UNSW Engineering is Australia’s largest engineering faculty – we produce the most graduates, have the greatest breadth of research and education opportunities, and we’re home to state-of-the-art facilities valued by industry and our world-leading academics. It’s no surprise that main global league tables comfortably rank us in the top 50.

With more than 800 researchers and educators, and expertise across eight schools, 36 research centres and three institutes, UNSW Engineering is a powerhouse of innovation in Australia and in the region – which is why we attract more research funding than any other Australian university, and more companies partner with us than any other. These are just some of the reasons the best students are drawn to UNSW Engineering.

This reputation carries weight beyond our shores: we’re respected as leaders in solar cells, quantum computing, artificial intelligence and bioengineering. Our engineers have held world records for solar cell efficiency for 30 of the past 35 years, created the first two-qubit quantum computing logic gate in silicon, won five RoboCup soccer trophies and are recognised pioneers in bionic vision.

That excellence can only improve, with a new design centre launched and new Institute for Health Engineering coming into being, just as UNSW is investing $3 billion over the next decade in new facilities and people.

Ultimately, the best measure of any university’s greatness is the impact of its graduates. We’re #1 in Australia for producing millionaires, and for graduates who create technology start-ups – like Atlassian, a software company founded by two UNSW alumni which was floated for $5.7 billion in 2015. But our graduates also have social impact, working in developing countries to create clean drinking water or build devices to allow the deaf to hear.

At a time when innovation is seen as essential to the lifeblood of any nation and its economy, we are thriving. Australia’s first quantum computing spin-off company – an $83 million venture between UNSW, industry and government – was born here in 2016. Our engineers launched two satellites into Earth orbit – and built key components for another – in 2017, the first Australian satellites in 15 years. And we’ve scooped the most funding from the Australian Research Council and half of all the funding for solar research in 2018, with 11 projects worth $16.4 million.

Society is the centre of engineering, because engineering creates real-life solutions, using technology, design and teamwork. It requires lateral thinking and a passion for making the world a better place. It’s these skills we instil in our students, and which we rely upon in our staff to not only make the modern world work better, but to create the future world we will all live in.

Mark Hoffman
Dean of Engineering
A RESEARCH POWERHOUSE

We are renowned for the international impact of our research, from revolutionising solar cell efficiency and manufacture – triggering the dramatic falls in the cost of solar power worldwide – to inventing transformational membrane technologies for water filtration that spawned an entire global industry.

Across 36 research centres and three institutes, UNSW Engineering’s internationally renowned innovators lead in their fields: in transport, energy, nanotechnology, robotics, artificial intelligence, biomedical implants, quantum computing, mining and food science, to name a few. We invest over $150 million a year in research, and take the lion’s share of national research grants in engineering as well as enjoying significant support from international industry.
GLOBAL IMPACT THROUGH PARTNERSHIPS

UNSW Engineering has a proud history of creating technologies that have world-changing impact, such as membranes for water filtration and silicon solar photovoltaics. To achieve this level of impact, and to translate our research into real-world solutions, we rely on our industry partners.

Each year we partner with over 500 companies, large and small, local, national and multinational. There are many ways we work with our partners, from small research contracts through to major, multi-year, multimillion-dollar consortia. Innovation Central Sydney, for example, is a long-term joint venture with four other partners to drive innovation in the Internet of Things.

We have a specific program to support local small-to-medium enterprises, called TechConnect Global. UNSW Engineering has great success in leveraging funding through the many government schemes designed to foster university-industry partnerships, including the CRC program and the Australian Research Council’s Industrial Transformation Program.

OUR COMMUNITY

Our esteemed alumni community have a reputation for being forward thinkers, solutions providers, and global leaders. We have alumni based in all corners of the globe doing amazing work across almost any field you can think of.

At UNSW we pride ourselves on having an alumni community that is genuinely invested in making their world a better place for current and future generations.

Our alumni community is equally invested in the future of our current students, often giving back their time, sharing their expertise or financially supporting students who become the next generation of world changers.

How our community currently engages with us

- Events
- Giving
- Mentoring & volunteering
- Recruitment
- Committee & Board members

Industries our alumni are working in:

- Solar and renewable energy
- IT and computer software development
- Transport and infrastructure
- Robotics
- Petroleum, mining and resources
- Tech
- Development of medical equipment and treatments
- Finance
- Lots of entrepreneurships and startups - the list is almost endless
- Aeronautics
CREATING LEADERS & INNOVATORS

We nurture, educate and inspire our students to achieve, to aim high and to see challenges as the path to innovation – and we deliver these at scale. And we also strive to instil an entrepreneurial mindset that emboldens our graduates to think globally, and to harness their creativity and initiative to create solutions. Below are some of the ways we do this.

Student-Led Projects
From solar powered cars to humanitarian initiatives in developing communities, our world renowned Student-Led Projects emphasise cross-disciplinary collaboration, complex project management, smart use of technology and global engagement. When applied to multi-dimensional real-world challenges, these elements combine to foster the diverse skillset and personal attributes which ensure our graduates are set up for success in industry.

Industrial Training
Students undertake at least 60 days of work experience in their chosen field of study - immersing themselves in engineering with industry and government partners, starting the path to their future career and graduating with accreditation from Engineers Australia.

International Experiences
We offer students exchange programs, short courses and tours, research practicums, industrial training, internships and volunteering opportunities around the world, allowing them to immerse themselves in new cultures and gain international experience that employers value.

The Maker Games
An exciting student prototyping competition designed to solve real-world challenges set by our Industry Partners. Students reaching the later stages of The Maker Games program can earn course credits, gain exclusive access to specialised workshops, and have one-on-one guidance from working professionals in their field of study. The winning team gets an all-expenses paid trip to visit innovative start-up communities in the USA and Asia.

Women in Engineering
Increasing the number of women in the profession is a strategic priority for UNSW Engineering. Already 27% of incoming UNSW engineering students are women – well above average – and we are progressing towards a target of 30% by 2020.

We’re committed to increasing our number of industry-sponsored Women in Engineering scholarships, highlighting engineering as a career choice to more school-aged girls through workshops, camps and events on campus, and providing current female engineering students with industry networking and professional development opportunities. To find out more visit unsw.to/wie

Sunswift team and Violet in Darwin
CREATING STATE-OF-THE-ART FACILITIES

Bringing about positive social and economic impact through our world-class research and teaching is a core mission of UNSW Engineering.

With vital support from our passionate staff and academics, and our wider alumni and industry network, our vision is to create a pioneering new engineering precinct at UNSW that will spearhead a collaborative model for addressing complex global issues. The redevelopment of the School of Civil and Environmental Engineering building will enhance student facilities and provide the infrastructure and capacity to carry out vital research that addresses today’s real-world problems. It will deliver synergies with the new School of Mineral and Energy Resources Engineering, creating efficiencies in areas such as construction, water, mining, geotechnical engineering, solar thermal and gas.

This new multidisciplinary precinct will also house initiatives such as the **UNSW Global Water Institute (UNSW-GWI)**, combining UNSW Engineering’s suite of world-leading water research facilities and expertise – stretching back more than 40 years – to create a hub for sharing water knowledge, technologies and expertise.

It is Australia’s most advanced water knowledge hub, connecting more than 400 researchers and 14 specialist centres across the UNSW, with a key focus on clean water and sanitation, water security, and sustainable water management and practices. By bringing together these cornerstones of Engineering, our new campus precinct will enable the finest multidimensional learning experience for our students and foster more innovative industry partnerships.

Our research is focussed on industrial and social needs, and the work of our eight schools – some among the top 10 in the world – have the power to bring about significant change, both in Australia and overseas.

**Philanthropy has enabled UNSW Engineering to tackle some of society’s biggest challenges – water security, our future energy needs and gender diversity.**

Philanthropic donations have acted as a catalyst for discovery and we are grateful to our donors for their generosity and foresight in creating scholarships, supporting innovative research, establishing partnerships and assisting community engagement.

Benjamin Jordan, Development Director, UNSW Engineering
A LITTLE ABOUT US

Through excellence in education and research, we bring passion, focus and innovation to address global challenges.

“Getting involved with EngSoc was definitely one of the best things I’ve done at university. Joining a team of people who are so passionate about supporting their peers is truly inspiring.”

Yasmin Zaman
Fourth-year B Engineering (Aerospace)/B Science

We are proud to offer the most diverse degree options in Australia across our eight engineering schools. For more information, visit futurestudents.unsw.edu.au

8 Schools
16,000+ students
29% u/grad international
27% female u/grad commencing
782 staff (Academic: 520, Technical: 102, Professional: 160)

2017 Effective Full-time Student Load and Research Income by School
UNSW Engineering has more graduates enter the Australian workforce than any other institution
Source: The Times Higher Education 2017 Global University Employability Survey

Largest engineering faculty in Australia
(offers 25 undergraduate degrees and 100+ degree combinations)
Source: QS star ratings

Five-star rating for the past three years for employability, teaching and research

Globally recognised degrees, accredited with Engineers Australia and recognised by the Washington Accord

Student exchange opportunities in 39 countries at 200 institutions

$3 million in Engineering Faculty scholarships provided each year

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Front Cover: Composite Fibre Steering Machine