Faculty of Engineering
UNSW Australia
Sydney NSW 2052 Australia

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Welcome to UNSW Engineering

There are many people who can imagine the world to come, but it takes an engineer like you to make the future real.

It doesn’t matter which career path excites you the most, because the influence of engineering knows no bounds. People will turn to you as an engineer to solve problems and to improve our society, whether your passion is construction, economics, technology, energy, manufacturing or medicine. Engineers are creating intelligent machines (mechatronics), bionic limbs (biomedical engineering) and harnessing geothermal energy (petroleum engineering) to name just a few exciting examples.

UNSW Engineering is consistently ranked as the number one engineering faculty in Australia and one of the top 50 in the world.* As a student you will be inspired by some of the brightest engineering students in the country. Our student-led projects are the most highly regarded in Australia and are internationally renowned for their sophistication, variety and success. They include the world record-breaking iUNSWift solar car, the world champion RoboCup team and the amazing UNSW Redback Racing team.

As a UNSW Engineering graduate, you will be highly sought after in Australia and internationally. Your career opportunities will be enhanced through our strong industry partnerships and an extensive international alumni network.

If you’re looking to make an impact and improve the world we live in, we’ll be happy to help show you the way.

Professor Mark Hoffman
Dean of Engineering

A degree that gives you options

What do you think of when you think of engineering? Flying in a zero-gravity simulator? Trekking across the wonders of Antarctica? Perhaps it’s breaking the land-speed record in a solar-powered car or sending satellites into orbit? Maybe you imagine fossicking deep below the ground in huge caverns, or among microscopic human cells creating life-saving drugs? Well, you should think of all these things, and plenty more.

Completing a degree in engineering is about building the foundation you need to launch into a vast number of exhilarating careers that have a tangible and valuable impact on the way we live. It will ask you to master that have a tangible and valuable impact on the way we live. It will ask you to master

Great engineers change the world. By picking up this guide, you have taken the first step towards an exciting, enriching and enjoyable career in engineering. You will be surprised at all the incredible places it can take you.

By choosing UNSW Engineering, you will work alongside the brightest engineering students in the country. Our student-led projects are the most highly regarded in Australia and are internationally renowned for their sophistication, variety and success. They include the world record-breaking iUNSWift solar car, the world champion RoboCup team and the amazing UNSW Redback Racing team.

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Professor Mark Hoffman
Dean of Engineering

Valuable skills in any career

Engineering is diverse, versatile and fun. Once you graduate, the options can be staggering. In fact, many CEOs have a degree in engineering, having picked up the knowledge and skills needed to solve problems a company may face.

The skills you learn in engineering can be used in any industry and any job. Engineers shape the future, from medicine to renewable energy, and food technologies to sustainable mining.

There is no limit to what an engineer can do.

Solving tomorrow’s problems today

UNSW Engineering graduates are:

- Working alongside NASA to launch Earth observation satellites
- Solving sanitation problems in developing countries
- Revolutionising drug delivery in cancer treatments
- Helping switch on the Southern Hemisphere’s largest solar photovoltaic power station
- Developing wound-healing bandages
- Enhancing the taste, nutrition and safety of our foods
- Adopting artificial intelligence to improve transport networks
- Developing a watch for the elderly that contains a fall-detection alarm
- Helping to restore degraded wetlands
- Pioneering a robotic tractor and seeding machine
- Launching a low-cost wastewater treatment system built from recycled materials
- And so much more ...

* 2014 ARWU/SHEJ rankings place UNSW Engineering at number 1 in Australia and number 42 in the world.

Tsing Lee
Mechanical Engineering/Biomedical Engineering

I thought that doing engineering would just lead to a job as an engineer, but that is not true at all. I have been looking into management consulting, as well as jobs in the research field. After starting my program, I no longer just want a career as an engineer, but I also want to try my hands at other fields as well.

Hungry for innovation?

Our e-magazine, available at unswengineers.net, features more UNSW Engineering innovations.

Also visit our Facebook page: search “UNSW Engineering”.

Why engineering?
Amazing hands-on opportunities

There are many student-led engineering projects at UNSW Australia to help you gain valuable leadership and management skills. Each school offers the chance to engage in projects that will challenge you, hone your teamwork skills and let you have some fun with real-world engineering while studying. Here are some of our favourites ...

Redback Racing
Opportunity: Building and driving a racing car

UNSW Redback Racing is a student-led team that designs, constructs and races an open-wheeled racing car. Every year since 2000, the team has competed in the challenging Formula SAE Australasian competition run by the Society of Automotive Engineers. Each team in the competition is also judged on its car’s performance, fuel consumption, design, cost to manufacture and commercial viability. Students from all engineering disciplines at UNSW Australia work together to gain manufacturing experience, but also get to put their design theory into practice and develop leadership, management and communication skills. The UNSW Redback Racing team has been rewarded with several top-five positions, with the racer clocking speeds of up to 150km/h.

BLUESat
Opportunity: Space engineering

The BLUESat Group at UNSW Australia creates practical engineering projects to give undergraduate students hands-on experience in space technology. Current projects include a microsatellite test flight on a stratospheric balloon, and a rover suitable for asteroid, lunar and Mars-like environments.

There are exciting opportunities for students from a wide variety of engineering backgrounds, across all years.

[www.bluesat.unsw.edu.au](http://www.bluesat.unsw.edu.au)

sUNSWift
Opportunity: Developing the world’s first road-legal solar-powered sports car

sUNSWift is a UNSW Australia student-led project that began in 1996. It is helping to shape a clean-energy future by developing a practical solar sports car using existing technology. In doing so, it’s challenging current notions about renewable energy technology. In 2014, eVe, as the car is fondly known, broke a world speed record for the fastest long-range electric car, averaging 107km/h for more than 500km. Next? Seeing eVe on the road as a fully road-legal solar-powered sports car.

[www.sunswift.com](http://www.sunswift.com)

RoboCup
Opportunity: Designing world-champion autonomous robots

Do you believe a team of bipedal robots can beat the FIFA World Cup champions by 2050? The members of this student research project do. They code robots for RoboCup, an annual international tournament where the best universities in the world compete in “leagues” such as soccer, work, home and rescue. In 2014, the UNSW Australia team, rUNSWift, came home from Brazil as world champions. Aside from giving its team members a great time, the project aims to develop technologies to help humanity, from assisting mobility-challenged people around the home to finding and helping victims of a building collapse.


Robogals
Opportunity: Making engineering more accessible to women

Robogals is a student-run organisation that aims to increase female participation in engineering, science and technology through fun and educational initiatives aimed at girls in primary and secondary schools. There are chapters at 15 other universities in Australia, the UK, Ireland, Japan and the US. They help show the world how rewarding and enjoyable an engineering career can be.

[sydney.robogals.org.au](http://sydney.robogals.org.au)
Learn from the best

While thousands of our graduates enjoy fruitful careers around the globe, UNSW Australia attracts some of engineering’s best minds. They are the world’s leading researchers and are here to share their knowledge. Here are just a few of our great lecturers ...

**Associate Professor Andrea Morello**

**Expertise:** Quantum nanosystems

**Highlight:** His multi-award winning, cutting-edge quantum research won him the 2014 NSW Science and Engineering Award for Emerging Research.

**Future:** Creating powerful quantum computers capable of complex calculations in medical research, data security and modelling biological molecules and drugs. Andrea delights in sharing his research findings with students at UNSW Australia, which he describes as the “quantum capital of the world”.

**Doctor Alice Lee**

**Expertise:** Food manufacture and allergens

**Highlight:** Using nanotechnology to detect microorganisms, allergens and chemical traces in our foods to help make what we eat safer.

**Future:** To devise a rapid test for pathogens such as *Escherichia coli* (aka *E. coli*) and *Salmonella* - a breakthrough that could potentially save millions of lives.

**Associate Professor Richard Buckland**

**Expertise:** Computer security, cybercrime and cyberterror

**Highlight:** Teaching, face to face and online. He was the Australian ICT educator of the year in 2010 and the Engineering Educator of the Year for Australia and New Zealand in 2008.

**Future:** Passing on his love of education and learning.

**Doctor Megan Lord**

**Expertise:** Body integration of implantable devices

**Highlight:** Winning a NSW Young Tall Poppy Award for her work in developing materials that replicate tissue components and help medical devices integrate with the body.

**Future:** To continue her groundbreaking research, share her love of biomedical engineering with students, researchers and the community, and be an inspiration to women interested in engineering.

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Alumni changing the world

Did you know that UNSW Engineering graduates make up 18% of the top 100 most influential engineers in Australia? Here are just a few exciting stories ...

**Doctor Lydia Ng**

**BE in Electrical Engineering**

**BSc (Computer Science)**

**Job:** Director, Technology  +  **Company:** The Allen Institute

“The Allen Institute is a non-profit organisation (that served) the scientific community by creating resources to help understand the brain. I lead a team of data scientists and software engineers who turn hundreds of thousands of high-resolution serial sections of different brains into one unified resource. The fun comes after a large chunk of data has been processed: I love finding spatial relationships. We pivot, cluster, regress and correlate the data, creating maps of the brain, which are interesting scientifically and quite mesmerising.”

**Doctor Raji Ambikairajah**

**Bachelor of Engineering (Electrical) (Hons)**

**PhD (energy systems and smart grids)**

**Job:** Chief Operating Officer  +  **Company:** Women In Banking and Finance

“After completing her degree in 2008, Dr Raji Ambikairajah was snatched up by Personal Audio to work on MyEars technology, which combines neuroscience, psychophysics and digital signal processing to create true 7.1 headphone sound. She then worked for Room to Read, a non-profit aiming to transform the lives of millions of children through education, and with venture capitalists to ensure engineering strategy is at the forefront of new business. Currently, she promotes gender-balance opportunities in the finance sector.”

**Alex North**

**Bachelor of Science (Computer Science and Engineering)**

**Job:** Founder  +  **Company:** First Order

“Since graduating in 2006, Alex North has lectured in cryptography and security at UNSW Australia, founded Deep Grey Labs and JamCode, worked as a senior software engineer at Google, served as vice-president of engineering at start-up Posse and made award-winning apps. With a love of product and technology with commercialisation and start-ups.”

**Rami Banna**

**Bachelor of Engineering (Electrical and Telecommunications Engineering)**

**Job:** Consultant  +  **Company:** Star-ups all over the world

“Before finishing my degree I worked with Telstra and Alcatel-Lucent – thanks to UNSW’s excellent Co-op Program Scholarship. After graduating I worked with Lucent Micronetronics [later Agere Systems], designing the world’s first chips for 3G and 4G mobile phones. From there I branched into medical devices [implantable hearing aids] and product development, and last year I started an MBA at London Business School to combine my love of product and technology with commercialisation and start-ups.”

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The lecturers

The graduates

Alumni changing the world
Take your engineering degree further

An essential part of being a world-class university is offering its students the chance to get global experience.

After all, how can you make a world of difference without seeing the world? You may get the opportunity to work in North America, Asia, Europe, the Middle East … Why not head to a country where people don’t speak your native language? As well as experiencing a new culture, you might pick up a second language and open yourself up to even more career options.

Engineering students at UNSW Australia are actively encouraged to pursue interesting and contemporary educational experiences through international scholarships or industry placements overseas. We have connections with tertiary institutions around the globe and you may receive full credit towards your degree for your international achievements.

Student exchange destinations

- **Canada**
  - 8 tertiary institutions
- **USA**
  - 63 tertiary institutions
- **Canada**
  - 8 tertiary institutions
- **Latin America**
  - 3 tertiary institutions
- **Europe & UK**
  - 40 tertiary institutions
  - Austria: 1
  - Denmark: 3
  - France: 3
  - Germany: 5
  - Italy: 3
  - Norway: 2
  - Spain: 8
  - Sweden: 4
  - Switzerland: 6
  - Iceland: 1
  - Ireland: 1
  - UK: 7
- **Middle East**
  - 2 tertiary institutions
  - Israel: 2
- **New Zealand**
  - 1 tertiary institution
- **Asia**
  - China: 8
  - Hong Kong: 5
  - Japan: 2
  - Korea: 6
  - Malaysia: 1
  - Singapore: 21
  - Taiwan: 1
  - Thailand: 2

Globalise your study experience

- Exchange scholarships
- Internships overseas
- Volunteering opportunities
- Student exchange
- You may receive credit towards your degree
- Industrial training placements
- Short courses and study tours

Find out more

international.unsw.edu.au
+61-2-9385-7276
**Women In Engineering**

Major employers of engineering graduates recognise that workforce diversity is important for business success. This means female engineering graduates are in high demand.

UNSW Engineering has above-average female enrolments at 20 per cent (the national average is closer to 16 per cent) and we are actively recruiting women. We have set a goal of boosting female enrolments to 25 per cent by 2020.

UNSW Australia has a dedicated Women in Engineering Manager, Dr Alex Bannigan. She works in high schools and with university students, alumni and industry to encourage outstanding, qualified women to pursue engineering careers.

**What UNSW offers**

+ Workshops
+ Seminars
+ Networking events
+ Student societies
+ An extensive alumni network
+ Academic and career development

**Graduate profile**

Dr Jacqueline Thomas  
BSc/BA (Hons), PhD (civil engineering, water quality)

**Job:** Senior scientist – water, sanitation and hygiene research  
**Company:** Ifakara Health Institute, Tanzania

In Tanzania, 9 per cent of all deaths of children aged under five occur from diarrhoeal disease because of poor water supply and low level sanitation. Dr Thomas is working on hygiene interventions that reduce contamination of drinking water and make a real difference in developing countries. Her team is making affordable, chemically dosed ceramic water filters that are effective at removing bacteria and killing viruses. The system also collects and treats human waste for safe use in agricultural production and for creating fuel briquettes, replacing wood taken from cutting down virgin forests.

**Students under 18 years**

International students under the age of 18 are welcome at UNSW Australia, as long as they have appropriate accommodation and welfare arrangements. The conditions for these are regulated by the Department of Immigration and Border Protection to ensure a student’s safety and wellbeing and allow them to get a student visa.

[unsw.to/under18](http://unsw.to/under18)

**Assumed and recommended knowledge**

UNSW Engineering degrees list assumed knowledge and recommended studies in certain subject areas, such as mathematics and physics. If your child doesn’t have the assumed knowledge for a degree, they are not prevented from enrolling but may find it difficult to keep up. UNSW Australia provides bridging courses to assist and these can be taken before the start of your child’s degree.

**Settling in**

Student Development International (SDI) runs an airport pick-up service and a welcome centre for about four weeks before semester starts. Staff and peer mentors can assist your child to settle in Sydney and on campus.

[international.unsw.edu.au](http://international.unsw.edu.au)

**Student services**

The University is a self-contained community with cafes, food outlets, banks, a post office, medical and dental centres, a pharmacy and a newsagency. For more information, see pages 14–15.

**Study time**

UNSW Australia libraries provide students with access to a wide variety of resources and services. Libraries provide study spaces, group study rooms, presentation practice rooms and computer equipment. We also have a free campus-wide wireless network called Uniside and a number of online services for students.

**Safety comes first**

Sydney is a safe and friendly city, but UNSW Australia sees student safety and the security of personal property as high priorities. The campus has an all-hours security team that does foot and vehicle patrols, and has a security shuttle bus and safety escort services. There are also numerous help points with emergency phones.

**Student support and wellbeing services**

We understand that students can take a while to adjust to university life. So from the moment students arrive on campus we offer a wide range of support services, starting with our Getting Started and Orientation Week activities. Whether they’re having difficulty with their degree, paying bills, or balancing university with their work or social life, we have staff that can help them stay on track. For more information, see pages 18–19.

**Parent Information Guide**

UNSW Australia has produced a guide that provides the information you need to feel confident helping your child make a decision about where and what to study. It explains the benefits of attending UNSW Australia, includes a useful timeline and provides details on enrolments, costs, contacts and more.

[unsw.to/gfp](http://unsw.to/gfp)

**Contact:**

Dr Alex Bannigan, a.bannigan@unsw.edu.au  
[+61-2-9385-7458](http://+61-2-9385-7458)

For more information, see page 51.

**Bringing family**

The Bringing Family Guide assists students planning to bring their families to Australia. It provides information, links and resources relating to accommodation, childcare, schooling and employment for partners.

[http://unsw.to/family](http://unsw.to/family)

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**In good hands**

We understand that it’s important to you that your child makes the best decision for their future and finds a career that makes them feel happy, secure, successful and driven. UNSW Australia wants to help them make the most of their potential in a safe, welcoming environment.
Embracing the sights, sounds, tastes and events unique to campus life is an important way to get the most out of your university experience. Whether you’re into sport, music or meditation, or simply enjoy hanging out, our friendly and well-appointed campus caters to everyone.

Location
The main UNSW Australia campus in Kensington unfolds over a gorgeous, 38-hectare site. It is well signposted and maps are available, but we recommend taking the free one-hour campus tour. It’s conducted by our well-informed student ambassadors and runs on most Fridays, as well as the first Saturday of every month during university semesters. campustours.unsw.edu.au

Facilities
The University has everything you need – from cafes, food outlets and bars to banks, a bookshop, supermarket, newsagency and post office. We also have medical and dental centres, a pharmacy and optometry clinic plus a free counselling service.

In addition to our excellent library, The Hub gives our students a place to meet for study and group work activities or to catch up with friends. You’ll also find our professional student participation advisors there to help with welfare, study and uni-related matters. student.unsw.edu.au/facilities

Recreation
You can join one of more than 100 clubs and societies supported by Arc, UNSW Australia’s student organisation. It’s a great way to make friends who share your interests and become a part of the campus community. arc.unsw.edu.au

Peer mentoring program
We appreciate that it’s a big step starting university so to support new students we offer a peer mentoring program, where you can ease into uni life guided by a mentor during the starting month of your first semester. student.unsw.edu.au/peer-mentoring

The social scene
One of the most valuable benefits you can gain from studying engineering at UNSW Australia is building a large network of friends who are also future professionals in your field. These are people who may one day open doors to employment, or even co-found a company with you. Staying in touch with what’s on and fun around campus is easy, and it’s a great way to form friendships that will stay with you for life. studentlife.unsw.edu.au

The International Lounge
The International Lounge is a comfortable drop-in space for international students. It has computers, free internet access, study desks and a self-access space with resources. student.unsw.edu.au/international-lounge

Language and conversation skills
If you would like to further develop your language and conversation skills, we have a number of activities and programs to assist you. The UNSW Language Exchange Program allows you to meet other students and exchange language skills and cultural insights in a fun and relaxed environment. There are also English conversation classes and the Discussion Group Team. student.unsw.edu.au/language-and-conversation-skills

Social activities
Student Development International offers a range of social activities and programs to connect with the community, on and off campus. international.student@unsw.edu.au

Sport and fitness
The UNSW Sport and Recreation Centre has an indoor heated pool, steam room, gym, various fitness and training studios, tennis courts and squash courts – and offers a variety of sporting clubs to join. sportandrec.unsw.edu.au
UNSW Australia students have many accommodation options. These range from on- and off-campus university accommodation to private housing - rental properties and homestays.

**A home away from home**

- **Be prepared**
  Living in Sydney can be a big change for many students. If you don’t have a confirmed place on campus, we recommend you arrive three to four weeks before classes begin to look for accommodation and attend orientation sessions. If you need temporary accommodation when you arrive, try to organise it beforehand. Options include private hotels, motels, hostels, lodges or furnished apartments ranging from $45 to $300 per day.

- **International Student Housing Assistance (ISHA)**
  If you need help looking for temporary or private accommodation, Student Development International (SDI) may be able to assist. [www.student.unsw.edu.au/housing-assistance](http://www.student.unsw.edu.au/housing-assistance)

- **University accommodation**
  With six residential colleges, seven self-catered apartment buildings and affiliated communities, we have a range of on- and off-campus accommodation. Living in university accommodation close to campus offers greater security, social opportunities, easy access to university facilities and the convenience of moving into fully furnished accommodation. [www.rc.unsw.edu.au](http://www.rc.unsw.edu.au)

- **UNSW colleges**
  Residential colleges provide a choice of full board, partly catered and self-catered accommodation, as well as gender options. Dietary requirements like halal, kosher and vegetarian can be catered for. Costs range from $310 to $495 per week. [www.rc.unsw.edu.au/colleges/unsw-colleges](http://www.rc.unsw.edu.au/colleges/unsw-colleges)

- **UNSW apartments**
  Independently run university apartments are furnished and include a kitchen and bathroom. Apartments are available to suit singles, couples or families with children, and vary in cost depending on the number of rooms, condition and location. Costs range from $210 to $550 per week. [www.rc.unsw.edu.au/apartments/accommodation](http://www.rc.unsw.edu.au/apartments/accommodation)

- **Private accommodation options**
  Private housing gives students the chance to enjoy an independent lifestyle and control over expenses.

- **Rental property**
  Rental properties are available in nearby suburbs and the cost depends on the number of bedrooms, condition and location. When renting, expect to sign a six- or 12-month lease and pay rent in advance, plus a refundable security deposit called a “bond”. Most properties are unfurnished and electricity, gas and telephone charges are not included. Costs range from $150 to $250 per week in a shared house. [www.international.unsw.edu.au/living-sydney/accommodation/private-accommodation](http://www.international.unsw.edu.au/living-sydney/accommodation/private-accommodation)

- **Homestays**
  Options include full board and single room-only accommodation. Full board usually includes a furnished room, use of facilities in a private home (with a family or single person) plus breakfast and dinner. Some may include bed linen, laundry and room cleaning. Single room-only homestays include furnishings and gas and electricity costs. You will be responsible for your own food, cooking, cleaning and laundry. Costs range from $180 to $320 per week. [www.studystays.unsw.edu.au](http://www.studystays.unsw.edu.au)

* All values in Australian dollars

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**UNSW Australia is close to Sydney’s main attractions**

- **Royal National Park**
  40 minutes

- **City**
  15 minutes

- **Harbour Bridge**
  20 minutes

- **Opera House**
  15 minutes

- **Bondi & beaches**
  15 minutes

- **Shopping district**
  10 minutes

- **International airport**
  40 minutes

- **Sydney: Australia’s top city**

  Safe and beautiful, and with a high quality of living and vibrant student mix, Sydney is the best city in Australia to study. And as Australia’s biggest business centre, Sydney is an ideal commercial launching pad into Asia-Pacific and the world. Sydney is one the world’s great multicultural cities; more than half of its 4.7 million residents were born overseas or have at least one parent born elsewhere. Residents and visitors enjoy a healthy outdoor lifestyle and easy access to a diverse food and entertainment culture.

  *QS Top 10 Student Cities in the World 2014*
UNSW Australia prides itself on making international students feel welcome. We have many support services to make your time with us comfortable and enriching, and assist with your career planning.

**Support services**

### A helping hand

UNSW Australia prides itself on making international students feel welcome. We have many support services to make your time with us comfortable and enriching, and assist with your career planning.

#### The Centre offers academic support services that help students develop the skills and techniques needed to become effective and independent learners. One of these, WRISE (Write Reports in Science and Engineering), is an online learning environment that assists students who are required to write scientific reports.


#### Cultural Mentoring

You can apply to be matched with a cultural mentor via the Cultural Mentoring Program, which introduces new international students to a senior student mentor. Cultural mentors will answer your questions about learning at UNSW Australia or living in Sydney and can provide you with insight into Australian culture and customs.

[student.unsw.edu.au/cultural-mentors](student.unsw.edu.au/cultural-mentors)

#### The Culture of Oz

The Culture of Oz workshop series helps students develop an understanding of Australian culture. Guest speakers are invited to these workshops to talk to students on topics such as indigenous culture and history, colonisation in Australia, geography and Australian symbols, history of Australian public holidays, Australian slang, sport, academic culture and Australian workplace culture.

[student.unsw.edu.au/cultural-programs](student.unsw.edu.au/cultural-programs)

#### Language and conversation skills

If you would like to further develop your language and conversation skills, UNSW Australia has a number of activities and programs to assist you. This includes the UNSW Language Exchange Program, in which 85 language combinations have been exchanged by students so far, English conversation classes and the Discussion Group Team.

[unsw.to/languageskills](unsw.to/languageskills)

#### Student Development International (SDI)

SDI offers a range of services to assist international students. It is the best place you can go for help with orientation, mentoring or visa issues, or any other assistance.

#### Connecting with the UNSW community

SDI can help you prepare for University with a range of web-based resources before you even arrive in Sydney. Once you’re here, SDI organises social activities and programs to connect with the community, on and off campus.

[student.unsw.edu.au/important-notices](student.unsw.edu.au/important-notices)

#### Step Up Program

This is a three-day program designed to introduce you to studying at University and provide you with some practical experience of attending lectures and learning in Australia. You will get the chance to meet other new international students, University staff and SDI cultural mentors.

[unsw.to/stepup](unsw.to/stepup)

#### Individual consultations

For personalised advice from one of our experienced International Student Advisors, make an appointment via the SDI Online Booking system or take advantage of our drop-in service every Tuesday (1-2pm) and Thursday (10am-11am).

[unsw.to/sdi](unsw.to/sdi)

#### Find out more

+61-2-9385-5333

international.student@unsw.edu.au

### Your career starts here

We offer a variety of ways for international students to prepare for an exciting career.

#### Career assistance

Students can attend regular seminars that cover all aspects of the recruitment process, such as writing a resume, succeeding in interviews and networking. Students can book an individual appointment with a careers consultant as well. To build on this knowledge, employers are invited to the campus to give monthly presentations.

CAREERS expos are held several times a year and attract more than 100 potential employers. At these expos, students can seek answers to their career questions and find job opportunities.

There is also International Students Careers Week, which is designed to assist international students discover how to prepare for a great career with advice from employers and successful student graduates.

[unsw.to/careerexpo](unsw.to/careerexpo)

#### Building confidence

The UNSW Australia Professional Development Program (International Students) is an initiative to assist international students with English as a second language, further develop their communication skills and gain practical workplace experience.

The program has two components – a three-day training program on business communication, customer service skills, employer expectations and the recruitment process and a 50-hour office internship program.

The program aims to help international students gain knowledge of employer expectations in the Australian workplace, enhance their business communication, business writing and customer service skills, improve their interviewing skills and their ability to perform during the recruitment process and develop confidence in professional settings.

[unsw.to/pdpis](unsw.to/pdpis)
Australia’s engineering future

Choosing to study engineering at UNSW Australia is one of the smartest moves any aspiring engineer can make. You have the choice of the widest range of program specialisations in the country through our nine engineering schools. There are also opportunities to combine your degree with one from another faculty, or boost your bachelor degree by combining it with a concurrent masters program.

Bachelor of Engineering (Hons)

This foundation of engineering study at UNSW Australia gives students a choice of 21 specialisations. Since most specialisations have a common set of courses in the first year, you don’t necessarily need to choose your area of expertise before you begin.

Program structure

Year 1: All first-year engineering students (except those in Bioinformatics, Civil with Architecture and Software Engineering) study five common courses to gain the same basic engineering science knowledge: mathematics (two courses), physics, computing and engineering design. Those enrolled in a specific engineering degree complete one additional core course and two electives, while Flexible First Year students complete three electives.

Year 2: Engineering degrees begin to diverge in second year, when you start to focus on the core principles of your chosen discipline. Courses consolidate skills gained in the first year, and students are introduced to concepts and practical skills used later in the program.

Year 3: Third year expands on core engineering courses and introduces a major design project. This project provides valuable experience in project management, problem solving, marketing, budgeting and teamwork – all necessary skills. You also start to choose further electives and specialise. At the end of third year you are required to undertake at least 60 days of industry training.

Year 4: A thesis project is the main component of your final year. This is typically a year-long engineering project on a topic that you and your academic supervisor have agreed upon. Engineering management and ethics courses are usually taken in the final year, too. You may also choose professional electives to develop areas of specialisation.

Internal transfer

At the end of Year 1, UNSW Australia’s internal transfer program allows students to apply to move from one engineering discipline to another, subject to availability and grades. You can do this later, but you might not be able to complete your studies within the minimum timeframe. However, you could discover a career path better suited to your strengths and talents.

Flexible First Year

If you really don’t know what area of specialisation to choose, don’t fret – you’re not alone. In fact, many engineering students choose to enrol in the Flexible First Year program. As well as taking core courses, students can choose electives that appeal to them without committing to a specific discipline until Year 2. For more information, see page 47.

A dual degree = less time + more jobs

Those interested in taking their study to the next level might consider combining their bachelor degree with another or, in some cases, completing a masters program. You can achieve more in less time and have more options when you graduate.

Bachelor + Bachelor

Combining two degrees is a great way to enhance your career prospects without extending your studies too long. It takes five or six years to complete a dual degree, but it can put you at an advantage when applying for consulting and management roles.

Bachelor of Engineering (Hons)/Bachelor of Commerce

UAC code: 425960
Program length: 5.5 years
Ideal for: Students who wish to become more aware of the economic and social aspects of engineering. It is useful for work in the commercial sector, including banking and consultancy work.

Bachelor of Engineering (Civil)/Bachelor of Engineering (Mining or Environmental)

UAC code: 425401
Program length: 9 years
Ideal for: Students learn to broaden their skills via two related disciplines.

Bachelor + Masters

A masters degree provides a deeper specialisation and a higher level of understanding. By completing a masters and a bachelor degree concurrently, you can save a lot of time and be exposed to cutting-edge research and project work.

Master of Biomedical Engineering/Bachelor of Engineering (Hons)

UAC code: 425850
Program length: 5 years
Ideal for: Students interested in bridging the gap between clinical medicine and the complex world of medical technologies. Biomedical Engineering is only available as a masters program. See page 24.

Bachelor of Engineering (Hons) (Electrical)/Master of Engineering (Electrical)

UAC code: 426150
Program length: 5 years
Ideal for: Students who wish to maximise their learning in Electrical Engineering with minors available in computer science, music, mechatronics, photovoltaics, maths, physics and more. See page 31.

Other combinations

New dual programs are being created all the time. You can combine Computer Science with other programs, such as Advanced Mathematics, Advanced Science, Arts, Commerce, or Law. Or you can combine Engineering with Advanced Mathematics, or Advanced Science.

Check the UNSW Handbook for more details of what’s available.

* Depends on courses selected

Find out more

UNSW Online Handbook: handbook.unsw.edu.au
Bioinformatics Engineering
Bioinformatics Engineering is the fusion of computing and life sciences aimed at the development of technologies for storing, extracting, organising, analysing, interpreting and using biological and genetic information.

Aerospace Engineering
Aerospace Engineering focuses on the science and practice of air and space flight; the design, development, testing and production of aerospace vehicles; the maintenance and operation of aircraft; and aerospace research.

What does it involve?
Length of study: 4 years
Aerospace Engineering courses include aerodynamics, flight mechanics, propulsion structures and systems. These are complemented by two advanced design courses.

Career opportunities
You could work in:
+ The space industry
+ Defence
+ Consulting and finance industries

Use your skills to:
+ Design and manufacture all types of aircraft
+ Provide infrastructure for civil and defence satellites
+ Prototype new missiles
+ Design and produce satellites
+ Acquire new aircraft for particular purposes
+ Design and improve flight simulators
+ Train specialist pilots

Find out more
mech.unsw.edu.au
mech@unsw.edu.au
+61-2-9385-4093

BE (Hons) in Aerospace Engineering
Year 1*
+ Mathematics x 2
+ Physics
+ Computing for Engineers
+ Engineering Mechanics 1
+ Engineering Design and Innovation
+ Electives x 2
Year 2*
+ Design and Manufacturing
+ Mechanics of Solids 1
+ Thermodynamics
+ Engineering Mathematics
+ Engineering Mechanics 2
+ Fluid Mechanics
+ Engineering Design 2
+ Electrical and Telecommunications Engineering
Year 3*
+ Aerospace Structures
+ Flight Performance and Propulsion
+ Numerical Methods and Statistics
+ Linear Systems and Control
+ Aerospace Design
+ Aerodynamics
+ Professional Engineering and Communication
+ General Education
Year 4*
+ Dynamics of Aerospace Vehicles and Systems
+ Aerospace Design Project
+ Thesis
+ Professional Electives x 2
+ General Education
* Sample degree structure

Find out more
computing.unsw.edu.au
undergrad@cse.unsw.edu.au
+61-2-9385-4329

What does it involve?
Length of study: 4 years
Bioinformatics Engineering covers the foundation disciplines of bioinformatics, which include biology (biochemistry, molecular biology and genetics), computing (algorithms, databases and programming), and mathematics and statistics.

The degree gives you the skills to design and implement computer software. For example, it may help you identify which genes to target in order to diagnose particular cancer types, or engineer bacteria to produce more efficient fuel.

Career opportunities
You could work in:
+ Pharmaceutical or biotechnology companies
+ Medical technology
+ Agriculture
+ Consulting and finance industries

Use your skills to:
+ Create and analyse biological databases
+ Use mathematics to find patterns in biological data
+ Map the human genome
+ Develop new drugs
+ Discover advances in crops and livestock
+ Recommend new systems to improve results

Find out more
computing.unsw.edu.au
undergrad@cse.unsw.edu.au
+61-2-9385-4329

Matthew Lau
Aerospace Engineer
When I was a child, I vividly remember being amazed by how something as heavy as an aeroplane could fly through the sky. It was the combination of that and a passion for problem solving and technical challenges that got me interested in aerospace engineering. I then received a Taste of Research scholarship, which gave me the chance to develop my critical thinking skills, and has led me to seriously consider research as a career path.

Vivian Ho
BE (Bioinformatics Engineering), ME (Biomedical Engineering)
I chose to study engineering because I liked science and maths at high school and wanted to apply these skills to problem solving. I did not initially choose bioinformatics when I enrolled at UNSW. I found my passion for computing in first year and transferred. Bioinformatics is great because I get to take both biology and computing subjects and I never get bored during semester. I chose to combine it with biomedical engineering for similar reasons and contributing to medical research is incredibly rewarding.
Biomedical Engineering

Biomedical Engineering is the application of engineering analysis and techniques to problem-solving in medicine and life sciences. Biomedical engineers bridge the gap between clinical medicine and the increasingly complex world of medical technologies.

Use your skills to:

- Design body parts or tissues
- Manage technology in the healthcare system
- Invent health technologies
- Manage robotic surgery
- Improve robotic surgery
- Develop artificial organs and organ replacement devices
- Design, develop and refine medical imaging systems
- Manage technology in the healthcare system
- Improve robotic surgery
- Invent health technologies

What does it involve?
Length of study: 5 years (dual degree)

Biomedical Engineering is a masters degree taken concurrently with an undergraduate engineering degree in Bioinformatics, Chemical, Computer, Electrical, Mechanical, Mechatronic, Software, Telecommunications or Materials Science (offered by the Faculty of Science).

The Biomedical Engineering degree integrates a four-year BE degree and the 18-month Biomedical Engineering degree into a single five-year full-time degree, with Biomedical Engineering courses taken from Year 1.

Career opportunities

You could work in:
- Hospitals
- Regulatory bodies
- Research institutions
- Tertiary education
- The medical devices or biotechnology industries

Use your skills to:
- Develop systems to maintain and enhance life
- Design body parts or tissues
- Develop artificial organs and organ replacement devices
- Design, develop and refine medical imaging systems
- Manage technology in the healthcare system
- Improve robotic surgery
- Invent health technologies

Master of Biomedical Engineering/Bachelor of Engineering (Hons)

Year 1
- Engineering in Medicine and Biology
- Principles of Physiology
- An Elective
- Biomedical Electives

Year 2
- Clinical Laboratory Science
- Process Design Project
- Biomedical Electives x 2

Year 3
- Principles of Physiology
- Mass Transfer in Medicine
- An Elective
- Advanced Biomedical Engineering

Year 4
- Thesis A
- Principles of Bioinformatics
- An Elective
- Biomedical Electives x 2

Find out more
- gbmed@unsw.edu.au
- +61-2-9385-1148

Chemical Engineering

Chemical engineers design, create and optimise the systems and equipment used in chemical, industrial, biological and environmental processes. They produce a range of materials, from fuels and fertilisers to processed foods, beer and wine, pharmaceuticals.

What does it involve?
Length of study: 4 years

Chemical Engineering bridges the study of the chemical and physical sciences with engineering. The major activity areas of Chemical Engineering are the design and development of chemical processes and equipment, optimisation and control of industrial operations, plant operation and management, and environmental management and pollution control.

Critical analysis and economics are very important components of the undergraduate training.

Career opportunities

You could work in:
- Water treatment and recycling
- Environmental health and safety management
- The energy and petrochemical industries
- Manufacturing
- Food processing
- Research, from molecular level up to full heavy-industry scale

Use your skills to:
- Manufacture products such as nanomaterials
- Produce energy
- Provide food and clean water
- Design systems and processes to manage environmental impacts
- Improve chemical processes in manufacturing

BE (Hons) in Chemical Engineering

Year 1
- Mathematics x 2
- Physics
- Chemistry or Engineering Materials and Chemistry
- An Elective
- Biomedical Elective

Year 2
- Process Design Project
- Process Modelling and Analysis
- Chemical Reaction Engineering
- Fluid and Particle Mechanics
- General Education

Year 3
- Process Plant Design
- Process Dynamics and Control
- General Education

Year 4
- Process Modelling and Analysis
- Advanced Thermodynamics and Separation
- Chemical Engineering Lab
- Chemical Engineering Design
- Process Plant Design
- General Education

Tencent

Find out more
- che@unsw.edu.au
- +61-2-9385-4319

Tsing Lee

I have always loved maths and science, so I chose engineering because I knew that it would allow me to combine these fields. I decided on Mechanical Engineering because I love moving things and figuring out how they work and opted to combine it with Biomedical Engineering because the emerging technologies in this field are so exciting. Going to uni for the first time I thought the lecturers would be much scarier, but it turns out they are very nice people who genuinely want to help you learn.

Tom Perfrement

I was drawn towards the numerical, problem-solving nature of engineering, yet it was my interest in chemistry and the ability of chemical engineers to tackle some of the world’s biggest challenges that led me to choose the ‘universal engineering’ field – chemical engineering. Undertaking a Chemical Engineering degree at UNSW has already provided me with priceless skills and I am looking forward to a stimulating and rewarding career.
Civil Engineering

Civil engineers design, construct, manage, maintain and assess sustainability of modern infrastructure. This includes buildings, bridges, roads, tunnels, airfields, dams, ports, railways, new mines, flood mitigation works, irrigation systems and water supply and sewerage schemes.

What does it involve?

Length of study: 4 years

This exciting degree provides students with an excellent grounding in civil engineering fundamentals and applications. You will study courses in structural engineering, geotechnical engineering, transport engineering and water engineering, as well as construction and management. Students have the opportunity to specialise in their fourth year with a full suite of electives offered in each area of Civil Engineering.

Career opportunities

You could work in:

- Specialist consulting firms
- Construction companies
- Large public companies
- Government organisations that construct, manage and maintain public utilities
- Financial and management consultants
- Both the office and in the field
- Anywhere in the world

Use your skills to:

- Investigate, plan, design and manage projects
- Build bridges, dams, buildings, towers or roads
- Design and construct transport systems
- Manage city infrastructure, like the water, gas and railway systems

Afrida Salma  Civil Engineering

"I always knew I wanted to study engineering. I chose UNSW because of its reputation and because it has the largest Faculty of Engineering in Australia – which means it has the strongest focus on engineering – and would provide plenty of opportunities. Although I had an interest in pursuing something maths- and science-related, I also wanted to engage with society. It turns out that building and designing infrastructure for communities is the perfect way to do that, which led me to choose Civil Engineering."

Find out more

civeng.unsw.edu.au

cven.enquiries@unsw.edu.au

+61-2-9385-5033/4198

Civil Engineering with Architecture

Civil engineers essentially design and manage the infrastructure of our built environment. This innovative degree extends the Civil Engineering bachelor degree by including a number of courses in Architecture.

What does it involve?

Length of study: 4 years

This degree incorporates classes in architecture to provide civil engineers with an appreciation and understanding of architectural principles. Creativity and inventiveness are further enhanced in this degree. The ultimate aim is to help students become great engineers and conceptual thinkers, with an appreciation for beauty and the mathematical ability to challenge the traditional boundaries of structural design.

Career opportunities

You could work in:

- Specialist structural engineering consultancies
- Construction and contracting companies
- Government organisations
- Airport and harbour authorities
- Project development
- Financial and management consultancies in large corporations
- Any country

Use your skills to:

- Create structures that require in-depth technical knowledge
- Collaborate with architects and other professionals in built environment teams
- Produce integrated and sustainable designs

Michael Chernyavsky  Civil Engineering with Architecture

"I chose my degree because I was fascinated with bridges, buildings and dams in high school. I wanted a degree that would be challenging and would lead to a dynamic job. The Civil Engineering with Architecture degree is perfect for me because it’s teaching me to look at not only how things are built, but why. It also provides a more complete outlook into the civil engineering industry."

Find out more

civeng.unsw.edu.au

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+61-2-9385-5033/4198
Computer Engineering

Computer Engineering is concerned with the theory, design and development of computer systems and their integration into a wide range of applications such as consumer electronics, transportation and medical equipment, and in the telecommunications industry.

What does it involve?
Length of study: 4 years

The Computer Engineering degree, jointly developed by the schools of Computer Science and Engineering, and Electrical Engineering, aims to produce graduates with a sound knowledge in both the hardware and software aspects of computer systems. Computer engineers learn theoretical concepts in engineering, Computer Science, mathematics and physics, along with the skills to put that theory into practice.

Career opportunities
You could work in:
+ Digital electronics
+ Processor chip designs
+ Image processing
+ Commercial systems
+ Telecommunications
+ The power industry
+ Defence
+ The development of gaming machines

Use your skills to:
+ Develop hardware and software systems
+ Design chips
+ Research and construct networks
+ Write enabling software that makes systems work seamlessly

Career opportunities
You could work in:
+ Digital electronics
+ Processor chip designs
+ Image processing
+ Commercial systems
+ Telecommunications
+ The power industry
+ Defence
+ The development of gaming machines

Use your skills to:
+ Develop hardware and software systems
+ Design chips
+ Research and construct networks
+ Write enabling software that makes systems work seamlessly

Samantha McGrath
BE (Computer Engineering), ME (Biomedical Engineering)

“I initially chose Electrical Engineering as my undergraduate degree, however I found that I really enjoyed the introductory computing courses, so I transferred to Computer Engineering. My program has been challenging and rewarding; there are so many interesting areas of computing to study. I have particularly enjoyed Algorithms and Programming Techniques, which focuses on problem solving. I am also being taught how to think rather than just what to think.”

BE (Hons) in Computer Engineering

Year 1
+ Computing x 2
+ Engineering Design and Innovation
+ Mathematics x 2
+ Physics x 2
+ Electrical and Telecom Engineering

Year 2
+ Microprocessors and Interfacing
+ Engineering Design in Computing
+ Digital Circuits and Systems
+ Graphs and Signals
+ Analogue Electronics
+ Mathematics x 2
+ General Education

Year 3
+ Computer Architecture
+ Operating Systems
+ Design Project
+ General Education
+ Electives x 4

Year 4
+ Design Project
+ Management and Ethics
+ Thesis
+ Electives x 4

Find out more
computing.unsw.edu.au
undergrad@cse.unsw.edu.au
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Computer Science

Computer Science is concerned with the principles and technologies that make up computer-based systems. It examines the principles behind computer hardware, algorithms, operating systems, networks, databases, graphics and artificial intelligence, and the practice of building these systems.

What does it involve?
Length of study: 3 years

Computer Science is the most flexible degree in computing. One-third of the subjects are free electives, which means you can easily combine your study in computing with other areas including law, languages, philosophy, sciences and commerce.

Career opportunities
You could work in:
+ A software company
+ Commercial institutions
+ Internet-related companies
+ IT units for most private sector and government organisations
+ Research organisations or universities

Use your skills to:
+ Program computers
+ Support system users
+ Work in network administration
+ Create software
+ Develop robots and artificial intelligence
+ Improve device efficiency

Dan Padilha
Computer Science/Aerospace Engineering

“I was given the opportunity by my high school IT teacher to form a team to compete in the UNSW programming competition. When it came time to choose a uni, I decided on UNSW mainly because of its extremely strong reputation in engineering. They were offering the engineering field I’m most passionate about, and the possibility to combine it with other programs like science.”

BSc in Computer Science

Year 1
+ Computing x 2
+ Discrete Mathematics
+ Mathematics x 2
+ Electives x 3

Year 2
+ Software Construction
+ Microprocessors and Interfacing
+ Engineering Design in Computing
+ General Education
+ Electives x 4

Year 3
+ Management and Ethics
+ General Education
+ An Elective
+ Third or Fourth Year Computing Electives x 5

Year 4
+ Thesis
+ Fourth Year Computing
+ Electives x 5

Find out more
computing.unsw.edu.au
undergrad@cse.unsw.edu.au
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**Optional honours year**
Electrical Engineering

Electrical engineers design and develop intelligent hardware and software systems and devices that contribute to our quality of life. Many are engaged in communications, smart energy, embedded systems, robotics, speech, video and image processing, and integrated electronics.

What does it involve?
Length of study: 4 years

The focus of Electrical Engineering is on the design, development, manufacturing and management of complex hardware and software systems and reliable, cost-effective devices. Many involve the use of new information and computer-intensive technologies.

The degree includes courses in telecommunications, photonics, systems and control, energy systems, microelectronics and signal processing, opening up a huge range of challenging and rewarding career paths.

Career opportunities
You could work in:
+ Service industries such as electricity and water
+ Large private industrial groups
+ New technology firms
+ Telecommunications and wireless electronics
+ Internet services
+ Biomedical instrumentation
+ Manufacturing
+ Transportation

Use your skills to:
+ Design, maintain and improve electrical devices
+ Work on motors or generators
+ Assemble and test new devices
+ Work on power-generation plants
+ Improve systems through problem solving

Find out more
ejt.unsw.edu.au
en@unsw.edu.au
+61-2-9385-4000

James Roberts-Thomson Electrical Engineering/Commerce

“I chose to study Electrical Engineering because I’m fascinated by the way technology can improve lives. UNSW has been a fantastic place to do this. I have really enjoyed being surrounded by other passionate people and all of the opportunities there are to get involved in student-led projects so you can apply the skills you’re learning.”

BE (Hons) in Electrical Engineering

Year 1
+ Mathematics x 2
+ Physics x 2
+ Computing x 2
+ Engineering Design and Innovation
+ Electrical and Telecom Circuits

Year 2
+ Mathematics x 2
+ Circuits and Signals
+ Analogue Electronics
+ Digital Circuit Design
+ Embedded System Design
+ General Education x 2

Year 3
+ Digital Signal Processing
+ Electronics
+ Electromagnetic Engineering
+ Electrical Energy
+ Control Systems
+ Engineering Design
+ Electives x 2

Year 4
+ Thesis
+ Strategic Leadership and Ethics
+ Electrical Engineering Design Proficiency
+ Electives x 4

* sample degree structure

Find out more
ejt.unsw.edu.au
en@unsw.edu.au
+61-2-9385-4000

Electrical Engineering (Combined Bachelor/Master)

This flexible, integrated dual degree gives students the chance to choose a minor in one of many interest areas. Students are able to specialise and are exposed to more design elements before being awarded two degrees in five years.

What does it involve?
Length of study: 5 years (dual degree)

+ Improved flexibility – You can choose from more than 10 interest areas, including postgraduate electives.
+ Better specialisation – Maximise your learning by being at the cutting edge of the Electrical Engineering disciplines of your choice.
+ More design – Be a step ahead thanks to a coursework thread in engineering design that unfolds from years one to four.
+ Easy integration with international exchange – Study up to six courses overseas as a part of the minor.

Career opportunities
You could work in:
Because the BE/ME provides the benefit of a bachelor degree in Electrical Engineering alongside a much more in-depth study of a particular area, students are able to focus their career in a particular area of their choice. You will have the skills and knowledge to step into a career with more ease and confidence.

During engineering study, students can pursue their interests in the following areas:
+ Commerce
+ Computing
+ Geospatial systems
+ Language
+ Mathematics
+ Mechatronics
+ Music
+ Nuclear engineering
+ Photovoltaics
+ Psychology
+ Satellite systems

Find out more
ejt.unsw.edu.au
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Jake Linnenbank, BE/ME in Electrical Engineering

“The best part of my program is being able to see the theory that we learn in lectures applied in real-life scenarios. We can physically experience these new ideas and develop a much better understanding of both the topics and our role as engineers. At UNSW the staff and students are really friendly, which makes for a fantastic place to be.”

BE/ME in Electrical Engineering

Year 1
+ Mathematics x 2
+ Physics x 2
+ Computing 1
+ Engineering Design and Innovation
+ Electrical and Telecom Engineering
+ Digital Circuits

Year 2
+ Mathematics x 2
+ Analogue Electronics
+ Circuit and Signals
+ Embedded Systems Design
+ Electrical System Design
+ Course for Chosen Minor
+ Engineering Elective

Year 3
+ Electromagnetic Engineering
+ Digital Signal Processing
+ Electrical Energy
+ Control Systems
+ Electrical Engineering Design
+ Course for Chosen Minor
+ General Education x 2

Year 4
+ Strategic Leadership and Ethics
+ Electrical Design Proficiency
+ Course for Chosen Minor
+ Electives x 3

Year 5
+ Project Report
+ Engineering and Technical Management Course
+ Course for Chosen Minor
+ Electives x 4

* Sample degree structure

Find out more
en@unsw.edu.au
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UAC CODE
425150
Environmental Engineering

Environmental engineers protect and improve human health and safety, and the natural environment. They apply their broad knowledge of engineering and environmental processes to developing effective solutions for various environmental problems and the provision of sustainable infrastructure.

Career opportunities

You could work in:
- The water industry
- Construction
- Energy
- The manufacturing industry
- International aid groups
- All levels of government

Use your skills to:
- Work on water-loss initiatives
- Consult on major tender projects such as recycling or desalination
- Work in wastewater treatment plants
- Plan sustainable infrastructure
- Contribute to environmental impact assessments
- Improve water use in developing countries

Belinda Lau  Civil Engineering, Environmental Engineering

I’d like to have a career where I can make a tangible difference in our world and help to build a sustainable future for ourselves and the environment. By studying Environmental Engineering, I’m learning how to create practical solutions to everyday problems like keeping our drinking water safe and improving public transport services. I chose UNSW because it has the most flexibility and some interesting double-degree combinations.

Food Science and Technology/Nutrition

Food Science and Technology is about using chemical, biological and physical science to understand foods and the changes that occur naturally and after handling and processing. It covers flavours and nutrition to product development, food storage and safety.

Career opportunities

You could work in:
- Operate in the food retail industry
- Do research in agriculture or aquaculture
- Design and develop products
- Companies or governments

Use your skills to:
- Design and develop products
- Do research in agriculture or aquaculture
- Work with ingredient manufacturers
- Operate in the food retail industry
- Work in marketing or PR
- Educate consumers
- Work in community nutrition

Chloe Paton  Food Science And Technology

I didn’t know whether I wanted to study science or engineering and this degree gave me the flexibility to do both. Plus, I can specialise in whatever area I want, whether that be nutrition or the technology side of food science.
**Geospatial Engineering**

Geospatial engineers use precision-measurement technologies to link information in space and time. They use satellites, aerial imagery, laser scanners and GPS, and combine these with IT tools for spatial analysis of anything that can be mapped – cities, vegetation, populations and even disease.

**What does it involve?**

**Length of study:** 4 years

The undergraduate degree in Geospatial Engineering is the pathway to an amazing range of careers. It focuses on geographic information systems, spatial analysis, satellite imagery and Earth observation, and includes a significant component of Computer Science subjects. The geospatial revolution has created a skills shortage globally.

**Career opportunities**

You could work in:

+ Emergency services
+ Urban planning
+ Health
+ Management of natural resources
+ Insurance
+ Transport planning
+ The United Nations
+ Companies such as Google

Use your skills to:

+ Use and improve GPS
+ Work in geodatabase systems
+ Utilise geoinformation technology
+ Create and analyse satellite imagery
+ Use remote sensing
+ Assist business and government in decision-making

**What does it involve?**

**Length of study:** 4 years

Industrial Chemistry involves researching, developing and improving the properties of products we use every day. This occurs through the selection of raw materials, the design of chemical processes and also the conditions for production. Industrial chemists take ideas from conception as a research proposal, through product development and on to commercialisation and manufacture. Management and economic courses are important components of the degree.

**Career opportunities**

You could work in:

+ Research and development
+ The food industry
+ Pharmaceuticals
+ Polymers and chemicals
+ Petrochemicals and minerals
+ Energy
+ Materials and manufacturing

Use your skills to:

+ Research new processes and materials
+ Develop new chemicals
+ Be a technical representative
+ Manage a plant or company
+ Invent a range of new manufacturing processes
+ Streamline environmental treatment
+ Improve efficiency in certain fields

---

**Timothy Kerr**  Geospatial Engineering

“I chose to study this degree because it’s a very interesting and challenging area of engineering, plus I had heard there was a good job market. Choosing UNSW was a no-brainer because it has the best engineering programs in Australia and it’s the largest Faculty of Engineering in Australia. I can tell you uni is a lot different from school: there’s much more freedom, flexibility and independence.”

**Joseph Tannous**  Industrial Chemistry

“I chose Industrial Chemistry because I enjoyed chemistry and wanted to put my skills into use in the industry. Industrial Chemistry is better than anything I could have imagined. I have completed experiments with extremely toxic chemicals (some fun ones like liquid nitrogen), worked at two international companies, had numerous site visits to large-scale industrial plants, and was involved with ground-breaking research for my thesis project (which may get published internationally).”

---

**BE (Hons) in Geospatial Engineering**

**Year 1**
- Mathematics x 2
- Physics
- Computing
- Engineering Design
- Surveying and GIS
- Electives x 2

**Year 2**
- Geospatial Information Systems
- Surveying Computation A and B
- Engineering Mathematics
- Computing
- Engineering Computations
- Geodesy and Geospatial Reference Systems
- Engineering Design in Computing or Software Construction

**Year 3**
- Geospatial Surveying and Land Law
- Remote Sensing and Photogrammetry
- Field Project
- Geospatial Information Systems
- Geodesy, Positioning and Applications
- Engineering Operations and Control
- Engineering Environments
- General Education

**Year 4**
- Thesis
- Design Practice
- Practical Experience
- Geospatial Information Science
- General Education
- Electives x 2

*Sample degree structure*

**Find out more**

civeng.unsw.edu.au
cven.enquiries@unsw.edu.au
+61-2-9385-5033/4198

**BE (Hons) in Industrial Chemistry**

**Year 1**
- Mathematics x 2
- Physics
- Chemistry or Engineering Materials
- Chemistry x 2
- Chemistry x 2
- Engineering Design and Innovation
- Computing for Engineers
- Statistics

**Year 2**
- Material and Energy Systems
- Fluid and Particle Mechanics
- Heat and Mass Transfer
- Chemical Reaction Engineering
- Organic Chemistry: Mechanisms and Kinetics
- Engineering Mathematics
- Numerical Methods and Statistics
- General Education

**Year 3**
- Process Dynamics and Control
- Environmental Chemistry: The Elements
- Organic Chemistry
- Instrumental Analysis
- Applied Industrial Chemistry
- Environmental Science and Management
- Polymer Science
- General Education

**Year 4**
- Environmental and Sustainability
- Process Design Project
- Thesis
- Electives x 2

*Sample degree structure*

**Find out more**

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dche@unsw.edu.au
+61-2-9385-4319
Mechanical engineers are the masters of many disciplines, from understanding the planning and operation of mechanical plants to designing simple devices such as door locks and fishing reels. In fact, they play a role in most things people drive, play with or live in.

What does it involve?
Length of study: 4 years

Mechanical and Manufacturing Engineering provides academic training for those wishing to become an engineer who can design and build. These attributes benefit the aerospace, mechatronics and shipbuilding industries, as well as industry in general.

In the third and fourth years of the degree, the focus is on applications of engineering with an emphasis on management, the operation of systems, economics, product design and manufacturing technology. Each student is required to submit a thesis at the end of the final year and to deliver a seminar on the topic of the thesis.

Career opportunities
You could work in:

- Manufacturing companies
- Process engineering
- Warehousing and logistics
- Consulting companies
- Service industries such as transport and banking
- Business and operations modelling

Use your skills to:

- Plan and implement strategies for process improvement
- Automate a manufacturing facility
- Design processes to reduce costs and improve quality
- Schedule equipment for optimum performance
- Implement fabrication processes for nano-devices
- Identify the most cost-effective facility layout

Title: "UNSW is a world-class university in the field of engineering. It’s also really flexible. I moved from Mechatronic to Mechanical and then to Manufacturing because of the practical knowledge being taught. I believe that having broad problem-solving and analytical skills is a very important aspect of being an engineer. I am thrilled that my degree will allow me to consider many different career options.”

Joanna Iskandar
Bachelor of Mechanical Engineering

"The best part of my studies is that I get to work on a real industry project. I’m currently working with Caterpillar on automating the drilling process of mining equipment and have secured a graduate position with Rio Tinto.”
**Mechatronic Engineering**

Mechatronic Engineering is concerned with the creation, design and building of intelligent machines, from automated wheelchairs to robotic fruit harvesters. Many modern machines used in the mining, agrifood and manufacturing industries have a significant mechatronic component.

**Career opportunities**

You could work in:
- Robotics and automation
- The automotive industry
- Mining
- Agriculture and food industries
- Consulting firms

Use your skills to:
- Design consumer machines
- Produce specialised industrial equipment
- Deal with complex project management across a range of engineering disciplines

**What does it involve?**

Length of study: 4 years

The Mechatronic Engineering degree combines mechanical design skills and computing skills with the knowledge of microprocessors, control systems and electronics. Students will go on to design and build smart, efficient and intelligent machines.

In the third and fourth years of the degree, students develop a deeper understanding of the principles supporting the conception, design, construction, maintenance, integration and repair of intelligent machines.

**Find out more**
mech.unsw.edu.au
mech@unsw.edu.au
+61-2-9385-4093

---

**Mining Engineering**

Mining Engineering is concerned with the planning, design, operation, management and sustainability of mines. Mining engineers are responsible for the safe, economic and environmentally sound extraction of minerals and resources from the earth.

**Career opportunities**

You could work in:
- Mining companies
- Service supply companies
- Consultancy firms
- Universities
- Investment firms
- Government
- Any country

Use your skills to:
- Manage mines
- Plan and design mines
- Manage operations within the mine
- Oversee technical services
- Be an investment analyst
- Inspect mines

**What does it involve?**

Length of study: 4 years

This degree covers mine design and planning, mining systems, geotechnical engineering, mining technologies including ventilation, rock breakage, mine management and sustainability.

Students experience innovative learning methods in a 3D virtual reality simulator, and undergo field trips and industrial training. They also deliver a seminar and a thesis as part of the research project in their final year.

**Find out more**
mining.unsw.edu.au
mining@unsw.edu.au
+61-2-9385-5006

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**Thien Nguyen**
Mechatronics Engineering/Science

“It was the wealth of extra-curricular projects available for students that attracted me to UNSW Engineering. I chose Mechatronics because I wanted my degree to give me a wide skill set, and I wanted to be able to pursue all of my three passions – computing, electronics and mechanical engineering – without having to compromise.”

---

**Adrian Cumerlato**
Mining Engineering

“Mining Engineering is all about discovering the most efficient and effective way to mine the ore or mineral that is needed, and the different techniques required for each site. There are so many aspects in mining engineering to learn and work with. It is a universal degree where you have a real chance to work overseas (which in itself is a learning experience). Mining engineering is just one door that leads to a thousand others.”
Naval Architecture

Naval Architecture is concerned with the design, construction and operation of all types of ships and marine vehicles, including commercial, recreational and military vessels. Naval architects ensure their fitness-for-purpose, seaworthiness, efficiency and environmental friendliness.

**What does it involve?**

**Length of study:** 4 years

Students are introduced to Naval Architecture through industry visits to see first-hand the design, maintenance and operation of ships. Naval Architecture courses include resistance and propulsion, hydrostatics and hydrodynamics, ship structures, marine engineering, and contracts and tendering. In the final year, students embark on their own ship design project.

**Career opportunities**

You could work in:
- Naval architecture firms
- Shipbuilding yards
- Government
- Ship classification societies
- Defence
- Ship management
- Consultancies
- Ship-owner organisations

Use your skills to:
- Design high-speed ferries, high-performance yachts, tankers, container vessels, submarines or deep-sea oil rigs
- Manage regulatory activities
- Build and repair ocean-going vessels
- Practise offshore engineering
- Survey ships
- Conduct research and development

**BE (Hons) in Naval Architecture**

**Year 1**
- Mathematics x 2
- Physics
- Computing for Engineers
- Engineering Mechanics 1
- Engineering Design and Innovation
- Electives x 2

**Year 2**
- Design and Manufacturing
- Mechanics of Solids 1
- Thermodynamics
- Engineering Mathematics
- Fluid Mechanics
- Engineering Design 2
- Electrical and Telecommunications Engineering
- General Education

**Year 3**
- Ship Design and Propulsion
- Mechanics of Solids 2
- Ship Hydrodynamics
- Numerical Methods & Statistics
- Ship Standards and Marine Engineering
- Ship Hydraulics and Practice
- Professional Engineering and Commercialisation
- Ship Structures 1

**Year 4**
- Linear Systems and Control
- Ship Design Project
- Thesis
- General Education
- Professional Electives x 2

*Sample degree structure*

**Find out more**

mech.unsw.edu.au
mech@unsw.edu.au
+61-2-9385-4093

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**James Heydon** Naval Architecture

“I did work experience in second year, which landed me a job with the Department of Defence. Now I live at a college on campus; it’s very social and I’ve had some amazing experiences. I wouldn’t have had living at home. UNSW has been a great place to meet new people and create new memories.”

Petroleum Engineering

Petroleum Engineering is concerned with the recovery of gas and oil from the earth in an efficient, safe and environmentally responsible manner to satisfy the world’s ever-increasing energy needs for many decades to come.

**What does it involve?**

**Length of study:** 4 years

The Petroleum Engineering degree is internationally accredited. It prepares graduates for work in all aspects of oil and gas development and production, coal seam gas production, geothermal energy and carbon dioxide storage.

Major studies include petroleum geology and geophysics, reservoir characterisation, drilling and completion, formation evaluation, oil and gas production, reservoir engineering and petroleum economics.

**Career opportunities**

You could work in:
- Petroleum and gas companies
- Coal seam gas production
- Geothermal energy production
- Carbon dioxide sequestration
- Banks and finance companies
- Legal firms
- Environmental organisations

Use your skills to:
- Find new ways to extract oil and gas from old wells
- Design equipment to extract oil and improve gas profitability
- Research new drill locations
- Analyse and monitor well performance
- Use computer simulation to determine optimal well placement

**BE (Hons) in Petroleum Engineering**

**Year 1**
- Mathematics x 2
- Physics
- Engineering Design and Innovation
- Computing for Engineers
- Engineering Mathematics
- Fluid Mechanics
- Engineering Design 2
- Electrical and Telecommunications Engineering
- General Education

**Year 2**
- Fluid and Particle Mechanics
- Mechanics of Petroleum Geology
- Engineering Mathematics
- Introduction to the Petroleum Industry
- Business Practices in the Petroleum Industry
- Introduction to Petrophysics
- Reservoir Engineering A
- General Education

**Year 3**
- Reservoir Engineering B
- Reservoir Characterisation and Simulation
- Field Development Geology and Geophysics
- Well Drilling Equipment and Operations
- Petroleum Engineering Design Project
- Formation Evaluation
- Petroleum Economics
- Elective

**Year 4**
- Oil and Gas Field Evaluation Thesis
- Enhanced Oil and Gas Recovery
- Well Technology
- Natural Gas Engineering
- Petroleum Production Engineering
- General Education
- Elective

**Find out more**

petrol.unsw.edu.au
petrol@unsw.edu.au
+61-2-9385-5189

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**Jay Ye Zho** Petroleum Engineering

“To become an engineer was my childhood dream and after ‘digging’ about, I discovered that UNSW is Australia’s top engineering university. Deciding on the type of degree to do wasn’t as easy – I decided on Petroleum Engineering because I wanted to be part of the solution to the world’s energy problems.”
Photovoltaics and Solar Energy Engineering

Photovoltaics Engineering is a degree focused on the manufacture and use of photovoltaic solar cells to generate electrical energy from sunlight, and using that to power practically anything that needs electricity.

Career opportunities
You could work in:
+ Solar cell manufacturing companies
+ Research organisations
+ Universities
+ System design and integration
+ Energy utilities
+ Communications companies

Use your skills to:
+ Improve existing solar cell technology
+ Research and develop new photovoltaic cells
+ Design integrated solar systems, both large and small
+ Monitor quality and safety in large-scale solar installations

Find out more
Pv.unsw.edu.au
Pv.course@unsw.edu.au
+61-2-9385-6848

Oscar Wilkie
Photovoltaics And Solar Energy Engineering

“This is a rapidly expanding field with an increased need for specialised photovoltaics engineers and there are constantly new opportunities arising. You could find yourself working with manufacturers of solar cells, research organisations, system design and integration companies, energy utilities and communications companies. Your career can take you to a number of exciting places both in Australia and overseas and can see you working on cutting-edge projects.”

Renewable Energy Engineering

Renewable Energy Engineering is concerned with the generation or use of energy through sustainable methods. This includes biomass, energy efficiency, photovoltaics, solar architecture, solar thermal and wind.

Career opportunities
You could work in:
+ Renewable Energy Policy and International Programmes
+ Thermodynamics
+ Advanced Photovoltaics
+ General Education
+ Any country, especially in the developing world

Use your skills to:
+ Manufacture renewable energy equipment
+ Improve quality and system reliability
+ Design devices and systems
+ Research and educate
+ Design and analyse systems
+ Diagnose and model faults

Find out more
Pv.unsw.edu.au
Pv.course@unsw.edu.au
+61-2-9385-6848

Jack Blackwell
Renewable Energy Engineering

“At open day I was impressed with the engineering facilities at the UNSW campus and the amount of information provided. UNSW was the only university offering Renewable Energy Engineering and it has a great engineering reputation, so my choice was easy. The best part of the program is the people. All of my lecturers and staff in my school are passionate about what they do and I share common values with the other students. As a result I’ve made a lot of great new friends.”
Software Engineering

Software Engineering concentrates on the processes, methods and tools for the design and development of high-quality, reliable software systems. Completing this degree involves the study and application of software specification, design, implementation, testing and documentation.

What does it involve?

Length of study: 4 years

Students will develop strong skills in software design and development, and will also gain a thorough grounding in fundamental computer science. There will also be substantial exposure to applications, giving a broad experience in aspects of software systems from the machine level to applications in business and industry.

A feature of the degree is a software engineering workshop, which spans the first three years and enables students to work in teams and gain hands-on experience in software development.

Career opportunities

You could work in:
- Software development and computing
- Telecommunications
- Defence
- Finance
- Electronics
- The medical professions
- The power industry
- Transport

Use your skills to:
- Design advanced information systems
- Build technical systems
- Develop new network technologies
- Test and evaluate software
- Create artificial intelligence

Students will develop strong skills in software design and development, and will also gain a thorough grounding in fundamental computer science. There will also be substantial exposure to applications, giving a broad experience in aspects of software systems from the machine level to applications in business and industry.

A feature of the degree is a software engineering workshop, which spans the first three years and enables students to work in teams and gain hands-on experience in software development.

BE (Hons) in Software Engineering

Year 1
- Mathematics x 3
- Computing x 2
- Engineering Design and Innovation
- Software Engineering Workshop

Year 2
- System Modelling and Design
- Engineering Design in Computing
- Two Software Engineering Workshops
- Microprocessors and Interfacing
- Probability, Statistics and Information
- Finite Mathematics
- Software Construction

Year 3
- Software System Design and Implementation
- Software Engineering Workshop 3
- Computer Networks and Applications
- Database Systems
- Two General Education
- Electives x 2

Year 4
- Professional Issues and Ethics
- Thesis
- Electives x 5

Find out more
computing.unsw.edu.au
undergrad@ece.unsw.edu.au
+61-2-9385-4329

Matt Saxby  Software Engineering/Commerce

A combined degree at UNSW has given me a unique opportunity to study both my passions for software and business. The two complement each other well and offer a unique perspective on the business world. I have a Co-op Scholarship, which means I’ve been able to apply what I’ve learnt at university to real-life situations. It’s also given me the opportunity to work at leading companies, learning from some of the best and brightest people in the industry.

Surveying

Surveying uses tools to precisely map the natural and built environment. Surveyors work with other engineers, environmentalists, architects and developers to establish legal boundaries and support the construction and development of infrastructure of every kind.

What does it involve?

Length of study: 4 years

The Surveying degree leads to registration in NSW as a cadastral or mining surveyor, with a focus on land management, town planning and modern satellite positioning, with options for transport, construction and water engineering.

Major studies include surveying for land development and management, land law, engineering and mining, Industrial surveying, offshore and hydrographic surveying, precise GPS surveying and navigation, and the preparation of maps and digital products are also included.

Career opportunities

You could work in:
- Government
- Mining firms
- Private surveying firms
- Construction firms
- Architectural and civil engineering firms

Use your skills to:
- Establish legal land boundaries
- Define and position new construction
- Optimise mining operations
- Map an area using GPS, lasers and aerial scanners
- Draft plans with measurements
- Study the natural and urban environment

Find out more
cleng.unsw.edu.au
civeng.enquiries@unsw.edu.au
+61-2-9385-5033/4198

Phillip Phi Vuong Dao  Surveying

Surveyors are currently in very high demand. As a surveyor you are able to work in the private sector or apply for positions in government organisations. A good surveyor is able to successfully deal with the outside elements, including nature and any obstacles that exist in a construction area. Plus, you often have the option of working outdoors or in an office environment. It provides variety.

BE (Hons) in Surveying

Year 1
- Mathematics x 2
- Physics
- Engineering Design
- Computing for Engineers
- Surveying and Geospatial Engineering
- Electives x 2

Year 2
- Surveying and Geospatial Technology
- Surveying Computations A and B
- Engineering Mathematics
- Principles of Water Engineering
- Geodesy and Geospatial Reference Frames
- Civil Engineering Computations
- General Education

Year 3
- Sustainable Transport or Soil Mechanics
- Water Resource Engineering
- Geospatial Information Systems
- Cadastral Surveying and Land Law
- Surveying Applications and Design
- Surveying Field Projects
- Remote Sensing
- Geodesic and Positioning Application

Year 4
- Thesis
- Design Practice
- Engineering Operations and Control
- Electives x 3
- General Education

Find out more
cleng.unsw.edu.au
civeng.enquiries@unsw.edu.au
+61-2-9385-5033/4198
**Telecommunications**

Telecommunications Engineering is concerned with the design, development, testing and maintenance of all aspects of voice and data communications systems. This ranges from satellite and optical fibre networks, to data encoding, compression and encryption.

**Career opportunities**

You could work in:
- Telecommunications service providers
- Major equipment and device manufacturers
- Start-up companies
- Government
- University research labs
- Banks and financial institutions

Use your skills to:
- Develop computer and communications networking
- Design, install and manufacture electronics
- Conduct research and development
- Design software and systems
- Manage projects

---

**Flexible First Year**

A key part of UNSW’s commitment to help students grow into their career, the Flexible First Year degree is for those who know they want to be an engineer but have yet to work out which direction to take.

**What does it involve?**

Length of study: 1 year (of a 4-year degree)

Flexible First Year allows you to explore a number of areas before deciding on your final specialisation. The first year of engineering study has a core of common courses, plus a wide choice of electives, which allows you to study a number of areas that appeal to you without making a formal commitment to a specific engineering degree until the end of your first year.

Flexible First Year students need to enrol in five core courses. You are then encouraged to select electives from the options listed, focusing on those required in the degree you are considering for future years. After successfully completing the Flexible First Year degree, you can transfer to any of the engineering degrees on offer, subject to available places and grades.

**Career opportunities**

From your second year you can specialise in a particular field of engineering, which opens up a range of career options. Due to the core of common courses in the first year of any engineering degree, you will complete your degree in the same time and will graduate fully qualified in the area of your choice with as much knowledge as those who have chosen this path from year one.

Refer to the various degree pages for more details on your career opportunities.
To gain entry to UNSW Australia, you will need to successfully meet the academic entry requirements for the program that you choose. Most international students require a student visa to study in Australia, and you will also need to pass certain English language requirements.

2016 international undergraduate direct entry guide

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**English Language Requirements**

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Your journey starts here

Follow this simple application process:

**Step 1: Choose your program**

Make sure it suits your interests, skills and career goals.

**Step 2: Check the program’s entry requirements**

The necessary information is in this guide. For the latest information, check the Online Handbook at www.handbook.unsw.edu.au.

**Step 3: Submit your application online**

To do this, visit www.apply.unsw.edu.au. You will need to follow the forward documents:

- Certified copies of academic transcripts and testamars (if it’s not in English, a NAATI-approved translation must be provided).
- Certified copies of IELTS or TOEFL (or equivalent) test scores.
- Details of work experience, if applicable.
- Some programs may require additional documentation.

**Step 4: Track your application**

Once you submit your application online, you will receive an application receipt. This will contain your student ID number. From now on, you can track your application at www.my.unsw.edu.au.

**Step 5: We will send you a letter of offer**

Your will be advised of the outcome of your application. If you’re receiving assistance with your application, your nominated representative will also receive a copy.

**Step 6: Accept your offer**

To do this, go to www.unsw.edu.au and follow the instructions in the offer letter. Once we receive your acceptance, you will be sent your electronic confirmation of enrollment (eCOE).

**Step 7: Enrol online**

Once you have accepted your offer, you must enrol online at www.my.unsw.edu.au to secure your place in your program of choice.
Build a strong foundation

Completing the prestigious UNSW Foundation Studies program is an ideal way to fulfil the academic entry requirements needed for your degree.

More than 20,000 international students have graduated from UNSW Foundation Studies, which is the oldest and most successful pre-university program in Australia. Established in 1988, the program teaches students the high-level academic skills they need to have a smooth transition into UNSW Australia’s undergraduate studies.

Why study with us?
UNSW Foundation Studies boasts a high record of success, with approximately 85 per cent of our students gaining entry to a university degree.

The programs are accredited by UNSW Australia. Our academic programs and our teaching style follows university practice with lectures and tutorials. Students participate in class activities that help develop their presentation skills and give them greater confidence in speaking English.

Most tutorial classes have between 16 and 18 students, so each student receives individual attention. Extra one-on-one consultation sessions with teachers are also offered outside of class time.

UNSW Pathway packages are available that combine UNSW Institute of Languages courses (if additional English language training is required, see p45) and UNSW Foundation Studies programs and UNSW Bachelor degrees – all on one visa.

Accommodation is offered at UNSW Foundation Studies Residential College, which is just a five-minute walk from campus.

Options to suit you
Transition program (4 months): This intensive, one-semester program is recommended if you have strong English language skills and have graduated from high school. You will need a senior high-school qualification such as A Levels, International Baccalaureate, Gao Kao or HKDSE, plus an IELTS of 6.0 or equivalent.

2016 program fee: $18,850*

Foundation Plus Program (12 months): This extended, two-semester program is recommended if you have good English language skills and good academic results but would like a steady pace of study. You will have completed 11 years of schooling (primary and secondary) plus an IELTS of 5.5 or equivalent. An offer can be made on the basis of your Year 11 or Year 12 Semester 1 results.

2016 program fee: $28,000

Standard Plus Program (12 months): This extended, two-semester program is recommended if you have good English language skills and good academic results but would like a steady pace of study. You will have completed 11 years of schooling (primary and secondary) plus an IELTS of 5.5 or equivalent. An offer can be made on the basis of your Year 11 or Year 12 Semester 1 results.

2016 program fee: $32,850

Foundation English Entry Course (10 weeks): If you have just missed out on the English entry requirement for a UNSW Foundation Studies program, you can enrol in an entry course followed by either the Standard or Standard Plus program. You will need an IELTS of 5.0 or equivalent to apply for this program.

2016 program fee: $7,950

Find out more
admissions@unswglobal.unsw.edu.au

What it will cost

As every student’s choices are different, it’s difficult to provide a definitive guide to costs while studying at UNSW Australia. Here are few things to consider ...

Tuition fees for UNSW Engineering undergraduate programs

| Program Title | Program code | Minimum duration | Semester 2 start | 2015 1st year fee | 2015 total program fee+
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*Indicative only, all values in Australian dollars. ** Students may be required to complete summer semester. Contact the Faculty of Engineering for details. ^ Except Mining Engineering.

Fees are course-based and vary every year

Fees for international students are set according to the course, not the program. Fees are also charged based on the year of commencement. For example, if you start in Semester 2 (July) 2015, the fees for the first semester are calculated at 2015 rates and your second semester fees are calculated at 2016 rates. If, however, you are required to complete a course again, you will be charged at the rate applicable to the year it is retaken.

The tuition fees tabled above are indicative only; they may change during the program. Actual fees for 2016 will be released in late 2015.

student.unsw.edu.au/fees-to-pay

Other study-related costs

Some programs and courses incur costs that are additional to tuition fees, for expenses such as equipment and field trips. Textbooks are not considered compulsory but we recommend budgeting about $1000 per year.

Living costs

Living costs depend on many factors, but we estimate a single international student should budget about $20,000 a year. This doesn’t include the costs of non-essential items such as electrical equipment or a car. You will also need at least $2000 when you arrive in Sydney to cover expenses such as a rental “bond” (see p16-17), and the cost of electricity, gas and household items. All estimates are subject to inflation and currency fluctuations.

Overseas Student Health Cover

If you are in Australia on a student visa, you will need to pay for health insurance through the Overseas Student Health Cover scheme (OSHCC) and be covered for the length of your visa.* There are five registered providers of OSHCC – Medibank (UNSW Australia’s preferred health-cover provider), BUPA Australia Health, Worldcare, nib OSHC and Australian Health Management. Medibank OSHCC will pay benefits toward your medical and hospital treatment, medically necessary ambulance transport and most prescription medicines.**

Financial aid

We can help US and Canadian citizens with extensions to their national student loans while studying at UNSW Australia.

international.unsw.edu.au/study/financial

* Exceptions are students from Belgium, Norway and Sweden, who are covered by CSN or Kammarkollegiet.
** Not all Medibank services are covered and there may be waiting periods and exclusions for pre-existing conditions.