
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<tr>
<td></td>
<td>Engineering and Engineering Geology)</td>
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<tr>
<td>CVENST5341</td>
<td>Graduate Diploma of Engineering Science (Geotechnical and Engineering Geology)</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

Transport Engineering
- Urban Transport Planning Practice
- Transport Modelling
- Transport Systems
- Traffic Management & Control

Water Engineering
- Catchment & Water Resources Modelling
- Urban Hydrology
- Surface Water Hydrology
- Channels, Rivers & Estuaries
- Groundwater Engineering
- Coastal Engineering
- Water & Wastewater Analysis

Research

Students who have not completed a four-year degree with a thesis must complete a Masters thesis research component. This gives them the opportunity to broaden their understanding of a topic they’re passionate about. It will be supervised by an appropriate academic.

After working for five years as a geotechnical engineer, I wanted to know more on how to address geotechnical problems in civil construction. So I decided to further my study in soil and rock mechanics to help me keep pace with all the new technologies and developments in the field. Although the subject matter is very complex, the lecturers and tutors are extremely helpful and willing to tailor lectures to individual classes to meet different interests and situations.

– AJAY RAJ ADHIKARI

CONTACT US

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IT and Computing

Information technology provides students with the skills to use today’s technology as well as create the technology of tomorrow. Graduates are trained to anticipate future requirements and develop applications, frameworks, products and services to meet those needs in areas such as networking, data mining, robotics and internet services.

Master of Information Technology

This program provides students with a broad IT education and specialised knowledge that enables them to work in a range of positions. It's perfect for students with minimal (if any) prior computing experience, or students with a computing-related bachelor degree who want to gain a broader understanding or specialise in an area. Students with prior IT and computing experience may be eligible for up to one year’s advanced standing.

Graduate Diploma of Information Technology

This is intended for students with little (if any) prior computing experience or students with some computing knowhow seeking a broader understanding. It consists of 12 courses selected from across the Master of Information Technology program, with a focus on the Advanced Disciplinary Knowledge Courses and a research option. Students may also choose up to two majors, while Two electives can be chosen from outside the school.

Master of Information Technology and Graduate Diploma students choose up to two majors from:
- Artificial Intelligence
- Bioinformatics
- Database Systems
- e-Commerce Systems
- Geographic
- Data Science & Engineering
- InterNetworking

Graduate Certificate of Computing

If you aren’t eligible for entry to the Graduate Diploma, or wish to take a shorter postgraduate qualification, you should consider this degree. It develops students' knowledge and skills in IT, and can lead to the Masters program. Students can choose any course for which they are eligible.

Students must take:
- Engineering Project Management

DISCIPLINARY KNOWLEDGE COURSES

Choose courses from:
- Foundations of Computer Science
- Principles of Programming
- Data Structures & Algorithms
- Microprocessors & Interfacing
- Database Systems
- Artificial Intelligence
- Computer Networks & Applications

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Choose at least six courses from:
- Advanced Graphics
- Advanced Topics in Software Verification
- Algorithmic Verification
- Bioinformatics Methods & Applications
- Comparative Concurrency Semantics
- Computational Bioinformatics
- Computer Architecture
- Computer Graphics
- Computer Vision
- Concepts of Programming Languages
- Data Warehousing & Data Mining
- Database Systems Implementation
- Design & Analysis of Algorithms
- Digital Circuits & Systems
- Distributed Systems
- e-Enterprise Project
- Engineering Decision Structures
- Experimental Robotics
- Extended Operating Systems
- Foundations of Concurrency
- Game Design Workshop
- Geometric & Graph Theoretic Data Processing
- Human Computer Interaction
- Information Retrieval & Web Search
- (In-)Formal Methods: The Lost Art
- Knowledge Representation & Reasoning
- Language-based Software Safety
- Machine Learning & Data Mining
- Mobile Data Networking
- Network Routing & Switching
- Neural Networks
- Object-Oriented Programming
- Object-Oriented Software Development
- Operating Systems
- Programming Languages & Compilers
- Robotic Software Architecture
- Security Engineering
- Security Engineering Workshop
- Service-Oriented Architectures
- Software Construction: Techniques & Tools
- System Capacity Planning
- Theory of Computation
- User Interface Design & Construction
- Web Applications Engineering
- Web Data Compression & Search
- Wireless Mesh & Sensor Networks

Electives

Students are permitted to take up to three electives from outside the school. All non-CSE electives must be selected from the MIT Course list.

Program Options

<table>
<thead>
<tr>
<th>Program Options</th>
<th>Program Code</th>
<th>Duration</th>
<th>Begins</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Information Technology</td>
<td>8543</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Graduate Diploma of Information Technology</td>
<td>5543</td>
<td>18 MONTHS</td>
<td>FEB &amp; JULY</td>
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<td>Graduate Certificate of Computing</td>
<td>7543</td>
<td>6 MONTHS</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

I love solving problems and I think programming is a really great tool for making the world a better place. I plan to start my own company, but at the moment UNSW has been fantastic in getting me as much experience as possible across different fields. UNSW continues to offer a great learning experience where I meet new people, develop my skills and learn more about myself. You get great industry exposure and work-ready experience, too.

– Ojasvi Chavali

FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

CONTACT US

CSE UNSW EDU AU / POSTGRAD@cse.unsw.edu.au / +61-2-9385-4329

7543 6 MONTHS  FEB & JULY

7543 6 MONTHS  FEB & JULY

8543 2 YEARS  FEB & JULY

5543 18 MONTHS  FEB & JULY

30

31
Manufacturing Engineering and Management

Manufacturing engineers are involved in all facets of production and have a broad knowledge of the design and operation of machines and systems, which means they often manage multidisciplinary teams. This program integrates engineering, technology and management, providing students with a grounding in everything from product design to manufacture, sales and distribution.

Master of Engineering Science (Manufacturing Engineering and Management)

This program covers a range of essential topics in product and process design, manufacture and delivery. It’s aimed at achieving quality, timely arrival, minimum cost and flexible manufacturing, with courses suited to management roles.

DISCIPLINARY KNOWLEDGE COURSES
Choose four or five courses from:

- Design & Analysis of Product-Process Systems
- Reliability & Maintenance Engineering
- Process Modelling & Simulation
- Strategic Manufacturing Management
- Engineering Management

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Students choose four or five courses from:

- Industrial Management
- Operations & Supply Chain Management in Engineering
- Production Planning & Control
- Computer Aided Design
- Computer Aided Manufacture
- Concurrent Product & Process Design

Electives
Students can take up to four electives, refer to page nine.

Research
You must complete these research components:

- MEngSc Project A
- MEngSc Project B
- Engineering Postgrad Coursework Research Skills or Launching a Startup

PROGRAM OPTIONS

<table>
<thead>
<tr>
<th>PROGRAM OPTIONS</th>
<th>PROGRAM CODE</th>
<th>DURATION</th>
<th>BEGINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Engineering Science (Manufacturing Engineering and Management)</td>
<td>MANFCS8338</td>
<td>2 YEARS</td>
<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Graduate Diploma of Engineering Science (Manufacturing Engineering and Management)</td>
<td>MANFPSS341</td>
<td>1 YEAR</td>
<td>FEB &amp; JULY</td>
</tr>
</tbody>
</table>

It was my interest in design and production that led me to this degree, and the projects I’ve experienced have been fantastic! From drink coolers to bakeries to full-scale beer production facilities, conceptualising these processes has been a great experience. I would love to design processes that bring a simple idea into mass production through a completed assembly. I find this amazing and for me, it would be considered a dream job.

– ZAC CHIN
Guide to the program fees

Because each student’s study choices are different, it’s impossible to provide a definitive cost of studying at UNSW. The program fee is an estimate based on the total units of credit. The fees stated here are indicative 2016 fees and are subject to change, please refer to unsw.edu.au/fees to stay up-to-date.

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Program Code</th>
<th>Minimum Academic Entry Requirement *</th>
<th>Duration** (full time)</th>
<th>Domestic Full Fee</th>
<th>International Program Fee</th>
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</thead>
<tbody>
<tr>
<td>Master of Engineering Science</td>
<td>8338</td>
<td>4-year Bachelor degree in an appropriate area of engineering with a minimum 65% average</td>
<td>2 years</td>
<td>$60,000</td>
<td>$82,160</td>
</tr>
<tr>
<td>Master of Engineering</td>
<td>8621</td>
<td>4-year non-accredited (Washington Accred) Bachelor of Engineering degree or equivalent in a relevant discipline with a minimum 65% average (20% for Electrical Engineering and Telecommunications)</td>
<td>2 years</td>
<td>$60,000</td>
<td>$82,160</td>
</tr>
<tr>
<td>Master of Food Science</td>
<td>8037</td>
<td>A Food Science degree with 65%+ average</td>
<td>2 years</td>
<td>$60,000</td>
<td>$82,160</td>
</tr>
<tr>
<td>Master of Information Technology</td>
<td>8543</td>
<td>4-year degree in Science or Engineering with a 65% average OR 3-year degree in Computer Science or Engineering with 65% average</td>
<td>2 years</td>
<td>$60,000</td>
<td>$82,160</td>
</tr>
<tr>
<td>Master of Biomedical Engineering</td>
<td>8660</td>
<td>4-year BE with at least a 65% average OR 4-year degree in Biomedical, health-related discipline with at least a 65% average</td>
<td>18 months</td>
<td>$45,000</td>
<td>$60,020</td>
</tr>
<tr>
<td>Master of Mining Engineering</td>
<td>8335</td>
<td>4-year degree in Mining Engineering (or related discipline) with at least a 65% average</td>
<td>18 months</td>
<td>$51,120</td>
<td>$60,020</td>
</tr>
<tr>
<td>Graduate Diploma of Engineering Science</td>
<td>5341</td>
<td>4-year degree in a relevant discipline of engineering or three or four year engineering or science degree plus the required relevant professional experience</td>
<td>1 year</td>
<td>$30,000</td>
<td>$39,880</td>
</tr>
<tr>
<td>Graduate Diploma of Food Science</td>
<td>5037</td>
<td>Food Science or related discipline with an average of at least 65%</td>
<td>1 year</td>
<td>$30,000</td>
<td>$39,880</td>
</tr>
<tr>
<td>Graduate Diploma of Information Technology</td>
<td>5543</td>
<td>3-year degree with mathematics up to at least year 2 level, with a 65% average</td>
<td>18 months</td>
<td>$45,000</td>
<td>$60,020</td>
</tr>
<tr>
<td>Graduate Diploma of Mining Engineering</td>
<td>5335</td>
<td>4-year degree in Mining Engineering or related discipline OR a 3-year degree with minimum of one year of industry experience</td>
<td>1 year</td>
<td>$34,080</td>
<td>$39,880</td>
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<tr>
<td>Graduate Certificate of Computing</td>
<td>7543</td>
<td>3-year degree in science or engineering OR at least three years of work experience in an area of engineering or science</td>
<td>6 months</td>
<td>$15,000</td>
<td>$19,940</td>
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<tr>
<td>Graduate Certificate of Mining Engineering</td>
<td>7335</td>
<td>4 years of relevant professional experience in mining OR a degree in a technical discipline with one year of relevant industry experience</td>
<td>6 months</td>
<td>$17,040</td>
<td>$19,940</td>
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<tr>
<td>Graduate Certificate of Petroleum Engineering</td>
<td>7343</td>
<td>Three or four year degree in a relevant discipline OR relevant petroleum industry experience (with a minimum of five years of full time professional experience)</td>
<td>1 year</td>
<td>$22,500</td>
<td>$30,160</td>
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</table>

* Minimum 65% average as determined by the UNSW Postgraduate Entry Score Calculator in a relevant discipline. (Minimum 70% for students from a non-211 university in China). Find the Postgraduate Entry Score Calculator at unsw.postgraduatescalculator.com • All programs are available in S1 and S2.

Fee and funding support

Fee and funding support

FEE-HELP is a Federal Government loan to assist full fee-paying students pay part or all of their tuition fees. FEE-HELP is available to students who are Australian citizens or permanent Australian residents with a humanitarian visa. Visit fee-help.gov.au for more info. For eligibility advice, please contact the FEE-HELP enquiry line on 1800 020 108.

Country and regional specific entry requirements

- **For Chinese students**
  Students from a non-211 university in China need a minimum 70% average for both the Master of Engineering Science and Master of Engineering programs, or a 75% average for the ME in Electrical or Telecommunications streams.

- **For South Asian students**
  Students who have a degree from an institution in India, Pakistan, Bangladesh, Nepal or Sri Lanka have varying grade point average (GPA) requirements based on the institution at which they completed their undergraduate degree. The minimum needed is either 65%, 75% or 80% depending on the previous institution.

- **For British students**
  Students with three-year British degrees are eligible to apply for UNSW Engineering’s postgraduate programs. However, applications will be considered on a case-by-case basis and outcomes are reliant on the GPA and discipline background of the student.

Fee and funding support

FEE-HELP is a Federal Government loan to assist full fee-paying students pay part or all of their tuition fees. FEE-HELP is available to students who are Australian citizens or permanent Australian residents with a humanitarian visa. Visit fee-help.gov.au for more info. For eligibility advice, please contact the FEE-HELP enquiry line on 1800 020 108.

HOW TO APPLY

1. **Choose your program**
   It should suit your interests, skills and career goals.

2. **Check the program's entry requirements**
   While we have a lot of info in this guide, more details and the latest requirements are in the Online Handbook: handbook.unsw.edu.au

3. **Submit your application online**
   Go to apply.unsw.edu.au to upload these documents:
   - Copies of academic transcripts and testamurs (if it’s not in English, a NAATI-approved translation must be provided).
   - Copies of IELTS or TOEFL (or equivalent) test scores (if applicable).
   - Details of work experience, if applicable. Some programs may require some additional documentation.

4. **Track your application**
   Once you submit your application, you will receive a receipt. This will contain your student ID number so you can track your application online. my.unsw.edu.au

5. **A letter of offer**
   You will be advised of the outcome of your application via email. If you’re receiving assistance, your nominated representative will also receive a copy.

6. **Accept your offer**
   Go to my.unsw.edu.au and follow the instructions in your offer letter. Once we receive your acceptance and deposit, you will be sent your electronic confirmation of enrolment (eCoE).

7. **Enrol online**
   Once you accept your offer and pay your deposit at my.unsw.edu.au to secure your place in your program.
Mechanical Engineering
This degree offers the unique opportunity to combine various disciplines together in order to develop and improve products, processes and systems. In short, to change the world for the better. Our programs provide students with the knowledge, tools and strategies to design engineering systems and manage a product’s lifecycle.

Master of Engineering Science (Mechanical Engineering)
This program covers the design, development, construction, operation and maintenance of machines, tools, plants and factories. This includes power generation, propulsion and manufacture.

DISCIPLINARY KNOWLEDGE COURSES
Students choose four or five courses from:
- Mechanical Design 2
- Engineering Mechanics 3
- Computational Fluid Dynamics
- Refrigeration & Air Conditioning
- Mechanics of Fracture & Fatigue
- Fundamental & Advanced Vibration Analysis
- Finite Element Methods
- Engineering Management

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Students choose four or five courses from:
- Computer Aided Design
- Fundamentals of Acoustics & Noise
- Composite Materials & Mechanics
- Introduction to Micro Electromechanical Systems
- Solar Thermal Energy Design
- Automobile Engine Technology

Electives
You can take up to four electives, details on page nine.

Research
You must complete these research components:
- ME Project A
- ME Project B
- Engineering Postgrad Coursework Research Skills or Launching a Startup

Master of Engineering (Mechanical Engineering)
This degree is for students who want to develop their technical knowledge and skills, and enter the engineering profession with a degree accredited with Engineers Australia.* Students are required to complete 16 subjects, a research project and 60 days of industrial experience.

* Provisionally accredited with Engineers Australia.

Students must take:
- Mechanical Design 2

DISCIPLINARY KNOWLEDGE COURSES
Students choose six courses from:
- Engineering Mechanics 3
- Computational Fluid Dynamics
- Refrigeration & Air Conditioning
- Mechanics of Fracture & Fatigue
- Fundamental & Advanced Vibration Analysis
- Finite Element Methods
- Engineering Management

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Students choose five courses from:
- Computer Aided Design / Computer Aided Manufacture
- Fundamentals of Acoustics & Noise
- Composite Materials & Mechanics
- Introduction to Micro Electromechanical Systems
- Solar Thermal Energy Design
- Machine Condition Monitoring
- Automobile Engine Technology

Research-related courses
- ME Project A
- ME Project B

Students must enrol in two courses from:
- Life Cycle Engineering
- Process & Product Quality in Engineering
- Engineering Project Management
- Economic Decision Analysis in Engineering

Industrial training
Students must complete 60 days of Mechanical Engineering-related industrial experience.

“Coming to UNSW was the best decision of my life. I have been able to experience so many amazing things and see all the ways I can positively impact the world. Where else would I have got to build a working bionic hand with a team of first year students? I want a job where I can apply my problem-solving skills to create large-impact health solutions in developing countries. But I’ll sharpen my business skills in management consultancy first.”

– TSING LEE
Mining Engineering

The best way to advance in the mining industry is to be armed with the latest skills and knowledge. Postgraduate coursework programs can make a significant difference for those already working in the industry or for those planning a career change.

Master of Mining Engineering

This degree provides advanced study in Mining Engineering with various entry points and pathways of study depending on the student's background. It's designed to cater for people with an engineering or technical background, and can be undertaken on either a part-time or full-time basis.

The program provides an opportunity for Mining Engineering graduates and minerals industry professionals to continue their professional development in specialised areas. Students have a choice of doing a Master of Mining Engineering with a component of Mine Geomechanics, or a Mine Management plan. Those interested in a specialist qualification in Mine Geomechanics should review the Master of Mine Geotechnical Engineering (see page 40).

Students can choose the Master of Mining Engineering program or enter via the Graduate Diploma and step up to the Masters at a later time.

Mine Geomechanics Plan

Students must take these core courses:
- Postgraduate Research Skills
- Fundamentals of Mining Engineering
- Hazard Identification, Risk & Safety Management in Mining
- Mining Processes, Systems & Analysis
- Mining Industry Research Project I*
- Mining Geomechanics
- Mine Geology & Geophysics for Mining Operations
- Not required for Graduate Diploma students unless they wish to articulate to the Masters program

Electives
Masters students choose five electives, and Graduate Diploma students choose two electives from:
- Technology Management in Mining
- Mine Slope Stability
- Numerical Methods in Mine Geomechanics**
- Advanced Soil Mechanics & Mine Fill
- Drilling, Blasting & Machine Excavations
- Mine Water & Waste Management
- Geotechnical Engineering for Underground Hard Rock Mines**
- Geotechnical Data Collection & Analysis**
- Mining Geotechnical Project**
- Mine Industry Research Project II**
  ** Not available to Graduate Diploma students

Mine Management plan

Students must take these core courses:
- Postgraduate Research Skills
- Fundamentals of Mining Engineering
- Hazard Identification, Risk & Safety Management in Mining
- Mining Processes, Systems & Analysis
- Mining Industry Research Project I*
  * Not required for Graduate Diploma students unless they wish to articulate to the Masters program

Electives
Masters students choose seven electives, and Graduate Diploma students choose four electives, from:
- Mining Industry Research Project II**
- Mining & Resources Law
- Technology Management in Mining
- Management Systems – Projects, Processes, Contracts, Contractors
- Mine Design & Feasibility
- Mine Surveying
- Environmental Management for the Mining Industry
- Advanced Mineral Economics & Project Evaluation
- Mine Geology & Geophysics for Mining Operations
- Mineral Processing
- Mine Water & Waste Management
- Uranium Mining Fundamentals
- Mine Ventilation
  ** Not available for Graduate Diploma students

Graduate Certificate of Mining Engineering

Students choose three core courses from:
- Foundation Disciplinary Knowledge Courses
- Advanced Disciplinary Knowledge Courses
- Not available for Graduate Diploma students unless they wish to articulate to the Masters program

Electives
Students must choose one course from:
- Mining Industry Research Project
- Mining & Resources Law
- Technology Management in Mining
- Management Systems – Projects, Processes, Contracts, Contractors
- Mine Design & Feasibility
- Mine Surveying
- Environmental Management for the Mining Industry
- Advanced Mineral Economics & Project Evaluation
- Mine Geology & Geophysics for Mining Operations
- Mineral Processing
- Mine Water & Waste Management
- Uranium Mining Fundamentals
- Mine Ventilation

CONTACT US
mining.unsw.edu.au / mining@unsw.edu.au / +61-2-9385-5006

I chose Mining Engineering because I love the outdoors, travelling and being active. Here, I can combine my love of the outdoors with problem-solving, innovation, creativity and my childhood interest in geology. One day I'd like to share my passion for the mining industry with people from all walks of life.

- ANNETTE AU
Mining Engineering (continued)

Master of Mine Geotechnical Engineering
This program is designed for those who work within the underground hard rock or underground coal mining industries, and who have responsibilities in the field of strata control. It has been specifically designed to cater for those professionals with both an engineering and a scientific background.

Students study fundamental principles of rock mechanics and Geotechnical Engineering, followed by a comprehensive coverage of practical strata control applications. For entry into the Masters program, students need to first complete the part-time Graduate Diploma. There are two plans offered: Underground Ground Control and Coal Mine Strata Control.

Note: This program does not allow international students to enrol on a student visa.

UNDERGROUND GROUND CONTROL PLAN
Students must take these six core courses:
- Mining Geomechanics
- Geology & Geophysics for Mining Operations
- Geotechnical Data Collection & Analysis
- Hazard ID, Risk & Safety Management
- Geotechnical Engineering for Underground Hard Rock Mines
- Mining Geotechnical Project (research specific to Underground Ground Control)

Masters students choose four electives, and Graduate Diploma students choose two electives, from:
- Drilling, Blasting & Machine Excavation
- Numerical Methods in Mine Geomechanics
- Geotechnical Disasters in Hard Rock Mines
* One non-geotechnical mine course or a Civil Engineering geotechnical course may be accepted as an elective in this stream, subject to approval.

Research
A research thesis specific to Underground Ground Control is required for the Masters, which includes two additional courses:
- Mining Industry Research Project I (MINE8440)
- Mining Industry Research Project II (MINE8445)

Graduate Diploma of Mine Ventilation
This highly flexible program is delivered in a predominantly distance-based format. It provides professional development in mine ventilation and the environment for mining engineers and others who work in the industry. The program covers the needs of the metalliferous and coal-mining sectors.

Students must take eight courses:
- Ventilation & Mine Services
- Environmental Contaminants
- Heat in Underground Mines
- Ventilation System Management
- Mine Ventilation Legislation
- Mine Hazards & Control
- Spontaneous Combustion & Reactive Ground
- Mine Ventilation Practices

Some face-to-face tutorials are incorporated into the program. Students can take the statutory Coal Mine Ventilation Officers course (non-award) without enrolling in an award program such as the Graduate Diploma.

Note: This program does not allow international students to enrol on a student visa.

Program Options

<table>
<thead>
<tr>
<th>Program Options</th>
<th>Program Code</th>
<th>Duration</th>
<th>Begins</th>
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<tbody>
<tr>
<td>Master of Mining Engineering</td>
<td>8335</td>
<td>18 MONTHS</td>
<td>FEB &amp; JULY</td>
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<tr>
<td>Mine Geomechanics Plan</td>
<td>MINE8335</td>
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<tr>
<td>Mine Management Plan</td>
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<tr>
<td>Graduate Diploma of Mining Engineering</td>
<td>5335</td>
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<td>FEB &amp; JULY</td>
</tr>
<tr>
<td>Mine Geomechanics Plan</td>
<td>MINE5335</td>
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<tr>
<td>Mine Management Plan</td>
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<tr>
<td>Graduate Certificate of Mining Engineering</td>
<td>7335</td>
<td>6 MONTHS</td>
<td>FEB &amp; JULY</td>
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<td>Mine Geotechnical Engineering</td>
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<td>18 MONTHS</td>
<td>FEBRUARY</td>
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<td>Underground Ground Control</td>
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<tr>
<td>Graduate Diploma of Mine Geotechnical Engineering</td>
<td>5059</td>
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<td>Coal Mine Strata Control</td>
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<td>Underground Ground Control</td>
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<tr>
<td>Graduate Diploma of Mine Ventilation</td>
<td>5066</td>
<td>1 YEAR</td>
<td>FEBRUARY</td>
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For Entry Requirements, a Fee Guide and Application Instructions, see page 34
Nuclear Engineering

This continues to be a growing field. In addition to the increasing number of “new build” proposals in the Western world, existing reactors require maintenance, servicing, operations and eventual decommissioning; waste needs to be managed and the fuel cycle requires servicing and handling. All of this requires engineers with an understanding of what makes the nuclear environment unique.

Master of Engineering Science (Nuclear Engineering)
This program educates and informs engineering graduates in the underpinning theory behind Nuclear Engineering techniques, technologies and processes. It also provides a stream that allows graduates from traditional engineering disciplines to prepare for a career in nuclear. Students learn from national and international experts in the sector, including staff from the Centre for Nuclear Engineering at Imperial College, London.

DISCIPLINARY KNOWLEDGE COURSES
Students can take four or five courses from relevant disciplines such as Electrical, Mining, Civil and Mining Engineering, or Maths and Physics, with approval from the school. Here is a typical sample list of subjects for an electrical engineer:
- Power System Equipment
- Power System Analysis
- Electricity Industry Planning
- Electricity Industry Operation
- Sustainable Energy Technology Assessment

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Students must take:
- Introduction to Nuclear Engineering
- Reactor Physics for Engineers
- Fuel Cycle, Waste Management & Life-cycle Management

Students can choose one or two advanced electives:
- Nuclear Safety, Security & Safeguards
- Uranium Mining Fundamentals

Electives
See page nine for details.

Research
See page nine for details.

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This degree has widened my outlook on the nuclear industry – particularly in power generation – and has connected me with international experts. It’s bridged the gap in my understanding between the physics and real-world applications of engineering, too. Working at the Australian research reactor, OPAL, it is important to have such an understanding. Plus this was the only course that could help me learn more about nuclear power.

– ALLY RABALIKO

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FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

CONTACT US

eet.unsw.edu.au / eet@unsw.edu.au / +61-2-9385-4000
Master of Engineering Science (Petroleum Engineering)

This popular program caters for those already working in the industry who want to deepen their knowledge and improve their technical understanding of Petroleum Engineering.

DISCIPLINARY KNOWLEDGE COURSES
Students must take:
- Reservoir Engineering A

Choose three courses from:
- Overview of the Petroleum Industry
- Introduction to Petrophysics
- Petroleum Geology
- Petroleum Geophysics

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Choose five courses from:
- Well Pressure Testing
- Numerical Reservoir Simulation
- Field Development Geology
- Well Drilling Equipment & Operations
- Natural Gas Engineering
- Petroleum Production Engineering
- Drilling Fluids & Cementing Techniques
- Well Completions & Simulation
- Reservoir Characterisation
- Drilling Systems Design
- Enhanced Oil Recovery
- Reservoir Engineering
- Geomechanics A
- Petroleum Geomechanics B
- Formation Evaluation
- Blow Out Control & Prevention
- Coal Seam Gas Engineering

Electives
Students take two Technical Management courses, plus two other electives: refer to page nine for details.

Research
Refer to page nine for details on the research requirements for Petroleum Engineering.

"I’d love to work in the office and the field; from offshore to onshore; from conventional to unconventional. It would be great if I can work in Australia, but I will also be able to work all around the world without having to re-qualify. Plus the Petroleum industry underpins many other industries out there. I have been given many opportunities to connect and learn from employers at several industry networking events at UNSW. This included a field trip to Perth and the annual Petroleum Dinner."

VINH TRUONG

Petroleum Open Learning Program

Our Petroleum Open Learning Program is designed to provide students with the skills and knowledge they need to meet the demands of working in the oil and gas industries. Professionals often work in remote locations and can’t attend usual university programs. So online learning students are now working all over the world.

This includes Australia, New Zealand, Indonesia, Malaysia, Brunei, Singapore, Taiwan, Thailand, Vietnam, China, India, Oman, Yemen, South Africa, The Netherlands, Spain, England, Scotland, Canada and the USA. The UNSW School of Petroleum Engineering has worked with the industry to structure the following programs so they can be delivered online:
- Master of Engineering Science
- Graduate Diploma of Engineering Science
- Graduate Certificate of Engineering Science

For more details, contact the School: petrol.unsw.edu.au.
Photovoltaics and Renewable Energy

Engineers interested in the burgeoning photovoltaics and renewable energy industries can choose advanced postgraduate study options at UNSW Engineering. Students can develop their existing skills or refocus in the direction of renewable energy technologies, systems and integration with existing energy systems.

Master of Engineering Science (Photovoltaics and Solar Energy)

This specialisation suits engineers from other disciplines and includes courses about photovoltaic devices and systems, its applications and also its integration with electricity systems.

DISCIPLINARY KNOWLEDGE COURSES

Choose three to five courses from:
- Low Energy Buildings & Photovoltaics
- Solar Cell Technology & Manufacturing
- Solar Cells
- Grid-Connected Photovoltaics
- Sustainable Energy in Developing Countries
- Photovoltaics

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students must take:
- Advanced Photovoltaic Manufacturing
- Advanced Solar Cell Characterisation
- Advanced Photovoltaics

Choose up to two courses from:
- Hybrid Renewable Energy Systems
- Stand-Alone System Design & Installation
- Managing Energy Efficiency
- Photovoltaic Materials Processing Technology

Master of Engineering Science (Renewable Energy Engineering)

This specialisation suits engineers attracted to the renewable energy industry. Students undertake a number of targeted courses in renewable energy and energy efficiency.

DISCIPLINARY KNOWLEDGE COURSES

Choose three to five courses from:
- Low Energy Buildings & Photovoltaics
- Grid-Connected Photovoltaics
- Biomass
- Wind Energy Converters
- Energy Efficiency
- Photovoltaics
- Advanced Thermofluids

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students must take:
- Renewable Energy System Performance Modelling & Analysis
- Hybrid Renewable Energy Systems

Choose one to three courses from:
- Integrated Design Studio High Performance Buildings
- Solar Thermal Energy Design
- Electricity Industry Planning & Economics
- Electricity Industry Operation & Control
- Advanced Photovoltaics

Electives (both specialisations)

Please refer to page nine.

Research (both specialisations)

Please refer to page nine.

“...I chose this degree because I wanted the technical background to contribute to the clean energy revolution. My dream job is to do this by working for the Australian Renewable Energy Agency funding clean tech venture capital, developing innovative business models and creating an enabling policy environment. I loved presenting at the Asia-Pacific Solar Research conference on my exploration into the profitability of renewable energy generators in the future."

– OSCAR WILKIE

FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

CONTACT US

pv.unsw.edu.au / pv.course@unsw.edu.au / +61-2-9385-6848

PROGRAM OPTIONS

| Master of Engineering Science (Photovoltaics and Solar Energy) | SOLAC8338 | 2 YEARS | FEB & JULY |
| Graduate Diploma of Engineering Science (Photovoltaics and Solar Energy) | SOLAE5341 | 1 YEAR | FEB & JULY |
| Master of Engineering Science (Renewable Energy Engineering) | SOLAD8338 | 2 YEARS | FEB & JULY |
| Graduate Diploma of Engineering Science (Renewable Energy Engineering) | SOLAF5341 | 1 YEAR | FEB & JULY |
Master of Engineering Science (Project Management)

The program, developed with extensive industry consultation, covers the fundamentals and applications of Project Management, including planning, risk, contracts, people, equipment, materials, legal, finances and economics.

DISCIPLINARY KNOWLEDGE COURSES

Choose four courses from:
- Problem Solving for Engineers
- Operations & Projects
- Engineering Contracts
- Sustainability in Construction
- Rock & Slope Engineering
- Deformation Monitoring Systems
- Fundamentals of Traffic Engineering
- Groundwater Resource Investigation
- Geomechanics
- Advanced Topics in Geotechnical Engineering
- Advanced Concrete Structures
- Advanced Water Engineering
- Structural Dynamics
- Transport Systems – Part 1

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Choose four courses from:
- Project Planning & Control
- Management of Risk
- Project Management Framework
- Dispute Avoidance
- Problem Solving & Decision Making
- Engineering Economics & Financial Management
- Strategic Management for Engineering
- Design of Construction Operations
- International Project Management
- Human Resources Management – Contracts

Research

Students who have not completed a four-year degree with a thesis must complete a Masters thesis research component supervised by an appropriate academic.

Electives

You must choose at least one elective from the Engineering and Technical Management course options listed below:

We recommend:
- Engineering Economics & Financial Management
- Project Management Framework
- Environmental Management
- Sustainability Assessment & Risk Analysis

Other options, subject to eligibility:
- Urban Transport Planning Practice
- Transport Modelling
- Transport Systems – Part 1
- Traffic Management & Control
- Geotech Models & Site Investigations
- Geomechanics
- Advanced Foundation Engineering
- Slope Instability & Stabilisation
- Rock Engineering
- Geotechnical Engineering of Dams
- Surface Water Hydrology
- Urban Hydrology
- Catchment & WR Modelling
- Channels, Rivers & Estuaries
- Groundwater Hydrology
- Structural Stability
- Pre-stressed Concrete Design
- Reinforced Concrete Design
- Computational Structural Mechanics
- Steel Structures
- Advanced Materials Technology
- Water & Wastewater Analysis
- Water Treatment
- Wastewater Treatment
- Solid Waste Management
- Environmental Engineering Science 1
- Fundamentals of Geopositioning
- Fundamentals of Geomechanics
- Coastal Engineering
- Environmental Engineering Science 2
- Environmental Management
- Special topics equal to six units of credit
- Principles of Geographic Information Systems & Science
- Principles of GPS Positioning

FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

CONTACT US

civeng.unsw.edu.au / cven.enquiries@unsw.edu.au / +61-2-9385-5033
Satellite Systems Engineering

This program was designed with input from both the space industry and global leaders in education. The focus is on producing "industry savvy" professionals with knowledge of satellite engineering, from management and law, mission development, launch, operations and maintenance, through to satellite applications.

Master of Engineering Science (Satellite Systems Engineering)

This program focuses on the Systems Engineering aspect of satellites before delving into satellite applications. Through care and elective courses, and a year-long practical project, students gain a comprehensive foundation in Satellite Systems Engineering from the space segment to the ground-based operations, and typical applications.

DISCIPLINARY KNOWLEDGE COURSES

Students must take:
- Space Systems Engineering
- Space Systems Architectures & Orbits
- Space Mission Development
- Space Law & Radio Regulations

Choose one course from:
- Advanced Aerospace Structures & Vibrations
- Principles of GPS Positioning
- Mobile & Satellite Communications Systems

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students must take:
- The Space Segment
- The Ground Segment & Space
- Space Applications 1
- Satellite Applications 2

Choose one course from:
- Digital Image Processing
- Remote Sensing Applications
- GPS Receivers
- Satellite Navigation
- Requirements Engineering

Electives
See page nine for details.

Research
Students must complete a major research project across two semesters, guided by an academic.

Currently I’m working with ACSER on the QB50 project, in which UNSW will launch one of 50 CubeSats (20cm long nano-satellites) in late 2016 as part of an international collaborative research activity. So far it has given me some excellent hands-on experience in satellite development, integration and testing activities. It has provided a perfect complement to the more theoretical aspects of my postgraduate coursework.

– TIM BROADBENT
Master of Engineering Science (Structural Engineering)

This program allows students to develop advanced professional skills in computational analysis and design of steel, and in reinforced, composite and pre-stressed concrete structures.

DISCIPLINARY KNOWLEDGE COURSES
Students choose at least four courses from:
- Design Practice A
- Operations & Projects
- Engineering Contracts
- Sustainability in Construction
- Rock & Slope Engineering
- Ground Improvement & Monitoring Techniques
- Advanced Topics in Geotechnical Engineering
- Advanced Concrete Structures
- Structural Dynamics
- Deformation Monitoring Surveys

ADVANCED DISCIPLINARY KNOWLEDGE COURSES
Students choose at least four courses from:
- Structural Stability
- Pre-stressed Concrete Design
- Computational Structural Mechanics
- Reinforced Concrete Design
- Steel & Composite Structures
- Advanced Materials Technology

Electives
Students choose at least one subject from the Engineering and Technical Management courses. All other electives can complement a student’s interests.
We recommend:
- Engineering Economics & Financial Management
- Project Management Framework
- Environmental Management
- Sustainability Assessment & Risk Analysis

Other possibilities:
Transport Engineering
- Urban Transport Planning Practice
- Transport Modelling
- Transport Systems – Part 2

Project and Construction Management
- Management of Risk
- Design of Construction Operations

Geotechnical Engineering
- Geotechnical Models & Site Investigation
- Geomechanics
- Advanced Foundation Engineering
- Numerical Methods in Geotechnical Engineering
- Slope Instability
- Rock Engineering
- Pavement Engineering
- Geotechnical Engineering of Dams

Water Engineering
- Surface Water Hydrology
- Urban Hydrology
- Catchment & Water Resources Modelling
- Rivers, Marshes & Estuaries
- Groundwater Engineering
- Coastal Engineering
- Water & Wastewater Analysis

Research
Students who have not completed a four-year degree that included a thesis must complete a Masters thesis research component, supervised by an appropriate academic, in an area in which they are passionate.
Sustainable Systems

Ready to take Environmental Engineering to the next level? This is what Sustainable Systems Engineering and industrial ecology is all about. This new discipline examines how engineers discover holistic and effective solutions to unsustainable practices in the modern world.

Master of Engineering Science (Sustainable Systems)

This program enables students to specialise and gain a deeper knowledge across a broad range of disciplines, including Sustainable Systems Engineering, industrial ecology, sustainability and environmental sciences, and sustainability management. Core subjects are coupled with a choice of electives from several UNSW faculties.

DISCIPLINARY KNOWLEDGE COURSES

Students must take:
- Ethics & Leadership in Engineering
- Energy Efficiency
- Environmental Principles & Systems
- Engineering Computations for Civil Engineers
- Transport Engineering & Environmental Sustainability
- Engineering Computations for Environmental Engineers
- Sustainable Transport & Highway Engineering
- Water & Wastewater Engineering
- Environmental Frameworks, Law & Economics
- Solid Wastes & Contaminant Transport
- Environmental Engineering Practice
- Sustainability in Construction
- Advanced Water & Wastewater Treatment
- Planning Sustainable Infrastructure
- Hazardous Waste Treatment
- Sustainable Land Development
- Society, Environmental Policy & Sustainability
- Tools for Environmental Management
- Environmental Management: Law Fundamentals, Physical Science Fundamentals & Social Science Fundamentals
- Sustainable & Renewable Energy Technologies
- Low Energy Buildings & Photovoltaics

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students must take two advanced courses:
- Industry Ecology & Sustainable Engineering
- Engagement Values Environment
- Sustainable & Renewable Energy
- Resources, Materials & Sustainability

Students choose one course from:
- Sustainability Assessment & Risk Analysis
- Life Cycle Engineering
- Life Cycle Assessment

Students choose one or two courses from:
- Wastewater Treatment
- Solid Waste Management
- Hazardous Waste Management
- Environmental Management
- Environmental Impact Assessment
- Managing Energy Efficiency
- Energy Storage & Alternative Generation
- Operational Energy Efficiency
- Energy Efficient Lighting & Equipment
- Sustainable Elec. Energy Technology Assessment
- Frameworks for Environmental Management
- Scenario Development & Analysis for Sustainability
- Sustainable & Renewable Energy
- Resources, Materials & Sustainability

Electives*

Students take four courses in sustainability management and implementation from an extensive list. Themes covered include; assessing and interpreting sustainable development, reporting and promoting sustainability, sustainable management of natural, man-made and human resources, and policies and solutions.

General focus
- Problem Solving & Decision Making
- Principles of GI Systems & Science or Geospatial Information Science
- Engineering Statistics & Experimental Design
- Managing Greenhouse Gas Emissions
- Time Series
- Introduction to Probability & Stochastic Processes
- Imperatives for a Sustainable Future
- Sustainable Development & the Urban Environment
- Energy & the Built Environment

Corporate focus
- Engineering Economics & Financial Management
- Human Resources Management
- Management of Risk
- Strategic Management for Engineering

I wanted to contribute to a field that was constantly being improved and reinvented, and make a positive contribution to the wellbeing of people at the same time. I’d love to start my own business designing off-the-grid, zero net energy homes. Yet this degree is so diverse that different opportunities always arise. Being president of one of the student societies has been great fun and very fulfilling, too. It is fantastic to have something in which to strive for excellence both in and out of the classroom.

- JACK BLACKWELL

FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

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PROGRAM OPTIONS

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<th>DURATION</th>
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<tr>
<td>Master of Engineering Science (Sustainable Systems)</td>
<td>ENGGAS8338</td>
<td>2 YEARS</td>
<td>FEB &amp; JUL</td>
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* You may select one Engineering and Technical Management elective from the consolidated faculty list with approval.

Research

Refer to page nine for details.
Telecommunications

For those working in the booming Telecommunications industry, or those who can see its potential, there’s no better way to gain a leading edge than through postgraduate study in this degree. Our programs provide advanced training in the latest in industry theory and application.

Master of Engineering Science
(Telecommunications)

This program focuses on recent and advanced aspects of Telecommunications, including protocols used in networks such as the internet, the operation and control of these kinds of networks, and the design and operation of their switches and routers. It also covers aspects of advanced wireless communications, such as modulation and coding techniques, and information theory.

DISCIPLINARY KNOWLEDGE COURSES

Students choose four or five courses from:
- Microelectronic Design & Technology
- Power System Analysis
- Advanced Digital Signal Processing
- Network Systems Architecture
- Network Operations & Control
- Advanced Wireless Communication
- Coding & Information Theory
- Microwave Circuits, Theory & Techniques
- Advanced Networking
- Quantum Communications

ADVANCED DISCIPLINARY
KNOWLEDGE COURSES

Students choose three or four courses from:
- Network Systems Architecture
- Switching Systems Architecture
- Network Operations & Control
- Advanced Wireless Communication
- Coding & Information Theory
- Microwave Circuits, Theory & Techniques
- Advanced Networking
- Quantum Communications
- Digital Modulation & Coding

Electives

Refer to page nine for details.

Research

Refer to page nine for details.

As we come up with new ways to connect with each other and the world around us in this rapidly developing industry, we need telecommunications engineers to build and maintain the networks of the future. I hope to work on the cutting edge of networking technology. So far I’ve found the design-focused subjects the most fun. There’s nothing more satisfying than going through all the trials and tribulations, and then ending up with a working product.

- ADELINE YEUNG

Master of Engineering
(Telecommunications)

The two-year Master of Engineering degree is for students who want to develop their technical knowledge and skills, and enter their profession with a degree accredited with Engineers Australia.

DISCIPLINARY KNOWLEDGE COURSES

Students choose six courses from:
- Principles of GPS Positioning
- Optical Circuits & Fibres
- Photonic Networks
- Network Performance
- Wireless Communication Technology
- Mobile & Satellite Communications System
- Digital Modulation & Coding
- Strategic Leadership & Ethics
- Entrepreneurial Engineering

ADVANCED DISCIPLINARY
KNOWLEDGE COURSES

Students choose five courses from:
- GPS Receivers
- Receivers & Systems
- GeoIT & Infomobility Applications
- Network Systems Architecture
- Network Operations & Control
- Advanced Wireless Communications
- Coding & Information Theory
- Microwave Circuits, Theory & Techniques
- Advanced Networking
- Quantum Communications

- GPS Receivers
- Receivers & Systems
- GeoIT & Infomobility Applications
- Network Systems Architecture
- Network Operations & Control
- Advanced Wireless Communications
- Coding & Information Theory
- Microwave Circuits, Theory & Techniques
- Advanced Networking
- Quantum Communications

Engineering and Technical Management

Students choose two courses from:
- Project Management
- Ethics & Leadership in Engineering
- Successful Innovation
- Project Management

Design

- Design Proficiency

Research

- ME Project A
- ME Project B

Work experience

Students must also complete 60 days of relevant industrial experience.

UNSW Electrical Engineering and
Telecommunications facilities

The School of Electrical Engineering and Telecommunications has a collection of facilities and labs that support faculty research, and enhance the learning experience of students. These include:
- High voltage
- Power electronics and drives
- Renewable energy systems
- Signal processing
- Mobile communication
- Communication networks
- Semiconductor nanofabrication facility (SNF)
- CAD facilities
- Fibre optic fabrication facility
- Polymer optical fibre fabrication facility
- Optical waveguide fabrication facility
- Photonics facility
- FBG fabrication facility
- Industrial and process control
- Systems neuroscience & Biomedical Engineering
- Vision and control laboratory

For further information, visit the School’s website: eet.unsw.edu.au.
Transport Engineering

With increases in population and urban sprawl, the need for safe, quick, reliable and efficient transport systems has never been more important. This discipline looks at the planning, functional design, operation and management of transport infrastructure, with a focus on its economic and environmental impact.

Master of Engineering Science (Transport Engineering)

This program provides students with advanced study options in Transport Engineering. This ranges from transport planning, ITS and land use and risk management and safety, through to network design, demand estimation and sustainability, emissions and health. It’s designed to develop skills in modelling and analysing systems (including passenger and freight) for all types of transport.

DISCIPLINARY KNOWLEDGE COURSES

Students choose at least four courses from:

- Engineering Contracts
- Deformation Monitoring Surveys
- Sustainability in Construction
- Rock & Slope Engineering
- Transport Systems – Part 1

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students must take:

- Urban Transport Planning
- Transport Modelling
- Transport Systems – Part 2
- Traffic Management & Control

Electives

At least one subject must be taken from the Engineering and Technical Management courses, subject to eligibility.

We recommend:

- Engineering Economics & Financial Management
- Project Management Framework
- Environmental Engineering Science 2
- Transport, Land Use & the Environment
- Principles of Programming
- Data Structures & Algorithms
- Econometric Analysis
- Choice Modelling
- GPS Positioning
- Precise GPS Positioning
- Optimisation
- Multivariate Analysis
- Transport Applications of GIS
- Aviation Safety & Accident Prevention
- Air Traffic Management
- Safety Risk Management
- Aviation & Tourism

Research

Students who have not completed a four-year degree including a thesis must complete a Masters thesis research component that gives them the opportunity to broaden their understanding of a topic under the supervision of an appropriate academic.

Working for almost nine years on road concession projects – in everything from operation to management – I realised that to progress my career I needed to formalise my professional knowledge. There are so many interesting courses to choose from at UNSW, and those I’ve taken so far are practical and reflective. This degree provides a continuous stream of learning which I believe is more efficient from a real world perspective.

– VANESSA CALDERON

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<tr>
<td>CVENBT5341</td>
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FOR ENTRY REQUIREMENTS, A FEE GUIDE AND APPLICATION INSTRUCTIONS, SEE PAGE 34

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Water Engineering: Catchment to Coast

This discipline looks at the full cycle of water in natural and engineered systems. It’s best suited to practising water engineers and recent graduates planning a career in large-scale water engineering.

Master of Engineering Science (Water Engineering: Catchments to Coast)

Taught by industry leaders, this program provides advanced study options in large-scale water engineering such as surface water hydrology, urban hydrology and stormwater management, catchment and water resources modelling, groundwater investigations, and hydrodynamics of rivers and estuaries. You will also study Coastal Engineering related to waves, beaches and infrastructure.

DISCIPLINARY KNOWLEDGE COURSES

Students choose at least four courses from:

- Design Practice A
- Operations & Projects
- Engineering Contracts
- Sustainability in Construction
- Rock & Slope Engineering
- Advanced Topics in Geotechnical Engineering
- Ground Improvement & Monitoring Techniques
- Advanced Concrete Structures
- Structural Dynamics
- Deformation Monitoring Surveys
- Groundwater Investigations
- Advanced Water Engineering
- Fundamentals of Water Engineering*

* Must be chosen by students without an adequate background in Water Engineering

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students choose at least four courses from:

- Urban Hydrology
- Catchment & Water Resources Modelling
- Channels, Rivers & Estuaries
- Groundwater Engineering
- Coastal Engineering

Electives

At least one course must be taken from the Engineering and Technical Management courses, subject to eligibility.

We recommend:

- Engineering Economics & Financial Management
- Project Management Framework
- Environmental Management
- Sustainability Assessment & Risk Analysis

Other possibilities:

- Project and Construction Management
- Geotechnical Engineering
- Geotechnical Models & Site Investigation
- Geomechanics
- Advanced Foundation Engineering
- Numerical Methods in Geotechnical Engineering
- Slope Instability
- Rock Engineering
- Pavement Engineering
- Geotechnical Engineering of Dams

Structural Engineering

- Structural Stability
- Pre-stressed Concrete Design
- Reinforced Concrete Design
- Computational Structural Mechanics
- Steel & Composite Structures
- Advanced Materials Technology

Transport Engineering

- Urban Transport Planning Practice
- Transport Modelling
- Transport Systems – Part 2
- Water & Wastewater Analysis

Research

Students who did not do a four-year degree that included a thesis must complete a Masters thesis research component supervised by an appropriate academic.

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Water, Wastewater and Waste Engineering

Effective and sustainable water and wastewater treatment are crucial for urban populations, as is environmentally responsible waste management. For engineers and other professionals interested in expanding their knowledge and skills, our programs cover current and future technologies for water usage, wastewater treatment and waste disposal.

Master of Engineering Science (Water, Wastewater and Waste Engineering)

This specialisation provides technical professionals with the opportunity to learn the fundamentals of current practices in this field and to engage with existing and future technologies.

DISCIPLINARY KNOWLEDGE COURSES

Students choose at least four courses from:

- Design Practice A
- Groundwater Investigations
- Sustainable Infrastructure
- Advanced Water Quality Principles
- Deformation Monitoring Surveys
- Fundamentals of Water Engineering*

* Must be chosen by students without an adequate background in water engineering

ADVANCED DISCIPLINARY KNOWLEDGE COURSES

Students choose at least four courses from:

- Solid Waste Management
- Hazardous Waste Management
- Water Treatment
- Wastewater Treatment
- Water & Wastewater Analysis

Electives

Students choose at least one subject from the Engineering and Technical Management courses, subject to eligibility. We recommend:

- Environmental Management
- Sustainability Assessment & Risk Analysis

Other possibilities:

- Environmental Engineering Science 1
- Environmental Engineering Science 2
- Surface Water Hydrology

Research

Students who have not completed a four-year degree that included a thesis must complete a Masters thesis research component that gives them the opportunity to deepen their understanding of a topic that they are passionate about. An appropriate academic will supervise the research.

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Apply for a postgraduate research program in five easy steps

UNSW connects students with the country’s best engineering researchers in their chosen field. Here’s how to apply in five easy steps:

1. Find a Research Area
   - Before applying for a postgraduate research program, match your area of interest with those offered by our schools. A list of research areas can be found at unsw.to/researcharea
   - Each research program has specific entry and eligibility requirements. You can get more details here:
     - Doctor of Philosophy (PhD): unsw.to/research-doctor-philosophy-phd
     - Masters by Research (MRes): unsw.to/research-master-research
   - Further information can be found in the UNSW Handbook, at handbook.unsw.edu.au/research/2016/ (enter current year in URL above)

2. Find a Supervisor
   - Before submitting an application, you must independently contact a UNSW researcher and secure their agreement to supervise your work. Proof of that correspondence needs to be included in your application. If you’re having difficulty finding a researcher, contact the School’s postgraduate research coordinator.
   - Search help: unsw.to/researcher

3. Develop a Research Proposal
   - Your proposal needs to be sufficiently detailed in order to enable the University to determine if it’s possible to provide adequate supervision and resources to support your research.
   - For more information, visit: unsw.to/research-proposal

4. Prepare Supporting Documentation
   - Some of the documents you may be required to provide include your supervisor’s agreement, research proposal, resume, all transcripts (degree results) and any English language test results. Documents must be in English or include a certified English translation.
   - For more information, visit: unsw.to/research-documentation

5. Submit your Application Online
   - Once you have secured a supervisor, developed a proposal and prepared supporting documents, you can lodge your documents online. International students need to apply for admission and scholarships at least six months before their planned starting semester.
   - For more information visit: unsw.to/research-apply

Useful Tips and Links

- What happens when I get an offer?
  Successful applicants will be sent a full or conditional offer, which should be read carefully before acceptance. You will then need to enrol for the correct semester and have the enrolment form approved by the School. To accept an offer, visit my.unsw.edu.au

- How much will it cost?
  For the duration of the degree, international candidates are required to pay tuition fees – see international.unsw.edu.au/fees. While domestic candidates are not required to pay tuition fees, some programs may include additional costs for laboratory kits and field trips. All students need to pay a Student Services and Amenities Fee (SSAF) to support the delivery of student services. For more, visit: unsw.to/research-fees

- Can I get a scholarship?
  There are many scholarships available for postgraduate research programs, from UNSW, the Australian government, industry partners and organisations from other countries. For more, visit: unsw.to/research-scholarships

- What are the English requirements?
  All applicants must meet the UNSW English Language admission requirement. For more, visit: unsw.to/research-english-policy

- More Questions?
  For further information about the Graduate Research School, see unsw.to/research-FAQs

- Research Applications
  Graduate Research School
  T: +61-2-9385-5500
  E (Domestic): domestic.grs@unsw.edu.au
  E (International): international.grs@unsw.edu.au

- More Tips and Links
  - For a list of research areas, visit: unsw.to/researcharea
  - For a list of supervisors, visit: unsw.to/researcher
  - For more information about the research proposal, visit: unsw.to/research-proposal
  - For more information about supporting documentation, visit: unsw.to/research-documentation
  - For more information about applying online, visit: unsw.to/research-apply
A guide to accommodation at UNSW

Living and studying at UNSW is an unforgettable experience; you’ll meet people from all over the world and make lifelong friends. You can live within walking distance of your lecture halls in Sydney’s charming eastern suburbs, which is only minutes away from the city’s famous beaches.

Our redeveloped and award-winning on-campus accommodation ensures we are now the largest provider of student housing in Sydney. We have six residential colleges, four self-catered apartment buildings and multiple affiliated communities. Each UNSW college and apartment has its own unique culture, identity and community to enjoy.

Colleges

Colleges provide a choice of full board, partly-catered and self-catered style accommodation. There is also a range of gender options including male only, female only, and mixed male and female accommodation. In most colleges, dietary requirements like halal, kosher and vegetarian can be catered for. For more info visit: housing.unsw.edu.au

Apartments

Apartments provide an independent style of accommodation for undergraduates, postgraduates, couples and families with children. Apartments can come furnished with a kitchen and a bathroom. Costs will vary depending on the number of bedrooms, their condition and location. For more information, make your way to: housing.unsw.edu.au

Private accommodation options

From apartments to rooms in houses, private accommodation options give students the chance to experience an independent lifestyle with complete control over expenses, housemates and location.

Rental property

There are a lot of properties for rent in the suburbs surrounding UNSW. Costs vary according to the number of bedrooms, their condition and location. When renting, you can expect to sign a six or twelve month lease and pay rent in advance, plus a security deposit called a “bond.” Rental properties can come furnished or unfurnished, and additional expenses like electricity, gas, telephone and Wi-Fi are not included. Costs vary and range from AU$150 – AU$300 per student, per week in a shared house.

Homestay – full board and room-only

Homestay options include full board and single room-only accommodation. Full board usually includes a furnished room, facilities use in the private home of a family or individual, plus meals. Some may also include bed linen, a laundry service and weekly room cleaning. Single room-only homestays include a furnished room, gas and electricity expenses, and you’ll be responsible for your own food, cooking, cleaning, laundry and telephone costs. Costs usually range from AU$180 – AU$305 per student, per week.

For more information, visit: housing.unsw.edu.au

Top Tips

Arrive Early

Living in Sydney will be an exciting change in your life! If you don’t have a confirmed place on campus to stay, we recommend you arrive three to four weeks before classes start to allow enough time to look for accommodation, settle in and attend orientation sessions. There are a number of accommodation options, either on or off campus, and from University housing to private rental properties and homestays in which to live.

Temporary Accommodation

If you require temporary accommodation when you first arrive, try to organise it before you leave home. This can include private hotels, motels, hostels, lodges or furnished apartments, which can range in price from AU$45 to AU$300 per day.

International Student Housing Assistance (ISHA)

If you need help with temporary or private accommodation, or if University accommodation isn’t available when you apply, Student Development International (SDI) may be able to help. For more information, visit: student.unsw.edu.au/housing-assistance

Frequently asked questions

There’s a lot to think about when deciding on the university and degree that can take your career to the next level. While we’ve aimed to cover as much information as possible in this guide, we thought we’d provide some additional answers to the most common questions asked by prospective students.

What is FEE-HELP?

FEE-HELP is a loan scheme that assists eligible fee paying students to pay all or part of their tuition fees. It cannot be used for additional study costs such as accommodation or text books. The Australian Government does not subsidise fee paying places. Instead, it provides access to the FEE-HELP loan scheme to help eligible fee paying students with paying their tuition fees, up to the FEE-HELP limit. Full details are available at the Study Assist website studyassist.gov.au

When can I start my course?

Most programs offer a Semester 1 (February) or Semester 2 (July) start.

When is the final date I can apply?

- Semester 1 (February) – due by November 30
- Semester 2 (July) – due by May 30

Late applications may be accepted after the closing dates subject to the availability of places. Please note that whilst we endeavour to process applications quickly, due to time constraints it cannot be guaranteed a late application will be processed in time for Semester commencement.

Where can I find additional course information?

For information on course descriptions, program structures and specialisations visit: handbook.unsw.edu.au

What is the delivery mode?

Most courses are offered face-to-face at the UNSW Kensington campus. Some courses are offered online or in Intensive mode, particularly those courses in the Computing, Petroleum, Mining and Civil Engineering disciplines. For more information, please see handbook.unsw.edu.au

Are there flexible study options?

Some of our postgraduate courses are offered in the evening, usually between 6:00pm and 9:00pm. These are designed to accommodate those with full-time employment. Some programs also offer courses via Distance and Intensive mode.

What is a typical study load for working adults?

If you’re employed full-time, you’ll typically study one or two courses per semester. Each course requires students to study approximately ten hours per week, including face-to-face classes and independent, self-directed study.

What about Commonwealth Supported Places?

Limited postgraduate Commonwealth Supported Places are available to eligible Australian students for UNSW programs. This is a higher education place for which the Government makes a contribution towards the cost of the student’s education. Students pay a Student Contribution amount (previously known as HECG charges), which varies depending on the course. Commonwealth supported places are subject to availability at the time of application. CSPs are limited so apply early. To find out whether a program has CSPs available, please refer to unsw.foqs.

For more information visit: rc.unsw.edu.au