ENGINEERING AT UWA
Welcome to our community

Engineering is a force to create profound change and improvement in society.

At UWA, our goal is to produce independent graduate engineers who are empowered to change the world and develop solutions to humanity’s greatest challenges. We aim to push the limits of engineering research and learning within an atmosphere of cross-disciplinary collaboration.

Real-world research
We take on projects of global significance, from inventing a needle microscope that pinpoints cancer cells to creating safer designs for oil and gas pipelines. Our research directly informs strategy, policy, training and operations in the real world. During your studies you will benefit from close interaction with our leading researchers and from their links to industry.

Highly skilled graduates
The Engineering pathway at UWA is internationally recognised, and accredited by Engineers Australia. It is designed to produce graduates who are versatile, technically adept and qualified to meet industry demand at an advanced level. Our graduates are sought after by employers and go on to become outstanding leaders in their chosen professions.

Forward-looking
It is an exciting time to join us as an engineering student. A multi-million-dollar investment at UWA, the revolutionary new EZONE UWA, will be opening Semester 2 of 2019. This knowledge space will reinforce the Faculty’s reputation as a global centre of excellence in education and research. As such, we aim to push the limits of engineering research and learning within an atmosphere of cross-disciplinary collaboration.

10 reasons to choose UWA Engineering

01 Global reputation
UWA is a top 100 university in the Academic Ranking of World Universities and has been at the forefront of education and research for more than a century.

02 Industry connections
We are committed to producing graduates who are well prepared for their chosen careers. We have many industry partnerships, including Cough, Monsalco, Rio Tinto, Woodside, BHP Billiton and Lycopodium, and these links provide a range of employment opportunities through vacation work, internships, volunteer work and graduate careers.

03 Outstanding location
Study in the heart of a city that combines the best of everything for engineers, from fantastic career opportunities via a vibrant mining and energy sector to a top lifestyle of beautiful beaches, surf culture and a Mediterranean climate. No wonder Perth was ranked among the top 10 liveable cities in the world by The Economist Intelligence Unit in 2016.

04 Dynamic skills
Engineering is technically specialised, but the engineers of the future will be set apart not only for their high technical skills but also their soft skills and professionalism. These include emotional intelligence (EQ), collaboration, leadership and communication skills, all qualities that industry looks for in candidates.

05 Research strength
UWA is one of Australia’s Group of Eight research-intensive universities and our Faculty’s research teams have global partnerships with leading names in industry.

06 Rankings
- 1st in Australia and 13th in the world for Environmental Science and Engineering (ARWU Rankings)
- 1st in WA and 9th in the world for Mining and Mineral Engineering (ARWU Rankings)
- 1st in WA and 33rd in the world for Civil and Structural Engineering (QS Rankings)

07 Engineering clubs and societies
From building race cars and helping overseas communities to organising side visits, more than 15 student-run clubs cover about every aspect of engineering and give you the chance to put your studies into practice in a social and fun environment.

08 Excellent facilities
EZONE UWA will form a vibrant, innovative campus space with purpose-built yet flexible-use facilities, to integrate research, education and industry engagement.

09 Enhanced degree
Students will graduate with a postgraduate qualification - a master’s degree - that is a higher qualification than a bachelor’s degree. This means you will enter the workplace with excellent technical knowledge and enhanced soft skills, giving you a competitive advantage.

10 Practical projects
Our courses give you the opportunity to work in multidisciplinary teams of students to solve major real-world engineering problems. For example, we have students who undertake environmental modelling projects, who write their own computer programs and who are working on a Renewable Energy Vehicle Project to build an electrical- and solar-powered car. Students will undertake a 12-week professional practice in industry as part of the Master of Professional Engineering.

Find out more at ems.uwa.edu.au
Why choose UWA

Study at an internationally recognised university

Ranked 1st in WA and 5th in the world for Mineral and Mining Engineering (ARWU 2019)

Ranked 1st in WA and 33rd in the world for Civil and Structural Engineering (QS Rankings 2019)

Ranked 1st in Australia and 7th in the world for Marine/Ocean Engineering (ARWU 2019)

1st in Australia and 19th in the world for Environmental Science and Engineering (ARWU 2019)

Ranked in the world’s top 100
1st in Western Australia (QS Rankings 2019)
Facilities

UWA brings together heritage architecture and state-of-the-art teaching and research facilities to provide you with an ideal learning environment.

Clough Engineering Student Centre
Open 24/7, this hub for engineering students mixes areas for group learning with spaces for quiet study. Featuring a large self-study communal area and a meeting room, as well as a kitchen and flat-screen TVs, it serves as a focal point for Faculty members.

It also houses Makers Lab, a space where students can create whatever they want using digital fabrication equipment such as 3D printers, laser cutters, CNC mills and more.

Computer labs
UWA has 11 computer labs for engineering students open 24/7, including high-performance machines for numerical modelling.

The Monadelphous Integrated Learning Centre
A collaboration between UWA and engineering group Monadelphous, this centre acts as a learning environment based on a simulated professional workplace. It features design studios, prototype and testing workshops, breakout offices, a boardroom, Wi-Fi and data-projection facilities, and a tearoom.

Flexilab
Flexilab is a multi-functional, open-plan space where students can work on projects. It allows for group and active learning, and includes workbenches that can accommodate a variety of technical devices. Equipment such as electric drills, hot-glue guns, bench vices and hand tools are readily available.

CO² Research Facility
A vital component of Australia’s efforts to achieve a reduced carbon future, this $2m facility houses a an ultra-modern chemical-engineering teaching lab, with a suite of processing equipment, funded by Chevron, that covers refrigeration, distillation, multiple-variable control and absorption.

Indian Ocean Marine Research Centre
A focal point for the latest research, this centre houses organisations at the forefront of scientific exploration of the Indian Ocean.

Geotechnical Centrifuge Facility (Centre for Offshore Foundation Systems)
Supporting accurate model-testing of offshore foundations, slopes, tunnels, mine wastes and ground-improvement techniques, this is the only geotechnical centrifuge facility in Australia and the only geotechnical modelling facility in the world to house two centrifuges.

Scholarships

Get a $25,000 head start in your engineering career. Make UWA Engineering your first preference and, if you achieve an ATAR of 98.00 or above, you may be eligible for a scholarship of up to $25,000. Students with an ATAR of 96.00 to 97.99 are also eligible for a scholarship of up to $5,000.

To find out more and for full terms and conditions, visit study.uwa.edu.au/engineering

“... was the perfect choice for me. It made the transition from my bachelor’s degree to the Master of Professional Engineering seamless, while also giving me the flexibility to complete a second major in Geology.”

Emma Guerini

Engineering Direct Pathway

The engineering pathway at UWA has been developed in consultation with industry to equip students with the skills to succeed in their future careers. Postgraduate qualifications are an expectation in the global workforce; at UWA, to become professionally qualified engineers, students complete five years of study, consisting of a three-year bachelor’s degree with an Engineering Science major, followed by a two-year Master of Professional Engineering. This ensures you have the capability and knowledge to take on some of our world’s greatest challenges.

Founding partners BHP and Woodside Energy, along with a number of our alumni, are invested in the STEM (Science, Technology, Engineering and Math) workforce of the future and have partnered with UWA to create this collaborative student space to nurture innovation.

ezone.uwa.edu.au

1. Students applying for 2020 undergraduate entry to UWA Engineering should take note that the ATAR for an Engineering Direct Pathway is 80. These students will be required to achieve a weighted average mark of 50 in their studies to be eligible to enter the Master of Professional Engineering.

2. Optional major from any one of eight disciplines: Science, Science or Commerce, Arts, Biomedical Science, Commerce, or Science discipline.

80 ATAR

Science

Science

Commerce

Arts

3 YEARS

2 YEARS

1. Engineering Science major
2. Optional major from any Arts, Biomedical Science, Commerce, or Science discipline.

Postgraduate
Master of Professional Engineering (MPE) in one of eight specialisations.

Qualification
Bachelor of Arts, Biomedical Science, Science or Commerce.

Undergraduate

Honor of Professional Engineering (MPE)

+ Honors

Industry-ready Accredited Engineer

Research Facility

Offshore Foundation Systems (Centre for

Extended Tabulated Course Details
Bachelor of Science

study.uwa.edu.au/science

The Bachelor of Science focuses on understanding and improving the natural world through systematic observation, experimentation, modelling and calculation. The Bachelor of Science gives you the opportunity to harness the skills and knowledge necessary to make a real contribution to the global challenges facing humanity.

Bachelor of Philosophy (Honours)

study.uwa.edu.au/bphil

The Bachelor of Philosophy (Honours) is an inspiring, holistic four-year degree comprising a three-year bachelor’s degree (chosen from UWA’s Arts, Biomedical Science, Commerce or Science) and a fourth year of honours. The innovative curriculum provides an individually designed academic program focused on your chosen area of specialisation, coupled with unparalleled access to UWA’s leading researchers and research facilities, international exchange programs, professional skills-development workshops and a network of talented peers and alumni. Bachelor of Philosophy (Honours) students can study any undergraduate major on offer at the University, as long as they have met any prerequisite requirements for the major.

The research-intensive focus ensures you have the skills to identify and solve complex problems, independently manage and lead projects, and communicate incisively across a range of platforms. During the course you will study abroad at one of UWA’s international partner institutions, expanding your connections among the international community. The cross-cultural learning this experience fosters is invaluable in today’s globalised workplace where intercultural knowledge is highly regarded.

Engineering Science major

study.uwa.edu.au/engineering-science

PREREQUISITES: Mathematics Methods ATAR
RECOMMENDED: Mathematics Specialist ATAR, Mathematics Methods ATAR, Chemistry ATAR and Physics ATAR

This major is available via the Bachelor of Science or Bachelor of Philosophy (Honours)

* With additional specified units taken in the first year, depending on the number of missing subjects.

The Engineering Science major provides fundamental engineering knowledge and develops your scientific, communication and problem-solving skills by combining practical, hands-on courses, industry projects and theoretical foundations. In this major, you will choose one of eight specialisations, and a weighted average mark (WAM) of at least 50 can lead to the Master of Professional Engineering (MPE) and a global career as a professional engineer.

Course structure

Level 1 core units
- Introduction to Professional Engineering
- Mathematical Theory and Methods
- Multivariable Calculus
- Fundamentals of Materials Engineering

Plus the following:
- Form and Function (to specialise in Biomedical Engineering); or
- Chemistry – Structure and Reactivity (to specialise in Chemical Engineering); or
- Software Engineering with Java (to specialise in Software Engineering); or
- Physics for Scientists and Engineers (for all specialisations, except Chemical Engineering and Software Engineering)

Level 2 core units
- Electrical Fundamentals
- Engineering Mechanics

Plus the following:
- Computer Analysis and Visualisation (for all specialisations, except Software Engineering)
- Physiology of Cells (to specialise in Biomedical Engineering)
- Data Structures and Algorithms (to specialise in Software Engineering)
- Systems Programming (to specialise in Software Engineering)

Popular study combinations:
- Engineering Science and Finance
- Engineering Science and Management
- Engineering Science and Physics
- Engineering Science and Computer Science
- Engineering Science and Data Science
- Engineering Science and Accounting
- Engineering Science and language studies

Level 3 core units comprise units from your choice of specialisation
- Biomedical
- Chemical
- Civil
- Electrical and Electronic
- Environmental
- Mechanical
- Mining
- Software

Career opportunities

The Faculty’s industry connections give our students access to key organisations, with varied employment opportunities in Australia and internationally. These include the energy and resources sector, the pharmaceutical industry, manufacturing, and power and water utilities. With highly developed analytical and problem-solving skills, engineering graduates can attract senior management roles in a range of industries.

Accreditation

The Master of Professional Engineering (MPE) has been assessed for accreditation by Engineers Australia, the national accrediting body. The Electrical and Electronic, Environmental, Chemical, Civil, Mining and Mechanical specialisations are fully accredited by Engineers Australia. The Software specialisation remains provisionally accredited. The MPE (Chemical Engineering) is fully accredited by the Institution of Chemical Engineers (IChemE), and the MPE (Software Engineering) has been provisionally accredited by the Australian Computer Society.

Completion of the MPE following the Engineering Science major accredits students as engineers under the Washington Accord.
Master of Professional Engineering

**AVAILABLE**

**FULL TIME**

**DURATION**

2-3 YEARS

FULL TIME

study.uwa.edu.au/mpe

This course has been developed in consultation with industry to equip you with the advanced technical expertise, critical thinking and professional skills required to remain competitive in a global workforce.

Focus on your chosen field of engineering to further your career options. For example, students interested in a career in the oil and gas industry can opt to specialise in Chemical Engineering, Civil Engineering, Electrical Engineering, Mechanical Engineering. By choosing the discipline you prefer, you will not only gain a deep understanding of the discipline from a holistic engineering perspective, but also undertake units relevant to your area of interest.

**Course outline**

The University of Western Australia

**Accreditation**

The Master of Professional Engineering has been assessed for accreditation by Engineers Australia, the national accrediting body. The Electrical and Electronic, Environmental, Chemical, Civil, Mining and Mechanical specialisations are fully accredited by Engineers Australia. The Software specialisation remains provisionally accredited until the required number of students graduate.

**Career opportunities**

This Engineers Australia accredited course, designed in consultation with industry, equips graduates with both outstanding technical skills and the ability to work creatively as part of a team across a diverse range of engineering specialisations. The Master of Professional Engineering unlocks a wide range of career opportunities in engineering and non-engineering sectors in Australia and overseas. Your options for employment will be varied, with work available in the energy and resources industry, pharmaceutical manufacturing, construction, power and water utilities, management and consultancy firms, and electronics, finance and telecommunications industries.

**Specialisations**

Choose from the following specialisations:

- Biomedical Engineering
- Chemical Engineering
- Civil Engineering
- Electrical and Electronic Engineering
- Environmental Engineering
- Mechanical Engineering
- Mining Engineering
- Software Engineering

...and (ii) prior studies in engineering, physics or mathematics; or (c) completed units in the Master of Professional Engineering Preliminary course at UWA as prescribed by the Faculty; or (d) completed a UWA Diploma in Science with a major in Engineering Science with an average of at least 60 per cent. 1 Students who completed Engineering Science are required to achieve a UWA weighted average mark of at least 50 per cent in their bachelor’s degree.

1 Students who completed Engineering Science are required to achieve a UWA weighted average mark of at least 50 per cent in their bachelor’s degree.

The Master of Professional Engineering (Chemical Engineering) is fully accredited by the Institution of Chemical Engineers (IChemE).

The Master of Professional Engineering (Software Engineering) has been provisionally accredited by the Australian Computer Society.

Completion of the Master of Professional Engineering following the Engineering Science major allows you to be recognised as an accredited engineer under the Washington Accord.

**Professional practicum**

As part of your engineering studies, you will complete a 12-week practicum and professional-development experience. This can be achieved by spending at least eight weeks in an engineering environment of your choice.

**Research**

Current Biomedical Engineering research areas at UWA

- Biomatertials
- Computer Simulation
- Optics and Biophotonics
- Biosensors
- Medical Imaging

**Option units**

- Collecting, Analysing and Interpreting Big Data in Biology
- Bioinformatics and Data Analysis for Genomics
- Computer Vision
- Control Engineering
- Numerical Methods and Modelling
- Biostatistics II
- Global Challenges in Biomedical Science
- Wicked Problems
- Enterprise and Innovation
- Technology Commercialisation

**Current undergraduates**

Students in UG Engineering Science can choose units from 2019 in order to enter the Biomedical Specialisation.

For more details, visit handbooks.uwa.edu.au
Chemical Engineering

Chemical engineers invent, design and manage processes to transform raw materials into useful products such as fuels, plastics, pharmaceuticals, textiles, foods and cosmetics.

Through the Chemical Engineering specialisation at UWA you will gain an in-depth understanding of topics such as advanced oil and gas processing, combustion science and technologies, mineral processing, reaction engineering and catalysis, and flow phenomena relevant to chemical processes.

Careers

Career options within the specialisation are extensive and exist in petroleum, minerals processing, oil and gas, iron and steel manufacturing, mining, biotechnology, specialty chemicals, electronic materials, fertilisers, food production and many consumer products. Other employment options include government agencies and state authorities concerned with gas, electricity, water-supply treatment, and environmental protection.

Option units

- Combustion Science and Technology
- Gas Processing 1—Flow Assurance and Gathering
- Gas Processing 2—Treating and LNG Production
- Process Instrumentation and Control
- Biomaterials
- Cardiovascular Biomimetics
- Contaminant Fate and Transport
- Extractive Metallurgy
- Advanced Engineering Mathematics
- Modern Control Systems
- Petroleum Engineering
- Renewable Energy
- Wicked Problems

Course outline

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<tr>
<th>Advanced Thermal Dynamics</th>
<th>Particle Mechanics and Solid Handling</th>
<th>Transport Phenomena</th>
<th>Engineering Design Project 1</th>
<th>Engineering Design Project 2</th>
<th>Engineering Research Project 1</th>
<th>Engineering Research Project 2</th>
<th>Option Unit</th>
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Chemical Engineering offers endless career opportunities and some of the highest-paid roles in the industry.

The Master of Professional Engineering (Chemical Engineering) is fully accredited by the Institution of Chemical Engineers (IChemE).

typeofengineeringdegreess.org

Civil Engineering

Civil Engineering deals with the design, construction and maintenance of the physical and naturally built environment, including roads, bridges, canals, harbours, airports, dams and buildings.

In the Civil Engineering specialisation at UWA you may choose to study sub-disciplines such as Geotechnical Engineering, Earthquake Engineering, Structural Engineering, Surveying, Construction Engineering and Transportation Engineering.

Careers

Career opportunities exist in both the public and private sectors in construction, infrastructure, consulting, transport, project management, mining, environmental control, water, waste and energy. Civil engineering graduates are also valued in commercial and corporate sectors such as finance, banking and accountancy.

Option units

- Structural Dynamics
- Transportation Engineering
- Underground Construction
- Offshore Geomechanics
- Introduction to Design of Offshore Systems
- Hydrology
- Wastewater Treatment Engineering: Treatment and Resource Recovery
- Coastal and Offshore Engineering
- Environmental Geotechnics
- Wicked Problems

Course outline

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<th>Applied Geomechanics</th>
<th>Structural Concrete</th>
<th>Numerical Methods and Modelling</th>
<th>Engineering Design Project 1</th>
<th>Engineering Design Project 2</th>
<th>Engineering Research Project 1</th>
<th>Engineering Research Project 2</th>
<th>Risk, Reliability and Safety</th>
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New developments

Eleanor Robson, a UWA Civil Engineering graduate, now works for John Holland and is involved in exciting new developments, including the Perth City Link Rail Project and Perth Children’s Hospital.

“Seeing the different aspects of my engineering studies being applied in the real world was definitely the most interesting and enjoyable aspect of my course. Currently, I’m working in the Commercial Team at the new Children’s Hospital – I manage my own subcontractors, including assessing the progress of their works on site, and contract variations. My degree set me up with the skills and knowledge for a successful career in the construction industry, which is so varied for an engineer. You have to be able to adapt to different facets of the business including design, delivery, quality, safety and commercial, and learn quickly.”

Eleanor Robson
Junior contracts administrator, John Holland
Electrical and Electronic Engineering

Electrical and Electronic Engineering ranges from the nanometres-thick scale of advanced electronic devices to the kilometres-long scale of power transmission, and everything in between.

You will also consider the context of the broader system application within which all of this falls, including economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability constraints.

Careers

Career opportunities exist in innovative fields such as developing sustainable energy solutions, designing technologies to improve healthcare, creating systems that support industry or communities, or designing electronics that transform lives.

Environmental Engineering

Environmental engineers apply their understanding of natural systems and engineering skills to find creative solutions to pressures facing our environment and sustainable development.

In the Environmental Engineering specialisation at UWA, you will gain an in-depth understanding of environmental management and design, ecological engineering and design, environmental modelling, contaminant fate and transport, hydrology, physical oceanography, environmental fluid mechanics, and advanced environmental systems and engineering.

Course outline

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Transport systems

Kelvin Liu, a UWA Electrical and Electronic Engineering graduate, now works for the Public Transport Authority, which provides road, rail and ferry services throughout Western Australia.

"The labs and practical work were the most interesting parts of my study - getting hands-on can make all the difference, and I loved being able to apply things I was learning to extracurricular activities such as my involvement with Engineers Without Borders. The network of friends that I built at UWA was also invaluable. Currently, at the Public Transport Authority, I’m on site testing communications systems for train-signalling equipment. It’s rewarding to see a train fly by at high speeds on a track! Back at the office, I get involved with electrical design, bench testing/ configuration of equipment and project management."  
Kelvin Liu  
Graduate engineer, Public Transport Authority

Course outline

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Environmental engineer, Kate Le Souef, currently works for the Vancouver Aquarium in Canada.

Follow your passion

“My engineering study pathway is valuable in my position, because of the practical, measured way that you are trained to think as an engineer. Understanding how ocean currents transport debris and plastic has also been useful to me for public presentations and when I interact with ocean scientists.”

If you are unsure what specialisation is right for you, my advice is to choose a field of study that excites you. I really believe that when you passionately pursue something that interests you, weird and wonderful career opportunities will follow.”  
Kate Le Souef  
Environmental engineer, currently works for the Vancouver Aquarium in Canada
Mechanical Engineering

Mechanical Engineering involves the production and use of heat and power for the design, invention and operation of machines and devices of all types.

The Mechanical Engineering specialisation at UWA covers core theories, methods and practices used in sound and vibration, control, thermodynamics, fluids and materials.

Careers

As a mechanical engineer you will develop broad-based knowledge which will enable you to move easily between industries. Career pathway options range from offshore and petroleum engineering through to the building, mining, mineral processing, construction, power, automotive and aerospace-manufacturing industries, where you will design and oversee the development, installation, operation and maintenance of machinery, solve practical engineering problems and improve efficiency.

Option units

- Biomaterials
- Cardiovascular Bioengineering
- Particle Mechanics and Solids Handling
- Transport Phenomena
- Introduction to Design of Offshore Systems
- Digital and Embedded Systems
- Ecological Engineering
- Extractive Metallurgy
- Coastal and Offshore Engineering
- Modern Control Systems
- Petroleum Engineering
- Renewable Energy
- Robotics
- Design and Failure Analysis of Materials
- Materials Characterisation for Bioengineering Applications
- Wicked Problems

Course outline

Advancing space travel

UWA Mechanical Engineering graduate Enrico Palermo now works in California’s Mojave Desert, heading operations for Virgin Galactic’s The Spaceship Company.

“During my time at UWA, I pursued all opportunities with vigour in diverse fields and real-world projects. For example, I joined the inaugural UWA Motorsport (UWAM) Formula-SAE team. I was fortunate to have support from great supervisors and mentors at UWA who were driven by technology application and practicality. At The Spaceship Company (TSC) and Virgin Galactic we are building the world’s first ‘spaceship’ – something no one has ever done before. Right now my focus is doing everything I can to support our goals of getting to space and starting commercial operations then, shortly after, completing TSC’s first spaceship. Beyond that I see plenty of new, exciting opportunities in scientific research, small satellite launching, fast intercontinental travel and beyond.”

Enrico Palermo
Vice-president, operations at The Spaceship Company

Mining Engineering

Mining Engineering encompasses all the processes involved in extracting ores from the earth, including activities such as deposit evaluation, mine design, mine production, and waste disposal.

The Mining Engineering specialisation at UWA integrates exposure to geology, finance and management with detailed knowledge of surface mining, underground mining, rock mechanics and mine design.

Careers

As a mining engineer you may work as a technical specialist with a service company, as a consultant (e.g. blasting, software), in mine management and production, in banking or finance, in research, or in the government sector. Your career can take you anywhere in the world.

Option units

- Introductory Financial Accounting
- Introduction to Data Science
- Applied Geomechanics
- Economics for Business: Applications and Policy
- Employment Relations
- International Employment Relations
- Extractive Metallurgy
- Numerical Methods and Modelling
- Introduction to Human Resource Management
- Management and Organisations
- Organisational Behaviour and Leadership

Course outline

Designing mines

UWA Mining Engineering graduate Shane Doherty now works at BHP Billiton.

“Studying Engineering at UWA was fantastic. At no point did I feel that anything I was studying would be irrelevant to my career. This feeling has been fully verified after five years in industry. Many of the lecturers within the course were veterans of the industry and consistently provided tangible case studies to work through. My job is extremely challenging in its scope and the diversity of the stakeholders involved. The most fascinating aspect is making strategic decisions for every stage of the mining cycle, from government approvals and exploration drilling, to mine scheduling and closure planning.”

Shane Doherty
Superintendent New Mines Development, BHP Billiton
Software Engineering

Software Engineering involves the design, development, testing, deployment, maintenance and evaluation of complex computer software systems.

Software engineers require a diverse set of skills including design, modelling, negotiation, team management, estimation and programming. The specific tasks they perform evolve quickly, reflecting new areas of specialisation and changes in technology.

The Software Engineering specialisation at UWA has a solid foundation in software requirements, design, implementation, testing and professional engineering standards. It also includes advanced topics in mobile computing, cloud computing and artificial intelligence. Upon graduation, you will be a capable problem solver, designing and delivering software solutions.

Careers

As a software engineer, you may develop robotic software to be used in large mining equipment, create mathematical modelling programs to track the spread of disease, use computer-aided techniques to review, test and validate financial data and calculations, or analyse the security of IT security frameworks in large corporations.

Option units

- Machine Learning
- Control Engineering
- Numerical Methods and Modelling
- Robotics
- Wicked Problems

The Master of Professional Engineering (Software Engineering) has been provisionally accredited by the Australian Computer Society.

Course outline

Programming for Google

Cameron Fitzgerald, a UWA Software Engineering graduate, is now working for Google in San Francisco.

"My time at UWA really shaped me as a person and substantially broadened my horizons. I gained a solid understanding of computer science principles, in addition to software engineering skills such as project management, testing and development strategies. Software engineering is a competitive industry with a lot of awesome opportunities and you need to stand out from the crowd. I was actively involved with the University Engineers’ Club, UWA Young Engineers, sports clubs, and was vice-president and welfare officer at the UWA Student Guild. I made a number of great friends in the Software Engineering cohort, several of whom are currently at Google in Sydney. My current job involves general software engineering - design, feature development, testing and maintenance. I’m a part of a mid-size cross-functional team working on notifications."

Cameron Fitzgerald

Software engineer, Google

International Students

Set yourself apart with a UWA degree.

Our courses are designed to equip you with the skills and knowledge to succeed locally, nationally and internationally.

You are an international student if you are:

- a temporary resident (visa status) of Australia,
- a permanent resident (visa status) of New Zealand, or
- a resident or citizen of any other country

Important Information

Fee Calculator: fees.uwa.edu.au/Calculator

Courses: study.uwa.edu.au/international

Email: international@uwa.edu.au

Phone: (08) 6488 1000

English language requirement:

IELTS (Academic) overall score minimum of 6.5, no band less than 6.0 (must include Academic Reading and Writing modules). For the most up-to-date information visit study.uwa.edu.au/elc