



UniSA

Engineering

- Civil Engineering
- Electrical and Information
- Mechanical and Advanced Manufacturing
- Double Degrees
- UniSA and Flinders University collaborative Engineering program



2012

Why study Engineering at UniSA?

- » \$73 million invested in Engineering at UniSA with the establishment of new research, learning and technology institutes and centres located at the Mawson Lakes campus
- » A range of pathway options available, including TAFE, Foundation Studies, the ATN Engineering Test, the Associate Degree in Engineering and the Special Tertiary Admissions Test (STAT)
- » Salaries for Engineering graduates can start from \$62,000*

* engineeringdegrees.com.au

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The recent Excellence in Research Australia (ERA) awards recognised UniSA's **Division of Information Technology, Engineering and the Environment** with world-class rankings for leading research in the areas of Mathematical Sciences, Pure Mathematics, Applied Mathematics, Chemical Sciences, Physical Chemistry (Including Structural), Environmental Sciences, Environmental Science and Management, Engineering, Chemical Engineering, Civil Engineering, Electrical and Electronic Engineering, Materials Engineering, Resources Engineering and Extractive Metallurgy and Urban and Regional Planning.

Front cover: UniSA's low-energy electric car, TREV (two-seater renewable energy vehicle). In 2010 and 2011, TREV participated in the 80 day 30,000 kilometre Zero Race. Powered by electricity from renewable energy sources TREV travelled around the world at a cost of less than \$400. For more information please visit unisa.edu.au/engineering

Welcome



The University of South Australia is a university of first choice for career-focused achievers. We provide the widest range of degree programs in South Australia and have a reputation for excellence in our four faculty divisions. At the University of South Australia, some of the world's

brightest minds teach and research in the areas of business, education, arts and social sciences, health sciences and information technology, engineering and the environment.

In the 2010 QS World University rankings, the University of South Australia recorded the biggest increase for an Australian university and we are now in the top 3 per cent of more than 10,000 universities in the world.

The quality of our teaching is regularly recognised by awards such as Citations for Outstanding Contributions to Student Learning, and two of our academics have won the nation's highest honour for university teachers, the Prime Minister's Award for University Teacher of the Year.

It's that quality teaching that helps our graduates in their careers; in 2010 almost 80 per cent of the University's domestic bachelor graduates secured full-time employment, which is above the national average.

Besides providing a high-quality teaching environment, the University of South Australia is a research leader. Our research institutes address research questions in a range of priority areas, including community sustainability, population health, defence and security, minerals science and business.

We have recently had proof that we are on the right track. The first Excellence in Research for Australia assessment – an official national evaluation of the quality of research – showed that 70 per cent of our assessed research is of world-class standard and in several areas we have built research that is performing well above world-class levels. The University's research informs our teaching and learning activities.

As a student at the University of South Australia you will have a world of opportunities open to you: you will be able to develop a capacity for critical and independent thinking; learn the value of research; develop the most up-to-the-minute knowledge of your chosen profession and learn the essential skills in communication and teamwork that will help you forge a successful career.

I wish you luck in all your academic endeavours.

Professor Peter Høj

Vice Chancellor and President

Engineering

We live in an evolving world and embedded within almost every innovation and development is an aspect of engineering. From turning on a light switch to supplying entire communities with power, communications and water, the engineer has a role in serving the community by maintaining and improving quality of life and standard of living. Engineers don't just develop and apply new technologies, they work in teams on projects that require creativity and innovation, and often end up becoming leaders in business and the community. Engineering underpins a range of specialist careers including computer systems, electrical and mechatronics, defence, mining, electronics and communications, networking and communications, the design of sustainable systems for energy production, the design and construction of green buildings, industrial development and water management.

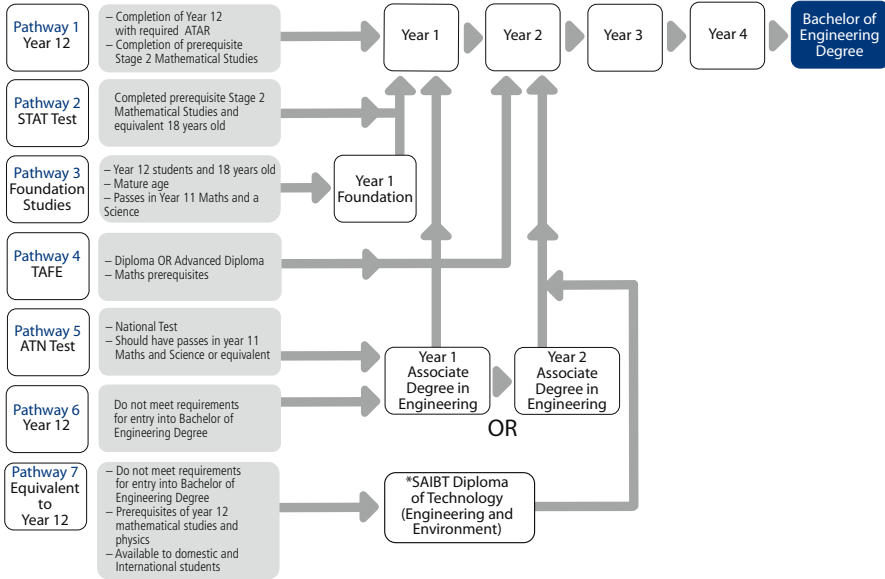
Careers within the sphere of engineering are widespread.

For more information please visit: unisa.edu.au/engineering

Your pathway to an Engineering degree

Flexible pathways

UniSA offers the widest range of flexible pathways to become an engineer in South Australia. These pathway options have been introduced to attract more people into engineering careers to help meet the significant industry growth, particularly in the fields of mining and resources, defence, civil infrastructure, construction, environmental engineering and advanced manufacturing.



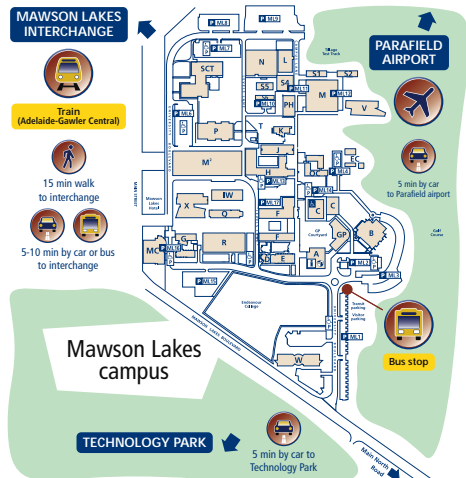
Note: Year 1 of the Associate Degree in Engineering is available at UniSA's Mawson Lakes campus and requires the completion of eight courses. Year 2 of the Associate Degree in Engineering is also available at UniSA's Mawson Lakes campus. If entering Year 1 of the Bachelor of Engineering from TAFE, credit will be assessed on a program to program basis. Pathway 1 duration: 4 years; Pathway 2 duration: 4 years; Pathway 3 duration: 5 years; Pathway 4 duration: 4 years; Pathway 5 duration: 4.5 years; Pathway 6 duration: 4 years; Pathway 7 duration 4 years. Correct at time of printing.

Mawson Lakes campus

Our Engineering programs are primarily taught at the Mawson Lakes campus. Mawson Lakes is part of the flourishing technology hub of the Northern Region, which offers the perfect blend of education and research for community, business and government, creating a vibrant and innovative nexus to support economic, social and environmental development. Over \$73 million has been invested into our new state of the art science and technology facilities.

Mawson Lakes is located opposite Technology Park and the industries that are significant employers of our engineering graduates.

The Mawson Interchange integrates bus and passenger train services. It provides direct, rapid access for park-n-ride commuters, pedestrians and cyclists from the Mawson Lakes town centre and the University.



Why study Engineering at UniSA?

Accelerated Program

UniSA offers South Australia's only three-year accelerated Engineering degree. Students achieving high results in first year may then be given the opportunity to complete their degree in as little as three years instead of the standard four years.



Graduate with a Bachelor of Engineering and Master degree in 5 years

Many students successfully completing this Bachelor of Engineering program have the opportunity to continue their studies into the Master program which is directly linked to their Bachelor specialisation. Eligible students will receive credit from their Bachelor degree and complete the Master program in only one additional year of full-time equivalent study. This option is available to students in the Bachelor of Engineering specialisations that are identified with this icon.

Experience 1 Studio

Experience 1 Studio is an innovative first year Engineering learning hub, which is located at Mawson Lakes campus. This is a learning environment that will influence the direction of future teaching and learning environments locally, nationally and internationally. This space is directly linked to the Engineering common first year offered by UniSA.

Common First Year

All of our Engineering degrees at UniSA contain a common first year set of core courses. These

courses lay the foundations and ready you for the specialisation of your choice. This common core is completed in the first year and as it is common across all Engineering degrees, you have the opportunity to change to an alternative specialisation without the loss of the courses you have already passed.

Teaching Experience

With UniSA's experienced and highly acclaimed academic staff, students can learn from outstanding professionals.



Associate Professor Mahfuz Aziz, an academic committed to the success of UniSA's Engineering programs won the nation's highest honour for university teachers – The Prime Minister's Award for Australian University Teacher of the Year 2009.

Dr Aziz is an exceptional teacher and is highly regarded amongst his peers and students.



Professor Julie Mills was presented with the Teaching Excellence Award for 2009 by the Australasian Association for Engineering Education. Professor Mills was selected on the basis of her outstanding contribution to teaching.

Teaching is a priority for Professor Mills and this is evident in her commitment to UniSA students.

Projects and Industry Experience

Students undertake a compulsory three-month, fulltime industry placement in a relevant field. This provides you with an opportunity to gain valuable work experience in an industry setting, in which you can apply your skills and knowledge to practical problems and gain valuable engineering practice. This experience prepares you for professional careers in electronics and telecommunications, while outstanding candidates may be offered further employment opportunities.

Final year student research projects in all Engineering disciplines are linked to industry. Student projects are conducted at industry sites, sponsored by industry and often co-supervised by industry leaders. Industry knowledge is embedded in our programs through guest speakers, design projects and industry projects.

Electric SAE Race Car Project

The Electrical SAE Race Car is one of our final year Engineering projects. The Formula SAE is an annual international engineering design competition that is run by the Society of Automotive Engineers (SAE) in the USA, UK, Japan, Europe and Australasia for university students. The competition requires teams to conceive, design, fabricate, and compete with small formula-style racing cars with electrical power.

Engineers Without Borders Challenge Project

The Engineers Without Borders (EWB) Challenge gives students the hands-on experience which is desired in industry. EWB brings together Engineering students, young graduates, experienced engineers and even non engineers as a team to help solve basic, small scale engineering problems faced by many people

in need. EWB aims not only to contribute to new and ongoing development projects, but also provides development training and experience for Australians.

Engineering Scholarships and Awards

Our scholarships offer financial assistance and, in many instances, valuable work experience opportunities which often lead to employment. New scholarships are constantly being developed so we recommend you regularly visit unisa.edu.au/scholarship

Global Experience

UniSA's Global Experience program is available to all undergraduate students enrolled at UniSA and counts towards your degree. Expand your knowledge through networks, workshops and a range of activities including volunteering, language studies, mentoring and going on exchange. For more information please visit: unisa.edu.au/globalexperience

Student Exchange

Going on exchange contributes to students' personal and academic development and is considered favourably by many employers. UniSA provides scholarships of at least \$2500 for eligible students to take up exchange opportunities. For more information please visit unisa.edu.au/exchange

For more information please visit unisa.edu.au/engineering

Associate Degree in Engineering

May Information Sessions

Mawson Lakes campus: Wednesday 25 May

For more information and to register visit

unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August

For more information visit

unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September

For more information visit

unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | n/a |
| UniSA program code | LTEN |
| CRICOS code | |
| (international students only) | 066197C |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 2 years |
| Prerequisites | None |
| Assumed knowledge | None |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | No |
| Program fees | Commonwealth supported |
| Program fees | |
| (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The program aims to prepare students for a professional career in engineering in the disciplines of Civil, Electrical & Information Engineering, Mechanical and Materials Engineering. The program provides a pathway to all Bachelor of Engineering programs and specialisations offered at UniSA.

What will I study?

Students are required to complete 72 units of study to obtain this Associate Degree. The program contains introductory studies in mathematics, physics and chemistry and courses from the common first year in Engineering. In addition students can select electives from introductory studies in Civil Engineering, Electrical and Information Engineering and Mechanical and Materials Engineering.

What does it take?

Students undertaking the program should have a curiosity-driven mind and good verbal and written communication skills. They should have a flexible attitude and enjoy working with science as well as social, administrative and management issues. Competence in mathematics and physics is also desirable.

Who will employ me?

Graduates typically secure employment as technologists, designers, specialist technicians, and managing officers in their respective disciplines. Completion of the Associate degree allows you to transfer into the full degree (with credits) or get employment and return to study at a later year.

Program requirements**FIRST YEAR****First Half**(Study Period 1, 2 or 3)Essential Mathematics 1:Algebra and TrigonometryComputer TechniquesIntroduction toEngineering PhysicsSustainable Engineering Practice**Second Half**(Study Period 4, 5 or 6)Introduction toEngineering ChemistryEssential Mathematics 2: CalculusEngineering Designand InnovationElectrical and Energy Systems**SECOND YEAR****First Half**(Study Period 1, 2 or 3)Engineering MaterialsMathematical Methodsfor Engineers 1Stream Elective 1Stream Elective 2**Second Half**(Study Period 4, 5 or 6)Mathematical Methodsfor Engineers 2Mechanics and PhysicsStream Elective 3Stream Elective 4Civil Engineering Stream electivesGeoinformatics for Engineers– Stream Elective 1Transportation Engineering –Stream Elective 2OR Environmental Engineering NEngineering and EnvironmentalGeology – Stream Elective 3Civil Engineering Practice– Stream Elective 4Electrical and InformationEngineering Stream ElectivesElectrical Circuit Theory– Stream Elective 1Programming Fundamentals– Stream Elective 2Principles of ComputerSystems – Stream Elective 3Electronic Devices and Circuits –Stream Elective 4OR Program FundamentalsMechanical and ManufacturingEngineering Stream ElectivesManufacturing Practice– Stream Elective 1Mechanical EngineeringPractice N Stream Elective 2Operations Management forEngineers Stream Elective 3Fluid and Energy EngineeringStream Elective 4

Michelle Bailey

Graduated – Associate Degree in Engineering

'There are boundless opportunities for Mechanical Engineers and undertaking this program is a wonderful opportunity.

Entry to this program is a prerequisite for employment and I took the opportunity to further my studies, my career and my future.

I particularly enjoy the extra-curriculum student projects and the hands-on approach to learning. I find the academic and general staff members are understanding and supportive.

In the future I hope to achieve good enough grades to be eligible to transfer into the Bachelor of Mechanical Engineering.'

Bachelor of Engineering (Civil)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434481 |
| UniSA program code | LBMI |
| CRICOS code | |
| (international students only) | 056091G |
| ATAR (February 2011 cut-off) | 70.25 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematics Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Civil) places particular emphasis on the application of theory through focused project and assignment work. By the final year of the degree, more than 50 per cent of the coursework is project based, including a major industry-related research project and a class design project that models industry practice.

Accelerated three-year Engineering program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes you to the breadth of cross-disciplinary studies as well as how engineering is applied in industry. You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders challenge.

The second year of the program develops broad technical knowledge and skills in civil engineering and related areas such as geology and geographic information systems.

In third year, you focus in detail on the disciplines of structural, water and wastewater, geotechnical and environmental engineering.

Fourth year provides students with the opportunity to continue with a broad cross-section of civil engineering studies through the choice of four electives and projects. Half of the fourth year is devoted to project work, both design and research.

Students who successfully complete this program have the opportunity to gain credit for four courses if they successfully apply to enter the Master of Engineering (Civil), which they can then complete after

graduation from the Bachelor's degree with an additional year of full-time study.



What does it take?

Modern civil engineers understand and attempt to minimise the possible effects of development on the natural environment. They regularly consult with community representatives on community concerns and work in multidisciplinary team environments. They therefore require the ability to communicate effectively and to manage people and resources. Students undertaking this degree should have an inquiring mind with good verbal and written communication skills. Students should have an interest in science as well as social, administrative and management issues, should enjoy working outdoors, and be prepared to travel.

Who will employ me?

This degree prepares graduates for careers as professional civil engineers in design consultancies, government agencies, the construction industry or related areas. Graduates are recognised by employers as being industry-ready and have consistently achieved excellent employment outcomes and high commencing salaries, particularly in the areas of construction, project management and design consultancy.

In 2010, 96% of graduates had found full-time employment in a range of private and government organisations.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project course may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques
Engineering Materials
Mathematical Methods
for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods
for Engineers 2
Electrical and Energy Systems
Mechanics and Physics
Engineering Design
and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Engineering Modelling
Mechanics and Structures
Geoinformatics for Engineers
Elective

Second Half

(Study Period 4, 5 or 6)

Introduction to Water
Engineering
Engineering and
Environmental Geology
Water Quality Fundamentals
Civil Engineering Practice

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Environmental Engineering N
OR Transportation Engineering
Rock and Soil Mechanics
Structural Engineering 1
Hydraulics and Hydrology

Second Half

(Study Period 4, 5 or 6)

Water Resources Systems Design
Geotechnical Engineering N
Structural Engineering 2
Structural Analysis and
Computer Applications

FOURTH YEAR

First Half

(Semester 1, 2 or 3)

Industrial Experience N
Civil Engineering Design Project
Civil Engineering Elective 1
Civil Engineering Elective 2

Second Half

(Study Period 4, 5 or 6)

Civil Engineering Project
Formulation
Civil Engineering
Investigation Project
OR Civil Engineering
Honours Project

Civil Engineering Elective 3

Civil Engineering Elective 4

Civil Engineering Elective 1 & 2

First Half

(Semester 1, 2 or 3)

Environmental Engineering N
Transportation Engineering
Environmental Planning
and Policy

Environmental Law

Civil Engineering

Advanced Topics 1

Civil Engineering Elective 3 & 4

Second Half

(Study Period 4, 5 or 6)

Land Use Planning
Environmental Conflict
and Public Consultation
Civil Engineering
Advanced Topics 2
Sustainable Development:
A Global Perspective



Christopher Maiolo

Bachelor of Engineering (Civil and Project Management)

'I always had a strong interest and passion for mathematics and the sciences whilst I was at school and therefore engineering was an obvious choice as I approached the end of Year 12.

UniSA has earned a reputation from within the engineering and construction industries for providing graduates who are career-ready with a strong industry focus and perspective. I decided that UniSA was well equipped to provide the sort of degree that I was looking for, based around decades of industry input and academic expertise.

Many courses are based around practical group work. This not only puts into perspective the academic theory that you have learned in lectures, but makes you apply it in a way to fully understand the subject matter, as well as forging relationships with your peers that will certainly hold you in good stead throughout the degree and beyond.'

Bachelor of Engineering (Civil and Environmental Management)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434861 |
| UniSA program code | LBMI |
| CRICOS code | |
| (international students only) | 067385B |
| ATAR (February 2011 cut-off) | 73.45 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per anum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Civil and Environmental Management) places emphasis on project-based, industry focused learning for the sustainable development of environment related infrastructure. The program aims to prepare students for a professional career in Civil Engineering and Environmental Management where all civil engineering developments must have the

environmental impacts associated with them taken into account.

Accelerated three-year Engineering program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

The first two years of the program provide a broad base in engineering and science courses needed for civil engineering careers as well as providing hands on experience in areas such as CAD and surveying, and an introduction to the main specialisations available in civil engineering.

In third year, you focus in detail on the disciplines of structural, water and wastewater, geotechnical and environmental engineering – and their interaction with the environment.

Fourth year provides you with the opportunity to specialise in the area of Environmental Management in a civil engineering context.

Students who successfully complete this program have the opportunity to gain credit for four courses if they successfully apply to enter the Master of Environmental Management and Sustainability (LMES) or the Master of Engineering (Civil), which they can then complete after graduation from the Bachelor's degree with an additional year of full-time study.



What does it take?

Modern civil engineers understand and attempt to minimise the possible effects of development on the natural environment. They regularly consult with community representatives on community concerns and work in multidisciplinary team environments. They therefore require the ability to communicate effectively and to manage people and resources.

Students undertaking this degree should have an inquiring mind with good verbal and written communication skills. They should have an interest in science as well as social, administrative and management issues, should enjoy working outdoors, and be prepared to travel.

Who will employ me?

This degree prepares graduates for careers as professional civil engineers in design consultancies, government agencies, the construction industry or related areas. Graduates are recognised by employers as being industry-ready and have consistently achieved excellent employment outcomes and high commencing salaries, particularly in the areas of construction, project management and design consultancy.

In 2010, 96% of graduates from this program had found full-time employment in consulting firms with environmental specialisations such as Golder & Associates, PB Consultants, Aurecon (and many others) as well as companies such as SA Water, DTEI and local government.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project course may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Engineering Modelling

Mechanics and Structures

Geoinformatics for Engineers

Elective

Second Half

(Study Period 4, 5 or 6)

Introduction to Water

Engineering

Engineering and

Environmental Geology

Water Quality Fundamentals

Civil Engineering Practice

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Environmental Engineering N

Rock and Soil Mechanics

Structural Engineering 1

Hydraulics and Hydrology

Second Half

(Study Period 4, 5 or 6)

Water Resources Systems Design

Geotechnical Engineering N

Structural Engineering 2

Structural Analysis and

Computer Applications

FOURTH YEAR

First Half

(Semester 1, 2 or 3)

Industrial Experience N

Civil Engineering Design Project

Water Quality Processes N

Seminar in Sustainability

Second Half

(Study Period 4, 5 or 6)

Civil Engineering Project

Formulation

Civil Engineering

Investigation Project

OR Civil Engineering

Honours Project

Environmental Impact Assessment

Water Quality Management



Kathryn Blansjaar

**Graduated – Bachelor of Engineering
(Civil and Environmental Management)**

**Formerly – Bachelor of Engineering (Civil Engineering),
Bachelor of Sustainable Environments
(Environmental Protection and Management)**

‘Civil Engineering and Environmental Science offer many opportunities in the engineering fields of civil, construction, environmental, project management, structural, mining, water and geotechnical.

I have enjoyed the practical nature of UniSA which allows me to apply new knowledge and skills in many situations, such as controlled experiments, excursions and camps. This included work experience in the construction field with York Civil and in mining with Rio Tinto in the Hunter Valley. I also value the high quality of lecturers and guest lecturers who are renowned in their fields.

I would like to put into practice the extra knowledge I have gained on the importance of sustainability because I believe engineers have the opportunity and responsibility to shape our sustainable future. I have secured a job with Sinclair Knight Merz (a leading global projects firm) and hope to successfully complete their four year graduate program.’

(08) 8302 2376 or 1300 UNINOW
study@unisa.edu.au

Bachelor of Engineering (Civil and Project Management)

May Information Sessions

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For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

| | |
|---|--|
| SATAC code | 434811 |
| UniSA program code | LBMI |
| CRICOS code | |
| (International students only) | 063506G |
| ATAR (February 2011 cut-off) | 75.25 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Graduates of this program are particularly prepared for careers that focus on the management of civil engineering projects in the construction industry, design consultancies, government agencies, local government and related areas. Civil engineers serve society by developing infrastructure such as bridges, buildings, airports, roads, railways, water and wastewater supply, treatment and reuse systems. Technical solutions developed by civil engineers

must take into consideration social, environmental and financial constraints.

The Bachelor of Engineering (Civil and Project Management) places particular emphasis on project work, which is a significant component in every year of the program.

By the final year of the degree, more than 50 per cent of the coursework is project-based, including a major industry-related research project and

a class design project that models industry practice. Such a strong industry focus ensures that graduates are already familiar with industry needs and modes of operation when they commence employment. All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers. Industry experience also helps you to determine your engineering career pathway as you are able to experience particular sectors prior to graduation.

Accelerated three-year Engineering program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes you to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

Students undertake a number of hands-on engineering projects including participation in the Engineers Without Borders challenge.

The second year of the program develops broad technical knowledge and skills in civil engineering and related areas such as geology and geographic information systems. In third year, you focus in detail on the disciplines of structural, water and wastewater, geotechnical and environmental engineering. Fourth year provides you with the opportunity to specialise in the area of project management in a civil engineering context through the completion of four project management courses, as well as design and research project work.

Students who graduate from this degree are able to apply for entry to the Master of Project Management degree (IMPJ) or the Master of Engineering (Civil), and receive credit for the four project management courses they have completed. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

Modern civil engineers understand and attempt to minimise the possible effects of development on the natural environment. They regularly consult with community representatives on community concerns and work in multidisciplinary team environments. Graduates from this degree can be involved in the management of major civil engineering projects. They therefore require the ability to communicate effectively and to manage people and resources.

Students undertaking this degree should have an inquiring

mind with good verbal and written communication skills. They should have an interest in science as well as social, administrative and management issues, and should also enjoy working outdoors, and be prepared to travel.

Who will employ me?

This degree prepares graduates for careers as professional civil engineers who also have skills in project management. Graduates of the civil engineering programs are recognised by employers as being industry-ready and have consistently achieved excellent employment outcomes and high commencing salaries, particularly in the areas of construction, project management and design consultancy. In 2010, 96% of graduates from this program had found full-time employment with companies such as Baulderstone, Built Environs, Hansen & Yuncken and Department for Transport, Energy and Infrastructure.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Engineering Modelling

Mechanics and Structures

Geoinformatics for Engineers

Elective

Second Half

(Study Period 4, 5 or 6)

Introduction to Water

Engineering

Engineering and

Environmental Geology

Water Quality Fundamentals

Civil Engineering Practice

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Environmental Engineering N

OR Transportation Engineering

Rock and Soil Mechanics

Structural Engineering 1

Hydraulics and Hydrology

Second Half

(Study Period 4, 5 or 6)

Water Resources Systems Design

Geotechnical Engineering N

Structural Engineering 2

Structural Analysis and

Computer Applications

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Industrial Experience N

Civil Engineering Design Project

Principles of Project

Management A

Time, Cost and Quality

Management

Second Half

(Study Period 4, 5 or 6)

Civil Engineering Project

Formulation

Civil Engineering

Investigation Project

OR Civil Engineering

Honours Project

Project Law

Human Resources and

Communication Management



Rebecca Pierotti

Graduated – Bachelor of Engineering
(Civil and Project Management)

Accelerated Employment – Graduate Engineer, Baulderstone

‘During high school I enjoyed mathematics, physics and being outdoors and I think it would be great to drive over a bridge or walk into a building and be able to say ‘I helped to create this’.

I chose the UniSA program as the courses are very practical. I have really enjoyed the group projects, which are often more practically based and reflect what is likely to be required during employment. The design projects we complete are for structures that are to be built, or have been built in South Australia, so we have an opportunity to visit the site.

I was awarded the SA Water Undergraduate Scholarship in Civil Engineering and Placement for Women, which includes 12 weeks of vacation employment for hands-on experience. In the future I would like to become Engineers Australia Certified and complete my Masters in Project Management.’

(08) 8302 2376 or 1300 UNINOW
study@unisa.edu.au

Bachelor of Engineering (Civil and Structural)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434941 |
| UniSA program code | LBMI |
| CRICOS code | |
| (international students only) | n/a |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Civil engineers design, build and manage roads, buildings, water supply and storage systems, wastewater systems, transport systems and bridges while taking into consideration any social, environmental, and financial constraints. They are responsible for the infrastructure and resources that are essential for the daily functioning of cities, towns and rural areas and this specialisation has a

particular focus on the building and structural components of that infrastructure.

The program has a strong practical, project and industry focus. You will have the opportunity to study overseas.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses

offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

The first two years of the program provide a broad base in engineering and science courses needed for civil engineering careers as well as providing hands on experience in areas such as geology, surveying and an introduction to the main specialisations available in civil engineering.

In third year students focus in detail on the disciplines of structural, geotechnical, environmental, water and wastewater engineering and the interaction with the environment.

Fourth year provides students with the opportunity to specialise in structural engineering through the choice of four electives and projects in a related area. Half of the fourth year is devoted to project work, both design and investigation.

Students who complete this Bachelor of Engineering have the opportunity to gain credit for four courses if they successfully apply to enter the Master of Engineering (Civil). It is then possible to complete the Master's program with an additional year of full-time study.



What does it take?

Modern civil engineers understand and attempt to minimise the possible effects of development on the natural

environment. You will regularly consult with community representatives on their concerns and work in multidisciplinary team environments. You will therefore require the ability to communicate effectively and to manage people and resources.

Students undertaking this degree should have an inquiring mind with good verbal and written communication skills. You should have an interest in science as well as social, administrative and management issues, as well as working outdoors, and be prepared to travel.

Who will employ me?

Graduates of this program are particularly prepared for careers in the development and implementation of structures such as buildings, bridges and storage tanks that form a large part of civil engineering projects, an area that is critical for the sustainable development of all countries worldwide.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au. Such accreditation is provisional until the program produces its first graduates.

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of

the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Engineering Modelling

Mechanics and Structures

Geoinformatics for Engineers

Elective

Second Half

(Study Period 4, 5 or 6)

Introduction to Water

Engineering

Engineering and

Environmental Geology

Water Quality Fundamentals

Civil Engineering Practice

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Environmental Engineering N

OR Transportation Engineering

Rock and Soil Mechanics

Structural Engineering 1

Hydraulics and Hydrology

Second Half

(Study Period 4, 5 or 6)

Geotechnical Engineering N

Structural Engineering 2

Structural Analysis and

Computer Applications

Water Resources Systems Design

FOURTH YEAR

First Half

(Semester 1, 2 or 3)

Industrial Experience N

Civil Engineering Design Project

Advanced Steel Structures

Advanced Concrete Structures

Second Half

(Study Period 4, 5 or 6)

Civil Engineering Project

Formulation

Civil Engineering

Investigation Project

OR Civil Engineering

Honours Project

Earthquake and Masonry

Engineering

Design of Composite Structures



Bachelor of Engineering (Civil and Transport)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434801 |
| UniSA program code | LBMI |
| CRICOS code | |
| (international students only) | 063507G |
| ATAR (February 2011 cut-off) | 82.75 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Civil engineers serve society by developing infrastructure such as bridges, buildings, airports, roads, railways, water and wastewater supply, treatment and reuse systems. Graduates of this program are particularly prepared for careers in the development and implementation of environmentally responsible and efficient transport systems, an area that is critical for the

sustainable development of all countries world-wide.

Civil engineers are creative and innovative problem solvers, who design, construct, manage, maintain, or rehabilitate all aspects of this infrastructure. The technical solutions they develop must take into consideration social, environmental and financial constraints. The Bachelor of Engineering (Civil

and Transport) places particular emphasis on the application of theory through focused project and assignment work. Project work is a significant component in every year of the program.

By the final year of the degree, more than 50 per cent of the coursework is project-based, including a major industry related research project and a class design project that models industry practice. Such a strong industry focus ensures that graduates are already familiar with industry needs and modes of operation when they commence employment.

All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers.

You will have the opportunity to apply and integrate the knowledge and skills you have gained during your program in an industry setting. Industry experience also helps you to determine your engineering career pathway as you are able to experience particular sectors prior to graduation.

Accelerated three-year Engineering program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core

engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders challenge.

The second year of the program develops broad technical knowledge and skills in civil engineering and related areas such as geology and geographic information systems.

In third year, you focus in detail on the disciplines of transport, structural, water and wastewater and geotechnical engineering, and their interaction with the environment.

Fourth year provides you with the opportunity to specialise in the area of transport engineering through advanced coursework and project work, both design and research.

Students who graduate from this degree are able to apply for entry to the Master of Engineering (Transport Systems Engineering) degree (IMEN) or the Master of Engineering (Civil), and receive credit for the four courses completed in the undergraduate degree. This allows them to complete the Master degree with one year of

additional full-time study if they choose. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

Modern civil engineers understand and attempt to minimise the possible effects of development on the natural environment. They regularly consult with community representatives on community concerns and work in multidisciplinary team environments and this is particularly the case for transport engineers. They therefore require the ability to communicate effectively and to manage people and resources.

Students undertaking this degree should have an inquiring mind with good verbal and written communication skills. Students should have an interest in science as well as social, administrative and management issues, and should enjoy working outdoors, and be prepared to travel

Who will employ me?

This degree prepares graduates for careers as professional civil engineers in design consultancies, government agencies or related areas, particularly those that specialise in transport engineering. In 2010, 96% of civil engineering students had found full-time employment at graduation as they are recognised as being industry-ready by employers. Graduates from this program will continue to be in high demand due to the significant shortage of transport engineers that exists in industry today and is predicted to continue in the future.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Engineering Modelling

Mechanics and Structures

Geoinformatics for Engineers

Elective

Second Half

(Study Period 4, 5 or 6)

Introduction to Water

Engineering

Engineering and

Environmental Geology

Water Quality Fundamentals

Civil Engineering Practice

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Transportation Engineering

Rock and Soil Mechanics

Structural Engineering 1

Hydraulics and Hydrology

Second Half

(Study Period 4, 5 or 6)

Water Resources Systems Design

Geotechnical Engineering N

Structural Engineering 2

Structural Analysis and

Computer Applications

FOURTH YEAR

First Half

(Semester 1, 2 or 3)

Industrial Experience N

Civil Engineering Design Project

Traffic Systems Engineering N

Transport Data Analysis

and Statistics

Second Half

(Study Period 4, 5 or 6)

Civil Engineering Project

Formulation

Civil Engineering

Investigation Project

OR Civil Engineering

Honours Project

Road Safety Engineering

Transport Network Analysis N

Bachelor of Engineering (Civil and Water Resources Management)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434851 |
| UniSA program code | LBMI |
| CRICOS code | |
| (international students only) | 067384C |
| ATAR (February 2011 cut-off) | 78.2 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Water is essential to our lives, and as a civil and water resources engineer, you will deal with issues concerning the quality and quantity of water as a valuable natural resource in both underground (aquifers) and above ground catchments such as lakes, rivers, and streams. You will work to prevent floods, to supply water for cities, industry and

irrigation, to treat wastewater, to protect beaches, to manage and reuse stormwater, to institute water-sensitive urban design (WSUD) or to manage river systems. You might be involved in the design, construction, or maintenance of stormwater harvesting and re-use systems, wastewater treatment systems, desalination systems, dams, pipelines, pumping stations, locks, or seaport facilities.

The program aims to prepare students for a professional career in Civil Engineering and Water Resources Management with emphasis on project-based and industry focused learning for sustainable development of water-related infrastructure. It combines studies in hydrology, environmental science, water resources engineering, water quality and management.

Accelerated three year engineering program

It is possible to complete this program in less than four years by undertaking course offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

The first two years of the program provide a broad base in engineering and science courses needed for civil engineering careers as well as providing hands on experience in areas such as CAD and surveying, and an introduction to the main specialisations available in civil engineering. In third year you will focus in detail on the disciplines of structural, water and wastewater, geotechnical and environmental engineering – and their interaction with the environment. Fourth year provides you with the opportunity to specialise in the area of Water Resources Management in a civil engineering context.

Students who successfully complete this program have the opportunity to gain credit for four courses if they successfully apply to enter the Master of Water Resources Management (LMWM) or the Master of Engineering

(Civil), which they can then complete after graduation from the Bachelor's degree with an additional year of full-time study.



What does it take?

Modern civil engineers understand and attempt to minimise the possible effects of development on the natural environment. They regularly consult with community representatives on community concerns and work in multidisciplinary team environments. They therefore require the ability to communicate effectively and to manage people and resources.

Students undertaking this degree should have an inquiring mind with good verbal and written communication skills. Students should have an interest in science as well as social, administrative and management issues, should enjoy working outdoors, and be prepared to travel.

Who will employ me?

This degree prepares graduates for careers as professional civil engineers with specialist skills in water resources management in design consultancies, government agencies, the construction industry or related areas. Graduates are recognised by employers as being industry-ready and have consistently achieved excellent employment outcomes and high commencing salaries, particularly in the areas of construction, project management and design consultancy.

In 2010, 96% of graduates from the civil engineering programs have found full-time employment

with companies such as SA Water, Department for Transport, Energy and Infrastructure, United Water, as well as a range of consulting and construction companies and local councils.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours in fourth year. Successful completion of the program and the Honours project course may lead to the award of the degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Engineering Modelling

Mechanics and Structures

Geoinformatics for Engineers

Elective

Second Half

(Study Period 4, 5 or 6)

Introduction to Water

Engineering

Engineering and

Environmental Geology

Water Quality Fundamentals

Civil Engineering Practice

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Environmental Engineering N

Rock and Soil Mechanics

Structural Engineering 1

Hydraulics and Hydrology

Second Half

(Study Period 4, 5 or 6)

Water Resources Systems Design

Geotechnical Engineering N

Structural Engineering 2

Structural Analysis and

Computer Applications

FOURTH YEAR

First Half

(Semester 1, 2 or 3)

Industrial Experience N

Civil Engineering Design Project

Seminar in Sustainability

OR Water Quality Processes N

Water Quality Modelling

Second Half

(Study Period 4, 5 or 6)

Civil Engineering Project

Formulation

Civil Engineering

Investigation Project

OR Civil Engineering

Honours Project

Water Resources and Society

Design of Flood and

Drainage Systems

OR Water Quality Management



John Dyson

Graduated – Bachelor of Engineering

(Civil and Water Resources Management)

Honours Employment – Senior Executive, Mott MacDonald
Formerly Bachelor of Engineering (Civil and Water)

‘The engineering program at UniSA is extremely well regarded in the industry. It equips graduates with the practical skills necessary to progress in a professional engineering career and also has a strong technical focus.

I enjoyed the practical teaching methods and real life engineering examples used in course materials. At the end of my third year of study I undertook a lengthy period of work experience, which was beneficial for gaining a valuable insight into industry.

After graduation I felt quite prepared and confident to enter a professional career in engineering and I am now a senior executive with Mott MacDonald, a global employee-owned management, engineering and development consultancy.

My community and engineering achievements have been acknowledged through a number of awards which I believe are testament to the quality education I gained at UniSA.’

Bachelor of Engineering (Computer Systems)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434441 |
| UniSA program code | LBIF |
| CRICOS code (international students only) | 057812D |
| ATAR (February 2011 cut-off) | 70.85 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Engineering graduates need to be specialists in their field and are also required to have practical experience in the application of theory in real industry settings.

The Bachelor of Engineering (Computer Systems) program provides the knowledge required of computer and electronic engineers and computer scientists. This program has been designed together with industry representatives to prepare highly

skilled professional engineers who are sought by industries in which computer systems are designed, manufactured or applied. The program also provides students with the essential skills required for professional practice.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period

breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders challenge. By the end of first year, you can choose an area of interest to specialise in. The Bachelor of Engineering (Computer Systems) covers the theoretical principles of operation and practical design of computer and electronic systems. Emphasis is placed on the design of computer hardware, and is complemented by a thorough knowledge of computer science and the development of a high level of proficiency in software engineering, including practical programming skills.

You will study the methods for design, development and integration of computer systems. This includes computer networks, real-time systems, systems level design and advanced computer hardware. You apply the principles and practices of

your studies in the final-year project. With the majority of projects sponsored by industry, the project enables you to work on the development of a range of computer systems for realworld applications. Computer Systems students also undertake a compulsory three-month, full-time industry placement in a related field. This provides you with an opportunity to gain valuable work experience in an industry setting, where you can apply your skills and knowledge to practical problems and gain valuable links to industry. This experience prepares you for professional careers in Computer Systems, while outstanding candidates are often offered further employment opportunities.

What does it take?

Students undertaking this degree should have an inquiring mind with good verbal and written communication skills. Students should also have an interest in science, social, administrative and management issues, and enjoy working with the broad areas of computer hardware design, electronics, computer communications and software programming.

Who will employ me?

Graduates typically secure employment as computer systems engineer, computer systems administrator, customer support engineer, embedded system designer, IT officer, network administrator, network design engineer, software engineer, systems engineer and research assistant.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate

membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Mathematical Methods
for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods
for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Programming for Engineers

Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half

(Study Period 4, 5 or 6)

Principles of Computer Systems

Electronic Devices and Circuits

Programming Fundamentals

Engineering Mathematics 4E

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Computer Hardware

Data Structures

Signals and Systems

Digital Devices and Systems

Second Half

(Study Period 4, 5 or 6)

Computer Communications
and Networks

Computer Hardware Design

Real-Time Systems and Control

Professional Engineering

Practice E

Practical Industrial

Experience Reports

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

System Design Techniques

Technical Elective

Systems Engineering

Electrical and Information

Engineering Project 1

OR Electrical and Information

Engineering Project 1 Honours

Second Half

(Study Period 4, 5 or 6)

Digital Signal Processing

Advanced Internet Technology

Elective

Electrical and Information

Engineering Project 2

OR Electrical and Information

Engineering Project 2 Honours



Bachelor of Engineering (Electrical and Electronic)

May Information Sessions

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Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434951 |
| UniSA program code | LBIF |
| CRICOS code | |
| (international students only) | n/a |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Electrical and Electronic) prepares students for professional careers in the design and operation of sophisticated devices, equipment, technology, services and systems. Electrical and electronic engineers focus on energy and information, and how they are generated, processed, transferred and controlled in safe and sustainable ways. They may have the opportunity to

work on a range of devices and services from electrical energy generation systems including renewable energy sources, electric and autonomous vehicles, robotics and consumer products such as mobile and internet communications. Employment and career opportunities exist in industry sectors including electrical power and energy, automation, manufacturing, electronics, defence and environmental monitoring.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

The first two years of this program are closely aligned with the other Engineering specialisations in systems engineering, electronics, communications and computer systems giving students the flexibility to transfer to a similar program depending on their career interests.

The Bachelor of Engineering (Electrical and Electronic) will provide a range of courses focused on engineering, mathematics, applied science and computer applications. Courses in first and second year cover electrical engineering, engineering communication and innovation, electrical circuit theory, and computer hardware and programming.

The final two years may include advanced courses such as signals and systems and real-time systems and control. Students may choose to specialise in a major including Computer Systems Engineering, Electrical Power Engineering, Electrical and Mechatronic Engineering, Electronics and Communications, Networking and Communications, Optical and Electronic Engineering and Systems Engineering.

Students also have the option to undertake a 15-week

structured engineering work placement in the fourth year of the program as an alternative to a semester of on-campus study. Students who complete four courses from an available masters specialisation may gain credit for those four courses if they successfully apply to enter the LMEE Master of Engineering in the associated specialisation. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

Students should be good problem solvers and show a passion for understanding new gadgets and technologies. They need to be able to think scientifically, critically analyse information and have good interpersonal skills. Students should have a minimum score of C- in SACE Stage 2 Mathematical Studies and a knowledge of SACE Stage 2 Physics.

Who will employ me?

The program prepares students for immediate employment and provides them with skill sets applicable to a wide range of industry sectors. Electronics engineers design, develop, test and maintain electronic parts and systems used in the fields of computers, communications, navigation, industry and entertainment.

Electronic and Electrical engineers are in demand within sectors including communications, defence, government, broadcast media, internet service providers, entertainment, automotive plants, computer manufacturers, consumer

electronics, power generation, infrastructure and distribution, renewable energy, water, mining, transport, and avionics.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Such accreditation is provisional until the program produces its first graduates.

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Mathematical Methods

for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mechanics and Physics

Electrical and Energy Systems

Mathematical Methods

for Engineers 2

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Programming for Engineers

OR Mechanical Engineering

Practice N

AND Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half

(Study Period 4, 5 or 6)

Programming Fundamentals

OR Electromechanics

AND Principles of

Computer Systems

Electronic Devices and Circuits

Engineering Mathematics 4E

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

IT Physics

OR Computer Hardware

AND Signals and Systems

Elective 1

Elective 2

Second Half

(Study Period 4, 5 or 6)

Elective 3

Elective 4

Elective 5

AND Elective 6

OR Professional

Engineering Practice E

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Professional Engineering Practice E

OR Structured Engineering

Work Placement

OR Elective 6

Elective 7

Electrical and Information

Engineering Project 1

OR Practical Industrial

Experience Reports

Second Half

(Study Period 4, 5 or 6)

Elective 8

Elective 9

AND Electrical and Electronic

Engineering Project 2

OR Electrical and Electronic

Engineering Honours Project 2



Bachelor of Engineering (Electrical and Mechatronic)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434451 |
| UniSA program code | LBF |
| CRICOS code | |
| (International students only) | 057811E |
| ATAR (February 2011 cut-off) | 78.70 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Electrical and Mechatronic) program leads to a rewarding career in an ever-expanding, and exciting discipline.

Mechatronics is an interdisciplinary area of engineering that combines mechanical engineering with electrical engineering and computer science. A typical mechatronic system senses signals from the environment, processes them to generate data, then transforms that data into forces, motions and actions.

Mechatronics has broad applications, for example, the design of control circuitry aimed at achieving pre-set tasks with minimum human intervention. Mechatronics encompasses robotics, machine tool control, automated guided vehicles, medical diagnostics and prosthetics. Its applications are only limited by human imagination and ingenuity. Graduates of this innovative program are keenly sought as professionally recognised engineers in a wide range of endeavours.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of cross-disciplinary studies as well as how engineering is applied in industry. You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest in which to specialise.

The Bachelor of Engineering (Electrical and Mechatronic) has substantial interdisciplinary content. The early years of the program provide a strong grounding in engineering mathematics, applied science and computer applications, balanced by a range of broadening studies. Later in the program, special aspects of generation, transmission, distribution and utilisation of electrical energy are emphasised along with the design, control and integration of electromotion devices. There is strong emphasis on problem-based learning,

encouraged by challenging and creative project work. Modern modelling and simulation techniques are used extensively.

The program provides you with sound communication and management skills and an understanding of social and environmental issues. This is achieved through courses in professional management and broadening education. In the final year, you apply the principles and practices of your studies in a major industry-based project.

The final-year project enables you to have hands-on practical experience and develop direct personal links to industry and professional networks where outstanding candidates may be offered further employment opportunities.

Electrical and Mechatronic Engineering students also undertake a compulsory, three-month, full-time industry placement in a related field. This provides students with an opportunity to gain valuable work experience in an industry setting in which they can apply their skills and knowledge to practical problems.

You also have the option to study abroad on the International Student Exchange program to gain international experience by completing part of your degree overseas. For more information visit unisa.edu.au/exchange.

What does it take?

Students undertaking the program should have an inquiring mind, an aptitude to think clearly and critically, enjoy solving problems which require more than one skill, and a keen desire to make a positive contribution to saving the environment.

Who will employ me?

Graduates of this program are recognised as versatile engineers, competent to meet challenges in diverse engineering applications. They are qualified to deal with power stations, automotive applications, electrical vehicles, alternative energy systems, household appliances as well as industrial and mobile robots. Their daily tasks may typically involve the design of electrical and mechatronic engineering devices and systems, supervision of manufacture, investigation of complex systems, computer applications and management.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements**FIRST YEAR****First Half****(Study Period 1, 2 or 3)**

Mathematical Methods

for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half**(Study Period 4, 5 or 6)**

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR**First Half****(Study Period 1, 2 or 3)**

Mechanical Engineering

Practice N

Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half**(Study Period 4, 5 or 6)**

Principles of Computer Systems

Electronic Devices and Circuits

Electromechanics

Engineering Mathematics 4E

THIRD YEAR**First Half****(Study Period 1, 2 or 3)**

IT Physics or

Computer Hardware

Electromotion

Signals and Systems

Programming for Engineers

Second Half**(Study Period 4, 5 or 6)**

Mechatronics 1

Electrical Power Systems

Real-Time Systems and Control

Professional Engineering

Practice E

Practical Industrial

Experience Reports

FOURTH YEAR**First Half****(Study Period 1, 2 or 3)**

Power Electronics and Drives

Mechatronics 2

Systems Engineering

Electrical and Information

Engineering Project 1

OR Electrical and Information

Engineering Project 1 Honours

Second Half**(Study Period 4, 5 or 6)**

Elective

Intelligent and Digital Control

Power System Operation

and Control

Electrical and Information

Engineering Project 2

OR Electrical and Information

Engineering Project 2 Honours



Kathleen Manuel

4th year Bachelor Engineering (Electrical and Mechatronic)

'This is an excellent program that helps you prepare for the real world. The practical side of our studies provides hands-on experience and helps us to gain a greater understanding and to further investigate concepts behind the topics presented during lectures.

Our final year team project gave us the chance to apply all the things that we had learnt throughout our studies. This project – building collision avoidance robots – gave us independence to work out how we as a group should go about solving the problem at hand, and to showcase our hard work to some of the industry's professionals. Also, a three month work placement in industry provides students with an idea about what it is like to work in a professional environment.

Once we graduate, we can contribute to almost every sector of society such as defence, power, water, transport, automation and even mining.'

(08) 8302 2376 or 1300 UNINOW
study@unisa.edu.au

Bachelor of Engineering (Electrical and Systems Engineering)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfoptions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434961 |
| UniSA program code | LBIF |
| CRICOS code (international students only) | n/a |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Electrical and Systems Engineering) prepares students for professional careers in Systems Engineering. Systems Engineers are responsible for the design and operation of all kinds of engineered systems including defence equipment, infrastructure, telecommunications systems, industrial systems and automotive

products. They are also responsible for the exploration, definition and specification, design, modelling, and successful construction and integration of whole systems. You will learn how to undertake large systems design such as the development of new submarines or ships as well as apply systems engineering principles to progress designs stage by stage to the required level of complexity.

What will I study?

The first two years of this program are closely aligned with the other Engineering specialisations in electronics, communications and computer systems giving students the flexibility to transfer to a similar program depending on their career interests.

The Bachelor of Engineering (Electrical and Systems Engineering) program will provide a range of courses focused on engineering, mathematics, applied science and computer applications, with graduates' skills underpinned by broad systems thinking and design principles.

Topics in first and second year include electrical engineering, engineering communication, design and innovation, electrical circuit theory, computer hardware, and programming in Java. The third year will provide specialist training in systems engineering with courses including Engineering Systems Thinking and Systems Engineering.

In the fourth and final year students will apply their theoretical knowledge in a major industry-based project. They will also study advanced and innovative courses in electrical and systems engineering such as System Project Environment and Principles of Test and Evaluation.

Students who graduate from this degree will be able to apply for entry to the Master of Engineering (Systems Engineering) and receive credit for some courses completed in the undergraduate degree. This allows students to complete one of the Master degrees

with one additional year of full-time equivalent study.



What does it take?

You should be a good problem solver and show a passion for understanding new gadgets and technologies. You will need to be able to think scientifically, critically analyse information and have good interpersonal skills.

Who will employ me?

Graduates typically secure employment in areas such as systems integration, network systems administration, defence, customer support, embedded system design, IT, logistics administration, network design, software and systems engineering and research.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Such accreditation is provisional until the program produces its first graduates.

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements**FIRST YEAR****First Half****(Study Period 1, 2 or 3)**

Mathematical Methods

for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half**(Study Period 4, 5 or 6)**

Mechanics and Physics

Electrical and Energy Systems

Mathematical Methods

for Engineers 2

Engineering Design

and Innovation

SECOND YEAR**First Half****(Study Period 1, 2 or 3)**

Programming for Engineers

OR Mechanical Engineering

Practice N

AND Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half**(Study Period 4, 5 or 6)**

Programming Fundamentals

OR Electromechanics

AND Principles of

Computer Systems

Electronic Devices and Circuits

Engineering Mathematics 4E

THIRD YEAR**First Half****(Study Period 1, 2 or 3)**

IT Physics

OR Computer Hardware

AND Signals and Systems

Engineering Systems Thinking

Digital Devices and Systems

Second Half**(Study Period 4, 5 or 6)**

Professional Engineering

Practice E

Systems Engineering

Technical Elective 1

Elective

Practical Industrial

Experience Reports

FOURTH YEAR**First Half****(Study Period 1, 2 or 3)**

Systems Engineering Project 1

OR Systems Engineering Honours

Project 1

AND System Project Environment

Technical Elective 2

Second Half**(Study Period 4, 5 or 6)**

Systems Engineering Project 2

OR Systems Engineering Honours

Project 2

AND Principles of Test

and Evaluation N

Technical Elective 3



Bachelor of Engineering (Electronics and Communications)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434751 |
| UniSA program code | LBIF |
| CRICOS code (international students only) | 057814B |
| ATAR (February 2011 cut-off) | 78.70 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | A\$25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Electronics and Communications) prepares students for professional careers in a range of electronics and telecommunications industries. The program develops skills in modern communications principles as well as micro-electronics, fabrication, electronic design, signal processing and modern communications principles.

As well as developing sound knowledge of the relevant technologies, students acquire a detailed understanding of electronic and communication systems and the skills needed to design both components and systems.

Accelerated three-year program

It is possible to complete this program in less than four years

by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of cross-disciplinary studies as well as how engineering is applied in industry. You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in.

The Bachelor of Engineering (Electronics and Communications) focuses on small and smart systems used in almost every industry such as automotive, food and beverage, defence, media, telecommunications, biomedical, safety, and the environment. The degree also incorporates study in the areas of computer technology, communications, intelligent systems, control, automation, microelectronics, electronic instrumentation, management and systems engineering. In the final years of the degree, you will undertake specialist studies in electronics and microengineering or telecommunications and apply the principles and

practices of their studies in a major industry-based project.

The final-year project provides you with an opportunity to gain hands-on electronics experience, apply the integrated skills you have developed throughout the degree and develop direct links to industry and professional networks.

Electronics and Communications students also undertake a compulsory three-month, full-time industry placement in a relevant field. This provides you with an opportunity to gain valuable work experience in an industry setting, in which you can apply your skills and knowledge to practical problems and gain valuable engineering practice. This experience prepares you for professional careers in electronics and telecommunications, while outstanding candidates may be offered further employment opportunities.

You also have the option of studying abroad for one year on the International Student Exchange program. This enables you to gain international experience by completing part of their degree overseas. For more information visit unisa.edu.au/exchange.

In association with industry partners and sponsors, UniSA recognises many deserving students with prizes and awards at various levels of study. For more information visit unisa.edu.au/eie/prizes.

What does it take?

Students undertaking the program should have a curiosity-driven mind and good verbal and written communication

skills. They should have a flexible attitude and enjoy working with science as well as social, administrative and management issues. Competence in mathematics and physics is also desirable.

Who will employ me?

The program prepares you for a career as an electronics engineer. Electronics engineers design, develop, test and maintain electronic parts and systems used in the fields of computers, communications, navigation, industry and entertainment. Graduates typically secure employment as clean room technologists, electronic design engineers, electronic process engineers, expert systems engineers, integrated circuit (IC) design engineers, IC fabrication engineers, internet protocol (IP) network engineers, materials technologists, micro electro-mechanical systems (MEMS) engineers, micro fabrication engineers, microsystems engineers, printed circuit board (PCB) engineers, and research officers.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Mathematical Methods

for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Programming for Engineers

Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half

(Study Period 4, 5 or 6)

Principles of Computer Systems

Electronic Devices and Circuits

Programming Fundamentals

Engineering Mathematics 4E

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

IT Physics

Computer Hardware

Digital Devices and Systems

Signals and Systems

Second Half

(Study Period 4, 5 or 6)

Introduction to

Communication Systems

Computer Communications

and Networks

Real-Time Systems and Control

Professional Engineering

Practice E

Practical Industrial

Experience Reports

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Specialisation Elective 1

Electronic Filters and Amplifiers

OR Telecommunication

Networks M

Specialisation Elective

VLSI Design G

OR Data Structures

Electrical and Information

Engineering Project 1

OR Electrical and Information

Engineering Project 1 Honours

Systems Engineering

Second Half

(Study Period 4, 5 or 6)

Specialisation Elective 3

Microengineering Technology

OR Modern Communication

Systems

Elective

Digital Signal Processing

Electrical and Information

Engineering Project 2

Electrical and Information

Engineering Project 2 Honours

Bachelor of Engineering (Networking and Communications)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434741 |
| UniSA program code | LBIF |
| CRICOS code (international students only) | 057813C |
| ATAR (February 2011 cut-off) | 77.85 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Networking and Communications) is designed to provide the essential theoretical and practical skills in the design, creation and implementation of modern communication networks. Networking is a rapidly developing speciality with new networking and communications technologies being developed to support all sectors of modern economies, including finance and commerce, manufacturing,

computing, education, medical and hospital services, social services, software and systems, mining, telecommunications, transport and defence.

You will develop skills and knowledge in the areas of computer hardware and software, communications engineering, and computer and communications networks. The program explores how to engineer systems so that information in all its forms

including data, voice, graphics and image signals are processed, networked, encrypted, transmitted and received across space, fibre optics and hardwired mediums. Successful completion of the program leads graduates into rewarding careers as professionally recognised engineers.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes you to the breadth of cross-disciplinary studies as well as how engineering is applied in industry. You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in. Throughout your studies, you will undertake a compulsory three-month, full-time industry work placement in a field related to networking. Placements are normally sponsored by local industry and provide you with an

excellent opportunity to apply your skills and knowledge to practical problems of interest to the telecommunications industry while gaining experience in a real industry setting.

In the final year of the degree, you undertake a major project that enables you to apply the principles and practices of your networking studies. The projects are often sponsored by telecommunications and defence industries and provide you with hands-on experience and valuable links to industry.

You will also have the option of studying abroad on the International Student Exchange program. This enables you to gain international experience by completing part of your degree overseas. For more information visit unisa.edu.au/exchange.

What does it take?

You need an inquiring mind with good verbal and written communication skills, and a genuine enjoyment of working with science as well as social, administrative and management issues. Competence in mathematics and physics is also desirable.

Who will employ me?

Graduates are typically employed as network engineers, network administrators, system and software engineers, computer system administrators, communications consultants, data network architects, digital signal processing (DSP) engineers, hardware engineers, mobile communications engineers, modem engineers, professional officers, scientific officers, IT specialists, information technology officers and research assistants.

A range of employment opportunities exist in both the private and government sectors, reflecting the ubiquity of computer networking and communications in our society.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Mathematical Methods
for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Programming for Engineers

Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half

(Study Period 4, 5 or 6)

Principles of Computer Systems

Electronic Devices and Circuits

Programming Fundamentals

Engineering Mathematics 4E

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Computer Hardware

IT Physics

Signals and Systems

Digital Devices and Systems

Second Half

(Study Period 4, 5 or 6)

Computer Communications

and Networks

Introduction to

Communication Systems

Computer Hardware Design

OR Real-Time Systems

and Control

OR Digital Signal Processing

Professional Engineering

Practice E

Practical Industrial

Experience Reports

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

System Design Techniques

Telecommunication Networks M

Systems Engineering

Electrical and Information

Engineering Project 1

OR Electrical and Information

Engineering Project 1 Honours

Second Half

(Study Period 4, 5 or 6)

Advanced Internet Technology

Digital Signal Processing

OR Computer Hardware Design

OR Modern Communication

Systems

Elective

Electrical and Information

Engineering Project 2

OR Electrical and Information

Engineering Project 2 Honours



Bachelor of Engineering (Optical and Electronic)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/penday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|---|--|
| SATAC code | 434911 |
| UniSA program code | LBIF |
| CRICOS code (international students only) | 068881M |
| ATAR (February 2011 cut-off) | 89.10 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Optical and Electronic) prepares students for professional careers in a range of optical electronics and telecommunications industries. The program develops skills in fibre optics, high speed internet, optical communications, optical sensors, solar cells, all types of lasers for business and industry, display technology for media products, high efficiency lighting, image processing, optical control, face recognition

software, LADS and LIDAR, astronomy, pollution monitoring, spectroscopy and much more. Optical Engineers make light do amazing things. They turn ideas into reality, from CD's and cell phones to laser eye surgery. Optical Engineers enjoy rewarding careers in research, design, development and commissioning of devices and systems that utilise light, both visible and invisible, to create all sorts of things we use every day in today's rapidly changing world.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

Students from this program study a combination of courses to graduate as an Electronic Engineer with a specialisation in Optical and Opto-Electronic Systems. Courses expose students to hands-on project work culminating in a full year optical engineering project in their final year. The third year and final year projects may be taken in either research laboratories or with local industry. This program has a strong practical and industry focus and you will have the opportunity to study overseas. You can also choose optical engineering electives from the Australian National University to contribute to your degree.

Optical and Electronic Engineering students also undertake a compulsory, three-month, full-time industry placement in a related field. This provides you with an opportunity to gain valuable work experience in an industry setting in which you can apply your skills and knowledge to practical problems.

What does it take?

You should be a good problem solver and show a passion for understanding new gadgets and technologies. You will need to be able to think scientifically, critically analyse information and have good interpersonal skills.

Who will employ me?

Optical engineers find employment worldwide in government, private enterprise and defence industries, in fields such as medicine, security, telecommunications, manufacturing, entertainment and the environment.

There are numerous electronics companies in Adelaide and many companies associated with the Defence industry that also utilise opto-electronic and optical vision systems.

There are companies who specialise in lasers systems for ophthalmic surgery, and photonics companies specialising in optical solutions for clients. There is a need for skilled electronic engineers with knowledge of optical and opto-electronic systems.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in the Honours courses in Engineering in their final year. Successful completion of the program and the Honours project courses may lead to the award of the Bachelor of Engineering with Honours.

Program requirements**FIRST YEAR****First Half****(Study Period 1, 2 or 3)**

Mathematical Methods

for Engineers 1

Engineering Materials

Computer Techniques

Sustainable Engineering Practice

Second Half**(Study Period 4, 5 or 6)**

Mathematical Methods

for Engineers 2

Electrical and Energy Systems

Mechanics and Physics

Engineering Design

and Innovation

SECOND YEAR**First Half****(Study Period 1, 2 or 3)**

Programming for Engineers

Electrical Circuit Theory

Analogue and Digital

Electronic Fundamentals

Engineering Mathematics 3E

Second Half**(Study Period 4, 5 or 6)**

Principles of Computer Systems

Electronic Devices and Circuits

Programming Fundamentals

Engineering Mathematics 4E

THIRD YEAR**First Half****(Study Period 1, 2 or 3)**

Computer Hardware

IT Physics

Signals and Systems

Lasers and Optics

Second Half**(Study Period 4, 5 or 6)**

Professional Engineering

Practice E

Optical Engineering Elective 1

Optical Engineering Elective 2

Applied Physics Project A

Practical Industrial

Experience Reports

FOURTH YEAR**First Half****(Study Period 1, 2 or 3)**

Modern Physics

Optical Engineering Elective 3

Systems Engineering

Electrical and Information

Engineering Project 1

OR Electrical and Information

Engineering Project 1 Honours

Second Half**(Study Period 4, 5 or 6)**

Microengineering Technology

Elective

Optical Engineering Elective 4

Electrical and Information

Engineering Project 2

OR Electrical and Information

Engineering Project 2 Honours

Optical Engineering Electives

Solar Technologies

Optical Communications G

Optical Materials and

Applications

Lasers, Optoelectronics

and Applications

Introduction to

Microelectromechanical Systems



Bachelor of Engineering (Materials)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434841 |
| UniSA program code | LBMR |
| CRICOS code | |
| (international students only) | 065053E |
| ATAR (February 2011 cut-off) | 74.35 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies and Chemistry |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

When designing or improving a product, one of the first things to consider is the material itself. Materials engineers select materials, fabricate new devices and make existing ones work better through improving the material properties, reducing processing costs and increasing strength and resilience. Materials engineering includes aspects of applied physics, chemistry, and chemical, mechanical, civil and materials engineering, as well as new high-tech areas such as nanotechnology.

In addition to metallurgy and materials engineering related to the minerals and mining industries, there are a range of industries requiring engineers with exposure to a range of materials and materials engineering concepts – from materials processing (including metals and minerals) through various manufacturing, biomedical and processing industries. Advanced materials such as ceramics, composites and biomaterials are also becoming increasingly used.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of cross-disciplinary studies as well as how engineering is applied in industry. You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in.

Courses in the second and third years are arranged to give the program a practice based emphasis and allow you to study areas such as design in plastics and advanced composites, ferrous and non-ferrous materials and ceramics, glasses and polymeric materials. You will study advanced topics in materials science and engineering in final year, together with specialised areas

relating to the use of materials in practical applications.

Final year may be taken as an honours year for students with outstanding academic results. The program has a strong practical and industry focus and students may choose to undertake their final year project with one of UniSA's leading research centres or work on a real-life industry project with one of UniSA's industry partners.

What does it take?

Strong interpersonal skills are required, matched with the ability to identify, analyse, design and solve problems. Students should be competent in mathematics, physics and chemistry. Good verbal and written communication skills and an inquiring mind are also important.

Who will employ me?

Demand for Materials Engineering graduates is high. Over the past five years (2006 – 2010), 85% of graduates found full-time employment locally and internationally in the minerals, mining, manufacturing, aerospace, automotive and processing industries. Many high technology products make extensive use of advanced materials, and materials engineering plays an important role in ensuring products are environmentally sustainable as well as economically competitive.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable

international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of the third year may be invited to enrol in the Honours project in the fourth year. Successful completion of the program and the Honours project may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems

Engineering Design

and Innovation

Mathematical Methods

for Engineers 2

Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures

Engineering Modelling

Manufacturing Practice

Mechanical Engineering

Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines

Mechanical Design Practice

Fluid and Energy Engineering

Elective

Industrial Experience

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Design for Manufacture

and Assembly

Energy Conversion

and Management

Project Planning and Control

Computer Aided

Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Design in Plastics and

Advanced Composites

Structural Materials 1: Ferrous

and Non-Ferrous Materials

Nanomaterials and Fabrication

Operations Management

for Engineers

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Materials Engineering Project 1

Nanocomposites and Practice

Structural Materials 2: Ceramics,

Glasses and Polymeric Materials

Second Half

(Study Period 4, 5 or 6)

Materials Engineering Project 2

Interfaces in Complex

Structures and Devices

Surface Engineering

Technologies and Coatings

FOURTH YEAR WITH

HONOURS

First Half

(Study Period 1, 2 or 3)

Materials Engineering Project 1

Nanocomposites and Practice

Structural Materials 2: Ceramics,

Glasses and Polymeric Materials

Second Half

(Study Period 4, 5 or 6)

Materials Engineering

Honours Project 2

Interfaces in Complex

Structures and Devices

Surface Engineering

Technologies and Coatings



Renee Goreham

PhD student

Mawson Institute

'I enjoy many aspects of the engineering profession. For one I would like to think that what I do may influence the way we all live. Essentially I feel that I make a difference. I got into engineering by accident (to tell the truth). I started my degree in forensics and analytical techniques and when it was time to undertake my postgraduate studies I realised that I was interested in engineering new materials and making old materials better. The thought of generating new compounds/materials that can change the way we live, such as polymers, Kevlar or POSS (Polyhedral Oligomeric Silsesquioxane) drives my research.

If I could change or inspire one thing for the engineering profession I would like to improve the quality of information provided to high school students about engineering and promote the benefits of studying science and mathematics. I would also love to promote the use of chemistry in engineering, which can often be overlooked.

As a rural student I found that I was not provided with a lot of career information whilst in high school. It was also very difficult to talk to someone face to face about careers in engineering and science or to undertake work experience in this field. I would love to have the opportunity to take engineering information to rural schools.'

(08) 8302 2376 or 1300 UNINOW
study@unisa.edu.au

Bachelor of Engineering (Mechanical)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434321 |
| UniSA program code | LBMR |
| CRICOS code | |
| (international students only) | 056093E |
| ATAR (February 2011 cut-off) | 71.15 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

This degree combines a strong theoretical foundation with significant practical exposure, a combination that is highly sought by today's employers. This applied approach provides you with the ability to find practical solutions to engineering problems and projects.

Academic staff in the School of Advanced Manufacturing and Mechanical Engineering have close ties with a cross section of

industry, and extensive research experience. You will learn about the latest developments in machinery design, manufacturing technologies, and sustainable energy usage and management. You may choose, as a final year project, to build and race an electric race car, design the next generation solar commuter car, or undertake a project with one of UniSA's research centres or work on an industry project with one of UniSA's industry partners.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

The degree focuses on finding real solutions to engineering problems utilising both engineering theory and practical exposure gained throughout the program.

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in. You will then select courses in the areas of design, mechanics, materials, energy, fluids, processes and engineering modelling.

Specialised courses in the final year provide advanced and innovative topics in mechanical

engineering such as vehicle emission control, mechanical system design, quality management and machine vision. The final-year project offers you the choice to participate in a range of industry based projects or in one of the many special School projects, such as the development of the Society of Automotive Engineers Race Car. The Formula SAE is an annual international engineering design competition that is run by the Society of Automotive Engineers (SAE) in the USA, UK, Japan, Europe and Australasia for university students. The competition requires teams to conceive, design, fabricate, and compete with small formula-style racing cars with electrical power.

All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers. Students have the opportunity to apply and integrate the knowledge and skills they have gained during their program in an industry setting. Industry experience also helps students to determine their engineering career pathway as they are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

Students who graduate from this degree are able to apply for entry into the Master of Engineering (LMEN), and receive credit for four courses completed

in the undergraduate degree. Hence it is possible to gain a bachelor and master degree in five years of full-time study.



What does it take?

The ability to design, innovate, communicate, identify and solve problems is necessary, and students should have an inquiring mind with good verbal and written communication skills. Competence in mathematics and physics is essential. Students should have an interest in science as well as social, management and sustainability issues.

Who will employ me?

Mechanical Engineering graduates find work locally and internationally in the mining, defence, manufacturing, ship building, environmental, engineering consulting, building services, automotive, petrochemical, and other industries. Many graduates receive multiple job offers and are able to choose their employer or the industry in which they wish to work.

In recent years (2006 – 2010), 85% of graduates from this program found full-time employment in various South Australian companies such as ASC, Orlando Wyndham Group, Holden, Origin Energy, Caroma, WMC (Olympic Dam), Aurecon, Bridgestone, Transport SA and SA Water.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems

Engineering Design

and Innovation

Mathematical Methods

for Engineers 2

Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures

Engineering Modelling

Manufacturing Practice

Mechanical Engineering

Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines

Mechanical Design Practice

Fluid and Energy Engineering

Elective

Industrial Experience

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Design for Manufacture

and Assembly

Energy Conversion

and Management

Project Planning and Control

Computer Aided

Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Design in Plastics and

Advanced Composites

Engineering Maintenance

Operations Management

for Engineers

Fluid and Energy

Management Practice

Students are required to

select a plan specialisation

aligned with their project

FOURTH YEAR WITH

HONOURS

First Half

(Study Period 1, 2 or 3)

Vehicle Emission, Control

and Strategy

Intelligent Manufacturing Systems

Mechanical Engineering Project 1

Second Half

(Study Period 4, 5 or 6)

Sustainable Development

and Design Practice

Mechanical Systems Design

Mechanical Engineering

Honours Project 2

Bachelor of Engineering (Mechanical and Advanced Manufacturing)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May

For more information and to register visit

unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August

For more information visit

unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September

For more information visit

unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434791 |
| UniSA program code | LBMR |
| CRICOS code | |
| (international students only) | 063509E |
| ATAR (February 2011 cut-off) | 78.40 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Advanced manufacturing involves the utilisation of new manufacturing and management techniques, sophisticated, high-precision machines combined with the application of information and communication technology (ICT), electronics and new organisational practices within the manufacturing sector to improve products and processes.

This degree focuses on theoretical knowledge as well as applied exposure to the latest technologies and techniques, a mixture that is highly sought by today's employers. You will develop the ability to find practical solutions to engineering problems, and have the opportunity to apply this knowledge through a final-year project with either the Mawson Institute, one of UniSA's leading Research

Institutes, or a project with one of UniSA's industry partners.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in. You can then select courses in the areas of design, mechanics, materials, energy, fluids, processes and engineering modelling. Specialised courses in the final-year provide advanced and innovative topics in mechanical and manufacturing engineering such as robotics, supply chain management, industrial automation and quality management.

The final-year project offers the choice of a range of industry-based projects or a School-based research project.

All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers.

You have the opportunity to apply and integrate the knowledge and skills you have gained during your program in an industry setting. Industry experience also helps you to determine your engineering career pathway as you are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

Students who graduate from this degree are able to apply for entry into the Master of Engineering (LMEN), and receive credit for four courses completed in the undergraduate degree. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

Strong interpersonal skills, matched with the ability to identify, analyse, design, communicate and solve problems, will enable graduates to implement new and emerging technologies and

organisational practices to help companies improve productivity and efficiency. You should be competent in mathematics, physics and chemistry and have a keen interest in the sustainability issues of tomorrow. Good verbal and written communication skills and an inquiring mind are also important.

Who will employ me?

Australia's excellence in manufacturing can be found in all industries, including aerospace, automotive, ship building, fabricated metal products, industrial machinery and equipment, pharmaceutical, defence, food and beverage industries, and primary metal industries.

Careers in this area are multifaceted, and could include: responsibility for running and optimising existing plants; improving automated processes; implementing software such as Enterprise Resource Planning (ERP); programmable logic controllers (PLCs); proximity sensors; robotics; 3D mechanical design software and systems; advanced planning and scheduling software; CMMS software systems; and manufacturing execution systems.

In recent years (2006 – 2010), 85% of graduates from this program found full-time employment in various South Australian manufacturers such as Orlando Wyndham Group, Caroma, Schefenacker, WMC (Olympic Dam), Mayne Pharma, Holden, ASC, Tenix and Bridgestone.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information

on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems

Engineering Design

and Innovation

Mathematical Methods

for Engineers 2

Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures

Engineering Modelling

Manufacturing Practice

Mechanical Engineering

Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines

Mechanical Design Practice

Fluid and Energy Engineering

Elective

Industrial Experience

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Design for Manufacture

and Assembly

Energy Conversion

and Management

Project Planning and Control

Computer Aided

Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Design in Plastics and

Advanced Composites

Engineering Maintenance

Operations Management

for Engineers

Fluid and Energy

Management Practice

Students are required to

select a plan specialisation

aligned with their project

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Intelligent Manufacturing Systems

Total Quality Management

Mechanical Engineering Project 1

Second Half

(Study Period 4, 5 or 6)

Mechanical Systems Design

Supply Chain Management G

Mechanical Engineering Project 2

FOURTH YEAR WITH

HONOURS

First Half

(Study Period 1, 2 or 3)

Intelligent Manufacturing Systems

Total Quality Management

Mechanical Engineering Project 1

Second Half

(Study Period 4, 5 or 6)

Mechanical Systems Design

Supply Chain Management G

Mechanical Engineering

Honours Project

Bachelor of Engineering (Mechanical and Mechatronics)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/penday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434781 |
| UniSA program code | LBMIR |
| CRICOS code (international students only) | 063513J |
| ATAR (February 2011 cut-off) | 71.20 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The program actively integrates mechanical engineering with computing, control, automation and actuation. The program has a strong practical and industry focus and students undertake a project with one of UniSA's research institutes or work on a real-life project with one of UniSA's many industry partners.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical, Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in. In following years, you can select courses in the areas of energy, fluids, design, mechanics, materials, processes and engineering modelling. Specialised final-year courses provide innovative topics in mechanical and mechatronics engineering such as robotics, industrial automation and machine vision.

The final-year project offers the choice of a range of industry-based projects in the sustainable systems and technologies areas or a School based project. All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers.

You will have the opportunity to apply and integrate the knowledge and skills you have

gained during your program in an industry setting. Industry experience also helps you to determine your engineering career pathway as you are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, offers many prizes and awards for students at various levels of study (for more information visit unisa.edu.au/ame/prizes).

Students who graduate from this degree are able to apply for entry into the Master of Engineering (LMEN), and receive credit for four courses completed in the undergraduate degree. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

You should have an inquiring mind, an aptitude to think clearly and critically. The ability to design, innovate, communicate, identify and solve problems is necessary, and competence in mathematics, physics is essential. Students should have an interest in science as well as social, management and sustainability issues.

Who will employ me?

Demand for Mechanical and Applied Mechatronics Engineering graduates is high. Over the past five years (2006 – 2010), 85% of graduates found full-time employment locally and internationally in the defence, automotive, aviation, automation, manufacturing and electronic industries. As the interface between mechanical, electrical and automation

engineering, graduates will be well positioned to tackle complex multidisciplinary problems.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of the third year may be invited to enrol in the Honours project in the fourth year. Successful completion of the program and the Honours project may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

| |
|--------------------------------------|
| Computer Techniques |
| Engineering Materials |
| Mathematical Methods for Engineers 1 |
| Sustainable Engineering Practice |
| Second Half |
| (Study Period 4, 5 or 6) |
| Electrical and Energy Systems |
| Engineering Design and Innovation |
| Mathematical Methods for Engineers 2 |
| Mechanics and Physics |

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

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|--|
| Mechanics and Structures |
| Engineering Modelling |
| Analogue and Digital Electronic Fundamentals |
| Mechanical Engineering Practice N |

Second Half

(Study Period 4, 5 or 6)

| |
|------------------------------|
| Mechanics of Machines |
| Mechanical Design Practice |
| Fluid and Energy Engineering |
| Electromechanics |
| Industrial Experience |

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

| |
|-------------------------------------|
| Programming for Engineers |
| Energy Conversion and Management |
| Project Planning and Control |
| Computer Aided Engineering Practice |

Second Half

(Study Period 4, 5 or 6)

| |
|--|
| Elective |
| Engineering Maintenance |
| Mechatronics 1 |
| Fluid and Energy Management Practice |
| Students are required to select a plan specialisation aligned with their project |

FOURTH YEAR WITH

HONOURS

First Half

(Study Period 1, 2 or 3)

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|-------------------------------------|
| Mechatronics 2 |
| Industrial Actuation and Automation |
| Mechanical Engineering Project 1 |

Second Half

(Study Period 4, 5 or 6)

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| Machine Vision Systems |
| Robotics and Automation |
| Mechanical Engineering Honours Project |



Tim Dixon

3rd year Bachelor of Engineering
(Mechanical and Mechatronic)

'I have worked as a mechanic and a machine operator and have always been mechanically minded. While working for one of Holden's sub-contractors I got to see firsthand what the mechanical engineers were required to do and this inspired me to return to university.

I really enjoyed the common first year in Engineering, which enables students from different streams to integrate and build networks. I also like the hands-on aspect of the courses. UniSA seems to run more practical events than its counterparts which are more appealing to me.

UniSA is one of the best places for you to undertake your career path and my goal, once I graduate, is to be able to find work in a job that will constantly challenge me.'

Bachelor of Engineering (Mechanical and Nanotechnology)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434761 |
| UniSA program code | LBMIR |
| CRICOS code (international students only) | 063515G |
| ATAR (February 2011 cut-off) | 78.70 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The program provides fundamental aspects of mechanical engineering combined with nanotechnology and hands-on experience in nanomaterials utilising both research-led teaching and practical exposure gained throughout the program. In their final year, you have the opportunity to undertake an advanced nanomaterials research project with UniSA's Mawson Institute or the Ian Wark Research Institute.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including

Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in. Courses offered in following years cover areas such as design, mechanics, materials, energy, fluids, processes and engineering modelling. Specialised final-year courses provide advanced and innovative topics in mechanical and nanotechnology engineering such as nanomaterials, nanofabrication, nanocomposites, quality management and mechanical system design.

The final-year project offers the choice to extend these specialist skills through a research project, industry-based project, or one of the many special School projects. All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers. You will have the opportunity to apply and integrate the knowledge and skills they have gained during their program in an industry setting. Industry experience also helps you to determine their engineering

career pathway as they are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

Students who graduate from this degree are able to apply for entry into the Master of Engineering (LMEN), and receive credit for four courses completed in the undergraduate degree. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

The ability and desire to design, innovate, communicate, identify and solve problems is important. Students should have an inquiring mind with good verbal and written communication skills. Competence in mathematics and physics is essential.

Who will employ me?

The 21st century is hailed as the century of nanotechnology. Nanotechnology offers solutions to many current problems by means of smaller, lighter, faster and better performing materials, components and systems. This opens up new opportunities for employment.

Demand for Mechanical and Nanotechnology Engineering graduates is high. Over the past five years (2006 – 2010), 85% of graduates found full-time employment locally and internationally in the defence,

petrochemical, minerals and materials processing, mining, research, food processing, manufacturing, pharmaceutical and environmental industries.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques
Engineering Materials
Mathematical Methods for Engineers 1
Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems
Engineering Design and Innovation
Mathematical Methods for Engineers 2
Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures
Engineering Modelling
Manufacturing Practice
Mechanical Engineering Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines
Mechanical Design Practice
Fluid and Energy Engineering
Elective
Industrial Experience

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Design for Manufacture and Assembly
Energy Conversion and Management
Project Planning and Control
Computer Aided Engineering Practice
Second Half

(Study Period 4, 5 or 6)

Design in Plastics and Advanced Composites
Engineering Maintenance
Operations Management for Engineers
Fluid and Energy Management Practice

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Total Quality Management
Nanocomposites and Practice
Mechanical Engineering Project 1
Second Half

(Study Period 4, 5 or 6)

Mechanical Systems Design
Nanomaterials and Fabrication
Mechanical Engineering Project 2

FOURTH YEAR WITH HONOURS

First Half

(Study Period 1, 2 or 3)

Total Quality Management
Nanocomposites and Practice
Mechanical Engineering Project 1
Second Half

(Study Period 4, 5 and 6)

Mechanical Systems Design
Nanomaterials and Fabrication
Mechanical Engineering
Honours Projects



Prof Peter Majewski

Associate Head – Research, Mawson Institute, UniSA School of AME

‘Everything is comprised of atoms. The properties of those products we make depend on how those atoms are arranged. For example, rearrange coal atoms and you make a diamond, rearrange sand (with a couple of other trace elements) and you can make silicon chips for your iPod; rearrange the atoms in air, dirt and water and you can make potatoes!’

In the not too distant future nanotechnology will be able to snap together the fundamental building blocks of nature easily, inexpensively and in most of the ways the laws of physics allow. When it does it will allow mechanical engineers to fabricate entire generations of cleaner, stronger, lighter, and more precise products.’

Bachelor of Engineering (Mechanical and Sustainable Systems)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434771 |
| UniSA program code | LBMIR |
| CRICOS code | |
| (international students only) | 063514G |
| ATAR (February 2011 cut-off) | 80.90 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees | |
| (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

This program prepares you for a career in developing and maintaining sustainable systems in mechanical engineering applications. It combines strong theoretical and practical content while maintaining an industry focus. You will develop the skills to find environmentally sustainable solutions to engineering problems utilising both engineering theory and practical exposure gained throughout the program.

In your final year, you have the opportunity to undertake an industry based research project with UniSA's Barbara Hardy Institute.

Accelerated three-year program

It is possible to complete this program in less than four years by undertaking courses offered during study period breaks. This accelerated option will be offered by the Program Director to students

who achieve outstanding grades in the first year.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes you to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in. In following years, you can select courses in the areas of energy, fluids, design, mechanics, materials, processes and engineering modelling. Specialised final-year courses provide innovative topics in sustainable systems engineering such as vehicle emission control, energy management for sustainability and sustainable energy system design.

The final-year project offers the choice of a range of industry-based projects in the sustainable systems and technologies areas or a School based project. All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers.

You will have the opportunity to apply and integrate the knowledge and skills they have gained during their program in an industry setting. Industry experience also helps you to determine their engineering career pathway as they are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, offers many prizes and awards for students at various levels of study (for more information visit unisa.edu.au/ame/prizes).

Students who graduate from this degree are able to apply for entry into the Master of Engineering (LMEN), and receive credit for four courses completed in the undergraduate degree. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

You should have an inquiring mind with good verbal and written communication skills. The ability to design, innovate, communicate, identify and solve problems is necessary, and competence in mathematics and physics is essential. Students should have an interest in science as well as social, management and environmental sustainability issues.

Who will employ me?

With current attention to climate change and the need to provide sustainable energy and sustainable resources, the demand for Mechanical and Sustainable Systems Engineering graduates is high. Over the

past five years (2006 – 2010), 85% of graduates found full-time employment locally and internationally in the conventional and sustainable energy industry (electricity, gas, solar, wind, geothermal), environmental, energy, building and mechanical services management, transport, consulting, automotive, mining and manufacturing industries.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project courses may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques
Engineering Materials
Mathematical Methods for Engineers 1
Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems
Engineering Design and Innovation
Mathematical Methods for Engineers 2
Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures
Engineering Modelling
Manufacturing Practice
Mechanical Engineering Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines
Mechanical Design Practice
Fluid and Energy Engineering
Elective
Industrial Experience

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Design for Manufacture and Assembly
Energy Conversion and Management
Project Planning and Control
Computer Aided Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Design in Plastics and Advanced Composites
Engineering Maintenance
Operations Management for Engineers
Fluid and Energy Management Practice
Students are required to select a plan specialisation aligned with their project

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Vehicle Emission, Control and Strategy
Energy and Society

Mechanical Engineering Project 1

Second Half

(Study Period 4, 5 or 6)

Sustainable Development and Design Practice
Sustainable Energy System Design
Mechanical Engineering Honours Project



Niall Buggy

Graduated – Bachelor of Engineering
(Mechanical & Sustainable Systems)

'I chose to study this program because I have always been interested in how things work. This degree combines engineering with sustainability and I believe that development does not have to be at the expense of the environment.

The sustainability component was particularly interesting because I was able to gauge the effects of engineering systems and the ways in which these effects, if negative, can be reduced.

This program has an emphasis on practical learning during classes. We also have guest lectures from practising engineers and industry visits to see how an engineering company operates. Once I graduate my goal is to work in the construction industry in building services.'

Bachelor of Engineering (Mechanical and Systems Engineering)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434971 |
| UniSA program code | LBMR |
| CRICOS code | |
| (international students only) | n/a |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

The Bachelor of Engineering (Mechanical and Systems Engineering) prepares students for careers in Systems Engineering. Systems Engineers are responsible for the design and operation of all kinds of engineered systems including defence equipment, infrastructure, telecommunications systems, industrial systems, automotive products, etc. They are

responsible for the exploration, definition and specification, design and modelling, and successful construction and integration of whole systems.

This program prepares students for careers in Systems and Systems Integration Engineering. Students will learn how to undertake large systems design such as the development of new submarines or ships. Students will apply systems engineering

principles in order to progress designs stage by stage to the required level of complexity.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

Students undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, students can choose an area of interest to specialise in. Courses in second and third years are arranged to give the program a practice based emphasis that provides engineering knowledge in the areas of mechanics and component design; fluid mechanics, thermodynamics and sustainable design; materials and design for manufacturing; and manufacturing systems and engineering maintenance. The fourth year offers the opportunity for specialisation to equip graduates for future leadership roles in the areas of mechanical design, advanced manufacturing, applied mechatronics, sustainable systems and nanotechnology with particular emphasis on the manufacturing, defence, mining, mechanical design, automotive, and building and mechanical services industries.

These specialisations each have a major individual project which is industry based.

All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers. Students have the opportunity to apply and integrate the knowledge and skills they have gained during their program in an industry setting. Industry experience also helps students to determine their engineering career pathway as they are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

Students who graduate from this degree are able to apply for entry into the Master of Engineering (LMST), and receive credit for four courses completed in the undergraduate degree. This allows students to complete one of the Master degrees with one additional year of full-time equivalent study.



What does it take?

Students should have an inquiring mind with good verbal and written communication skills. The ability to design, innovate, communicate, identify and solve problems is necessary, and competence in mathematics and physics is essential. Students should have an interest in

science as well as social, management and environmental sustainability issues.

Students should have a minimum score of C- in Stage 2 Mathematical Studies and a knowledge of SACE 2 Physics.

Who will employ me?

The program has a strong practical and industry focus and students may, as a final year project, work with industry or government to gain real world experience in Systems Engineering. Students will have the opportunity to work with Project Managers leading Defence projects such as Air Warfare Destroyer, New Submarines and Land Vehicles.

Industry and Government organisations expect a widespread skills shortage in Systems Engineering and Systems Integration. This shortage will significantly impact the nations capability to deliver advanced technologies. This comes at a time when careers in Systems Engineering and Systems Integration will become more abundant over the next five years. This program aims to meet the skill needs of industry and Government.

Mechanical and Systems Engineering graduates find work locally and internationally in the mining, defence, manufacturing, ship building, environmental, engineering consulting, building services, automotive, petrochemical, and other industries.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit

washingtonaccord.org and engineersaustralia.org.au

Such accreditation is provisional until the program produces its first graduates.

Honours

Students achieving a credit level average at the end of the third year may be invited to enrol in the Honours project in the fourth year. Successful completion of the program and the Honours project may lead to the award of a degree with Honours.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems

Engineering Design and Innovation

Mathematical Methods for Engineers 2

Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures

Engineering Modelling

Manufacturing Practice

Mechanical Engineering Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines

Mechanical Design Practice

Fluid and Energy Engineering

Elective

Industrial Experience

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Design for Manufacture and Assembly

Energy Conversion

and Management

Computer Aided

Engineering Practice

Engineering Systems Thinking

Second Half

(Study Period 4, 5 or 6)

Design in Plastics and

Advanced Composites

Engineering Maintenance

Fluid and Energy

Management Practice

Systems Engineering

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Students are required to

select a plan specialisation

aligned with their project

First Half (Study Period 1, 2 or 3)

Project Planning and Control

System Project Environment

Systems Engineering Project 1

Second Half

(Study Period 4, 5 or 6)

Operations Management

for Engineers

Principles of Test and Evaluation N

Systems Engineering Project 2

FOURTH YEAR WITH

HONOURS

First Half

(Study Period 1, 2 or 3)

Project Planning and Control

System Project Environment

Systems Engineering

Honours Project 1

Second Half

(Study Period 4, 5 or 6)

Operations Management

for Engineers

Principles of Test and Evaluation N

Systems Engineering

Honours Project 2

Bachelor of Technology (Mechanical and Manufacturing Engineering)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434221 |
| UniSA program code | LBNI |
| CRICOS code | |
| (international students only) | 018743B |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 3 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

This program prepares graduates for careers as engineering technologists in a range of mechanical and manufacturing engineering industries. Combining a strong practical and industry focus, students gain an understanding of fundamentals as well as an appreciation of the diversity of mechanical engineering.

Students who successfully complete this program can apply for entry to the Bachelor of Engineering (Mechanical Engineering), Bachelor of Engineering (Mechanical and Advanced Manufacturing Engineering), Bachelor of Engineering (Mechanical and Sustainable Systems Engineering), Bachelor of Engineering (Mechanical and Applied Mechatronics Engineering)

or Bachelor of Engineering (Mechanical and Nanotechnology Engineering) and receive significant credit toward the program. Students can also articulate into the above degrees after suitable completion of the first two years of the Bachelor of Technology program.

What will I study?

In the first year, you will study core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. By the end of first year, you can choose an area of interest to specialise in.

In the final year, you can select courses to specialise your studies in mechanical engineering, advanced manufacturing, sustainable systems and mechatronics. During your study, you access specialised laboratory facilities such as robotics, CNC machinery, thermofluids and polymer composites and utilise state-of-the-art engineering equipment and software.

You will be required to complete a project in an area of specialisation: either an

industry-based project with one of UniSA's industry partners or a project with one of UniSA's specialist research institutes.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

What does it take?

You should have an inquiring mind with good verbal and written communication skills. Students should be interested in science as well as social, administrative and management issues. Competence in mathematics and physics is also desirable.

Who will employ me?

The aim of the program is to produce graduates that are immediately useful to industry as assistants to professional engineers. These graduates occupy the role of project or production engineers in a range of industries including mining, automotive, building services, plastics, electronics, sustainable energy, renewable energy, food processing, pharmaceuticals, and mechanical services. They can carry out specific and complex engineering tasks, focus on interactions within engineering systems and identify and solve complex, specialised engineering problems by applying innovative practices and procedures.

The award also provides an important role as an articulation pathway for TAFE and university graduates with diploma qualifications who wish to improve their qualifications.

Professional recognition

This program is professionally accredited by Engineers Australia and is recognised as satisfying the requirements for membership as an Engineering Technologist.

Program requirements**FIRST YEAR****First Half****(Study Period 1, 2 or 3)**

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half**(Study Period 4, 5 or 6)**

Electrical and Energy Systems

Engineering Design

and Innovation

Elective

Mechanics and Physics

SECOND YEAR**First Half****(Study Period 1, 2 or 3)**

Mechanics and Structures

Project Planning and Control

Manufacturing Practice

Mechanical Engineering

Practice N

Second Half**(Study Period 4, 5 or 6)**

Mechanical Design Practice

Operations Management

for Engineers

Fluid and Energy Engineering

Specialisation Elective 1

Industrial Experience 3

THIRD YEAR**First Half****(Study Period 1, 2 or 3)**

Specialisation Elective 2

Design for Manufacture

and Assembly

Energy Conversion

and Management

Computer Aided

Engineering Practice

Second Half**(Study Period 4, 5 or 6)**

Specialisation Elective 3

Design in Plastics and

Advanced Composites

Specialisation Elective 4

Mechanical Engineering

Project 1A

Specialisation Electives

Mathematical Methods

for Engineers 2

Engineering Modelling

Mechanics of Machines

Fluid and Energy

Management Practice

Engineering Maintenance

Mechanical Systems Design

Total Quality Management

Vehicle Emission, Control

and Strategy

Robotics and Automation

Machine Vision Systems

Supply Chain Management G

Intelligent Manufacturing Systems

Sustainable Development

and Design Practice

Energy and Society

Industrial Actuation

and Automation



Bachelor of Engineering (Metallurgy)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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|------------------------------|--|
| SATAC code | 434931 |
| UniSA program code | LBGY |
| ATAR (February 2011 cut-off) | 87.75 |
| Program length | 4 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | No |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Scholarships available | unisa.edu.au/scholarships |

Program overview

The program aims to provide an in-depth knowledge of various metallurgical processes to prepare graduates for professional careers in minerals, mining, manufacturing and processing industries.

What will I study?

The program has a foundational first year that includes an introduction to mechanical, civil and electrical engineering to give you a broad engineering knowledge so that you have an extensive understanding of basic fundamentals and an appreciation of the diversity of engineering.

Courses in second year have a practice based emphasis that provides engineering knowledge in a range of areas including mechanical engineering, metallurgy, chemistry and manufacturing.

The third year of the program provides more detailed study of particular metallurgical and mineral processing including pyrometallurgy and hydrometallurgy along with some advanced manufacturing process engineering.

The fourth year includes a major individual, industry based project and the opportunity for you to choose a particular area of advanced study in metallurgy, materials or mechanical engineering according to their interests.

Who will employ me?

This program will prepare you for work as metallurgists, primarily in the mining industry. Graduates can gain employment within a range of industries requiring engineers with exposure to a range of materials and materials engineering concepts – from materials processing (including metals and minerals) through various manufacturing, biomedical and processing industries. Advanced materials such as ceramics, composites and biomaterials are also becoming increasingly used.

Students that successfully complete this program will also be able to progress onto higher degree work with materials research facilities inside and outside of UniSA.

Honours

Students achieving a credit level average at the end of third year may be invited to enrol in the Honours project in fourth year. Successful completion of the program and the Honours project may lead to the award of a degree with Honours.

Program requirements**FIRST YEAR****First Half**(Study Period 1, 2 or 3)Computer TechniquesEngineering MaterialsMathematical Methods
for Engineers 1Sustainable Engineering Practice**Second Half**(Study Period 4, 5 or 6)Electrical and Energy SystemsEngineering Design
and InnovationMathematical Methods
for Engineers 2Mechanics and Physics**SECOND YEAR****First Half**(Study Period 1, 2 or 3)Chemistry 100Mechanics and StructuresEngineering ModellingMechanical Engineering
Practice N**Second Half**(Study Period 4, 5 or 6)Major 1 – Metallurgical processes 252(Curtin University of Technology)AND WASM Technical Elective 332(Curtin University of Technology)Major 2 – Process Mineralogy 562(Curtin University of Technology)Fluid and Energy EngineeringThermal Processingand Metallurgy**THIRD YEAR****First Half**(Study Period 1, 2 or 3)Pyrometallurgy 561(Curtin University of Technology)Major 4 – Mineral Processing 561(Curtin University of Technology)Manufacturing PracticeEnergy Conversionand Management**Second Half**(Study Period 4, 5 or 6)Technical Elective 1Major 5 – Hydrometallurgy 562(Curtin University of Technology)Major 6 – Pyrometallurgy 562(Curtin University of Technology)ElectiveIndustrial Experience**FOURTH YEAR****First Half**(Study Period 1, 2 or 3)Major 7 – Process Control 561(Curtin University of Technology)Project Planning and ControlMechanical Engineering Project 1**Second Half (Study****Period 4, 5 or 6)**Major 8 – Process Design 562(Curtin University of Technology)Technical Elective 2Mechanical Engineering Project 2**FOURTH YEAR WITH****HONOURS****First Half**(Study Period 1, 2 or 3)Major 7 – Process Control 561(Curtin University of Technology)Project Planning and ControlMechanical Engineering Project 1**Second Half**(Study Period 4, 5 or 6)Major 8 – Process Design 562(Curtin University of Technology)Technical Elective 2Mechanical EngineeringHonours Project

Bachelor of Engineering (Mechanical), Bachelor of Information Technology

May Information Sessions

Mawson Lakes campus: Wednesday 25 May

For more information and to register visit

unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August

For more information visit

unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September

For more information visit

unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434271 |
| UniSA program code | LBRC |
| CRICOS code | |
| (international students only) | 036329M |
| ATAR (February 2011 cut-off) | 89.40 |
| Program length | 5 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees | |
| (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

This double degree is unique as the courses offered within the program provide you with an enhanced understanding and application of engineering principles in conjunction with theoretical and practical knowledge and skills about computers and information technology. Graduates gain two separate degrees by studying only one year more than it takes to gain the single degree of Bachelor of Engineering (Mechanical Engineering). You

will have the flexibility to select specialised engineering courses depending on specific areas of interest. The program has a strong practical and industry focus and you will have access to the latest developments in the areas of mechanical plant design, advanced manufacturing technologies and sustainable energy usage and management. With skills in both engineering and information technology, graduates are well prepared for careers in mechanical, manufacturing, defence,

building and mechanical services, information services, computing or software development.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice and Electrical and Energy Systems. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry. You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge.

This program has been designed to provide complementary education in computer and information science and mechanical engineering. The engineering studies over the five years of the program focus on engineering concepts, computing, problem solving and communication along with advanced studies in mechanical and manufacturing engineering through areas such as machine design, fluid mechanics, manufacturing processes, sustainable design and advanced composites. Specialist final-year courses are offered in advanced manufacturing, sustainable systems, applied mechatronics and nanotechnology.

The Information Technology program complements the engineering component of the degree, with studies in computer system architecture,

database technology, networking and internet technology and object oriented system development. During final year, you will complete a research or industry based engineering project, enabling them to apply the range of skills learned throughout the program in a professional environment.

All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers. Students have the opportunity to apply and integrate the knowledge and skills they have gained during their program in an industry setting. Industry experience also helps you to determine their engineering career pathway as they are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

What does it take?

You should have an inquiring mind with good verbal and written communication skills. Competence in mathematics and physics is essential. You should have an interest in science, information technology and social, administrative and management issues.

Who will employ me?

A multi-skilled employee is a valuable asset and graduates who can apply abilities across different fields are highly sought by industry. This

degree prepares graduates for careers as professional engineers in the mechanical, manufacturing or information services industries, readying them for the application of skills and knowledge in mechanical engineering, manufacturing systems, computing, software development, information services industries, or within government organisations.

Graduates could apply their computer science background to computer systems processes and procedures in the mechanical and manufacturing sector. Previous graduates of this degree have found employment with Aurecon; ASC; Southcorp; Mobil Oil Australia; Bridgestone Australia; and Seeley International.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Honours

Students achieving a credit level average at the end of the fourth year may be invited to enrol in the engineering Honours project in their final year. Successful completion of the program and the Honours project may lead to the award of the Bachelor of Engineering with Honours. Honours in Information Technology is available as a one year full-time (or part time equivalent) program on completion of the Bachelor of Information Technology.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems

Engineering Design

and Innovation

Mathematical Methods

for Engineers 2

Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures

Engineering Modelling

Problem Solving and

Programming

Mechanical Engineering

Practice N

Second Half

(Study Period 4, 5 or 6)

Information Technology

Fundamentals

Programming Fundamentals

Web and Database Development

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Data Structures

Systems Analysis, Design

and Project Management

Network Fundamentals

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines

Fluid and Energy Engineering

User Interfaces

Web Engineering

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Manufacturing Practice

Design for Manufacture

and Assembly

Elective

Network Fundamentals

Second Half

(Study Period 4, 5 or 6)

Mechanical Design Practice

Information Technology

Strategy and Management

ICT Project

FIFTH YEAR WITH HONOURS

First Half

(Study Period 1, 2 or 3)

Energy Conversion

and Management

Computer Aided

Engineering Practice

Engineering Elective 1

Engineering Elective 2

Second Half

(Study Period 4, 5 or 6)

Industrial Experience

Engineering Elective 3

Engineering Elective 4

Mechanical Engineering

Honours Project

Engineering Electives

Vehicle Emission, Control

and Strategy

Machine Vision Systems

Mechatronics 1

Robotics and Automation

Energy Management

for Sustainability

Sustainable Energy System Design

Nanomaterials and Fabrication

Mechanical Systems Design

Nanocomposites and Practice

Design in Plastics and

Advanced Composites

Fluid and Energy

Management Practice

Sustainable Development

and Design Practice

Total Quality Management

Engineering Maintenance

Project Planning and Control

Supply Chain Management G

Intelligent Manufacturing Systems

Industrial Actuation

and Automation

Operations Management

for Engineers

Bachelor of Engineering (Mechanical), Bachelor of Management

May Information Sessions

Mawson Lakes campus: Wednesday 25 May
For more information and to register visit
unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August
For more information visit
unisa.edu.au/opacity

Festival of Innovation

Mawson Lakes campus: Sunday 25 September
For more information visit
unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434411 |
| UniSA program code | LBNR |
| CRICOS code | |
| (international students only) | 056095C |
| ATAR (February 2011 cut-off) | 94.50 |
| Program length | 5 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

This double degree educates you in the dual disciplines of engineering and management, and aims to produce graduates who are qualified as professional engineers and who have a solid understanding of management and business.

Graduates of this program gain two separate degrees by studying only one year more than it

takes to gain the single degree of Bachelor of Engineering (Mechanical Engineering). You will have the flexibility to select specialised engineering courses depending on specific areas of interest, and have access to the latest developments in the areas of mechanical plant design, advanced manufacturing technologies and sustainable energy usage and management.

What will I study?

In the first year, all Engineering students study eight core engineering courses, including Engineering Design and Innovation, Mathematical Methods for Engineers 1 and 2, Mechanics and Physics, Computer Techniques, Sustainable Engineering Practice, Electrical and Energy Systems and Engineering Materials. These courses provide a practice-centred foundation to engineering that exposes students to the breadth of crossdisciplinary studies as well as how engineering is applied in industry.

You will undertake a number of hands-on engineering projects including participation in the Engineers Without Borders Challenge. Over the five years of the program, the engineering studies focus on engineering concepts, computing, problem solving and communication along with advanced studies in mechanical and manufacturing engineering through areas such as machine design, fluid mechanics, manufacturing processes, sustainable design and advanced composites. Specialist final-year courses are offered in advanced manufacturing, sustainable systems, applied mechatronics and nanotechnology.

The management component of the degree covers a range of topics relevant to both business and engineering, and includes law, human resource management, accounting and economics, marketing, strategic management and communication and organisational practices.

During the final-year, you will complete a research or industry-based engineering project, enabling you to apply the range of skills learned throughout the program in a professional environment.

All students in the program undertake 12 weeks of compulsory industrial experience during their study. This experience is highly regarded by students and prospective employers. Students have the opportunity to apply and integrate the knowledge and skills they have gained during their program in an industry setting. Industry experience also helps students to determine their engineering career pathway as they are able to experience particular sectors prior to graduation.

UniSA, in association with industry partners and sponsors, recognises many deserving students with prizes and awards at various levels of study (for more information visit unisa.edu.au/ame/prizes).

What does it take?

You should have an inquiring mind with good verbal and written communication skills. Competence in mathematics, and physics is essential. You should have an interest in social, administrative and management issues.

Who will employ me?

This double degree enhances the opportunity for graduates to advance into senior managerial positions. Graduates find employment across all sectors of mechanical engineering as the combination of engineering

and management courses in the program is very attractive to potential employers. Examples of organisations where previous graduates of this double degree have found employment include: ASC; Holden; Monroe Australia; Department of Defence; Transport SA; South Australian Centre for Manufacturing; The Granites Gold Mine; Southcorp; Walker Australia; Gerard Industries and STRATCO (SA).

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

The Bachelor of Management component is taught by the Division of Business, which is accredited by the European Quality Improvement System, (EQUIS).

Honours

Students achieving a credit level average at the end of fourth year may be allowed to enrol in the Honours project in Engineering in their final year. Successful completion of the program and Honours project may lead to the award of the Bachelor of Engineering with Honours. Honours in the Bachelor of Management degree is available as a one year full-time program for students who have completed the ordinary degree with meritorious performance.

Program requirements

FIRST YEAR

First Half

(Study Period 1, 2 or 3)

Computer Techniques

Engineering Materials

Mathematical Methods

for Engineers 1

Sustainable Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Electrical and Energy Systems

Engineering Design

and Innovation

Mathematical Methods

for Engineers 2

Mechanics and Physics

SECOND YEAR

First Half

(Study Period 1, 2 or 3)

Management Principles

Microeconomics

Marketing Principles:

Trading and Exchange

Quantitative Methods

for Business

Second Half

(Study Period 4, 5 or 6)

Foundations of Business Law

Managing Decision Making

Project Management:

Principles and Strategies

Accounting, Decisions

and Accountability

THIRD YEAR

First Half

(Study Period 1, 2 or 3)

Mechanics and Structures

Engineering Modelling

Manufacturing Practice

Mechanical Engineering

Practice N

Second Half

(Study Period 4, 5 or 6)

Mechanics of Machines

Mechanical Design Practice

Fluid and Energy Engineering

Engineering Maintenance

FOURTH YEAR

First Half

(Study Period 1, 2 or 3)

Communication and

Organisational Practices

Procurement and

Purchasing Strategies

Organisational Behaviour

Management Accounting

Second Half

(Study Period 4, 5 or 6)

Foundations of Human

Resource Management

International Management

Ethics and Values

Strategic Management

Organisational Administration

FIFTH YEAR

First Half

(Study Period 1, 2 or 3)

Elective 1

Elective 2

Industrial Experience

Energy Conversion

and Management

Computer Aided

Engineering Practice

Second Half

(Study Period 4, 5 or 6)

Elective 3

Elective 4

Mechanical Engineering

Project 1B

Eligible students entering fifth year can also elect to undertake an Honours program.

Bachelor of Engineering (Biomedical) (Flinders)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May

For more information and to register visit

unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August

For more information visit

unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September

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unisa.edu.au/engineering

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| SATAC code | 434831 |
| UniSA program code | LBFL |
| CRICOS code | |
| (international students only) | 064671J |
| ATAR (February 2011 cut-off) | 79.95 |
| Program length | 2 + 2 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Biomedical engineering involves the application of electronics and computer systems to improve health care and health services to enhance the quality of human life. It covers a range of fields including medical devices, medical imaging, physiological signal processing, biomechanics and biomaterials. Biomedical engineering results in products such as diagnostic devices,

biocompatible prostheses, medical devices, and imaging equipment such as MRIs and EEGs. It also assists in the development of tools for the training of medical professionals.

You will gain a solid education in Engineering and Medical Science and develop skills to investigate, plan, design, manufacture and maintain systems and equipment used in all aspects of health care.

What will I study?

The first year of the program is similar to the first year of all other University of South Australia Engineering awards and students may transfer to another University of South Australia Engineering award after one year with no loss of time.

The first year contains study in fundamental science and engineering topics including electrical and energy systems and mathematics. The second year builds on this base with topics dealing with a variety of areas including biomechanics, human physiology and biomedical instrumentation. You will then transfer to Flinders University to complete their award. The third year provides further biomedical material and incorporates Flinders' nationally recognised industry placement program which provides students with 20 weeks of structured industry work experience with one of 100 local, national and international organisations. You will gain specialist knowledge in key areas, graduating with a proven on-the-job performance. The final year provides further biomedical topics and provides scope to take electives in computer science and engineering. It also includes a major biomedical research project.

What does it take?

The ability to design, innovate, communicate, identify and solve problems is necessary, and students should have an inquiring mind with good verbal and written communication skills. An empathy with people with medical problems is also essential, along with mathematics and physics is essential. You should also have an interest in medicine and science.

Who will employ me?

Graduates can find employment in a variety of organisations, including hospitals, medical device manufacturers, pharmaceutical and medicine manufacturing, medical instruments and supplies industries and universities

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project course may lead to the award of a degree with Honours.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Additional notes

Please note that the third, fourth and honours fourth year of this program are competed at Flinders University. Upon successful completion of this program graduates will have their degree awarded by Flinders University. For further information on the third, fourth and Honours fourth year please visit the Flinders University website at flinders.edu.au/courses/

Program requirements**FIRST YEAR****First Half**(Study Period 1, 2 or 3)Mathematical Methodsfor Engineers 1Computer TechniquesEngineering MaterialsSustainable Engineering Practice**Second Half**(Study Period 4, 5 or 6)Mathematical Methodsfor Engineers 2Mechanics and PhysicsElectrical and Energy SystemsEngineering Designand Innovation**SECOND YEAR****First Half**(Study Period 1, 2 or 3)Programming in Java 1Human Physiology 100ASignals and SystemsComputer Hardware**Second Half**(Study Period 4, 5 or 6)Electronics and InstrumentationPrinciples of Computer SystemsBiomechanics 100Bioinstrumentation**THIRD YEAR****First Half**(Study Period 1, 2 or 3)Signal ProcessingEngineering ProjectManagement BBiomedical Instrumentation 1Engineering Programming**Second Half**(Study Period 4, 5 or 6)EITHER Professional EngineeringPracticeOR Engineering PracticumOR Engineering Work Experience**FOURTH YEAR –****FLINDERS UNIVERSITY**Ordinary degreeResearch Methods for EngineersEngineering Design ProjectBiomedical selectivesManagement selectivesElectives**FOURTH YEAR – FLINDERS****UNIVERSITY WITH HONOURS**Research Methods for EngineersEngineering Honours ProjectBiomedical selectivesManagement selectivesElectives

Bachelor of Engineering (Robotics) (Flinders)

May Information Sessions

Mawson Lakes campus: Wednesday 25 May

For more information and to register visit

unisa.edu.au/mayinfosessions

Open Day 2011

City West campus: Sunday 21 August

For more information visit

unisa.edu.au/openday

Festival of Innovation

Mawson Lakes campus: Sunday 25 September

For more information visit

unisa.edu.au/innovation

unisa.edu.au/engineering

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| SATAC code | 434821 |
| UniSA program code | LBFL |
| CRICOS code | |
| (international students only) | 064671J |
| ATAR (February 2011 cut-off) | 83.20 |
| Program length | 2 + 2 years |
| Prerequisites | SACE Stage 2 Mathematical Studies |
| Assumed knowledge | SACE Stage 2 Physics |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | Yes |
| External study available | No |
| Part-time study available | Yes |
| TAFE credit available | Yes |
| Honours study available | Yes |
| Program fees | Commonwealth supported |
| Program fees (international students only) | (A\$) 25,000 per annum |
| Scholarships available | unisa.edu.au/scholarship |

Program overview

Robotics is concerned with the design, manufacturing and application of robots in a range of fields. The degree combines electronics, computer control, signal processing, knowledge engineering and programming in the design, development and operation of robots, and their integration with other systems in the work environment.

They are capable of doing tasks with a level of precision, strength and endurance beyond

human levels and they are an ideal substitute for workers in repetitive, hazardous and laborious jobs in manufacturing applications. As safety becomes more important to employers facing potentially hazardous situations in industry, robots and robotics technologies are in more demand than ever.

Robots can fix satellites in space, perform underwater surveys, help in mining explorations, clean up nuclear waste, or

operate in security situations. They can be also used in remotely controlled surgery or health care related areas. Graduates work directly with robots in industry as robotics or systems engineers.

What will I study?

The first year of the program is similar to the first year of all other University of South Australia Engineering awards and you may transfer to another University of South Australia Engineering award after one year with no loss of time.

The first year contains study in fundamental science and engineering topics including electrical and energy systems and mathematics. The second year builds on this base with topics dealing with a variety of areas including electronics, microprocessors and instrumentation and robotics. You will then transfer to Flinders University to complete their award. The third year provides further robotics and electronics material and incorporates Flinders' nationally recognised industry placement program which provides you with 20 weeks of structured industry work experience with one of 100 local, national and international organisations. You will gain specialist knowledge in key areas, graduating with a proven on-the-job performance.

The final year provides further robotics material and provides scope to take electives in computer science and engineering. It also includes a major robotics research project.

What does it take?

The ability to design, innovate, communicate, identify and solve problems is necessary, and

you should have an inquiring mind with good verbal and written communication skills. Competence in mathematics and physics is essential. You should have an interest in science and technology.

Who will employ me?

Graduates can find employment in a variety of organisations, including advanced manufacturing and production industries, medical device manufacturers and universities.

Honours

Students achieving a credit level average at the end of third year may be allowed to enrol in Honours courses in fourth year. Successful completion of the program and the Honours project course may lead to the award of a degree with Honours.

Professional recognition

The successful completion of this program is designed to meet the requirements for graduate membership of Engineers Australia and comparable international institutions through the Washington Accord. For further information on these organisations visit washingtonaccord.org and engineersaustralia.org.au

Additional notes

Please note that the third, fourth and Honours fourth year of this program are completed at Flinders University. Upon successful completion of this program graduates will have their degree awarded by Flinders University. For further information on the third, fourth and Honours fourth year please visit the Flinders University website at flinders.edu.au/courses/

Program requirements**FIRST YEAR – UNISA****First Half****(Study Period 1, 2 or 3)**

Mathematical Methods

for Engineers 1

Computer Techniques

Engineering Materials

Sustainable Engineering Practice

Second Half**(Study Period 4, 5 or 6)**

Mathematical Methods

for Engineers 2

Mechanics and Physics

Electrical and Energy Systems

Engineering Design

and Innovation

SECOND YEAR – UNISA**First Half****(Study Period 1, 2 or 3)**

Programming in Java 1

Electronic Circuits

Signals and Systems

Computer Hardware

Second Half**(Study Period 4, 5 or 6)**

Data Structures

Electronics and Instrumentation

Principles of Computer Systems

Robotics

THIRD YEAR –**FLINDERS UNIVERSITY****First Half****(Study Period 1, 2 or 3)**

Signal Processing

Engineering Project Management

Robotic Systems

Control Systems Theory

Second Half**(Study Period 4, 5 or 6)**

EITHER

Professional Engineering Practice

OR Engineering Practicum

OR Engineering Work Experience

Electives

FOURTH YEAR –**FLINDERS UNIVERSITY**

Ordinary degree

Research Methods for Engineers

Engineering Design Project

Advanced Control

Robotic Systems selectives

Electronics selectives

Management selectives

Research Methods for Engineers

FOURTH YEAR – FLINDERS**UNIVERSITY – WITH HONOURS**

Research Methods for Engineers

Engineering Honours Project

Advanced Control

Electronics selectives

Management selectives

Research Methods for Engineers

Engineering Honours Project

Advanced Control



Graduate Certificate in Professional Practice

Open Day 2011

City West campus: Sunday 21 August

For more information visit

unisa.edu.au/opacity

Festival of Innovation

Mawson Lakes campus: Sunday 25 September

For more information visit

unisa.edu.au/innovation

unisa.edu.au/engineering

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|-------------------------------|------------------------|
| SATAC code | 4GC057 |
| UniSA program code | LCPP |
| CRICOS code | |
| (international students only) | 061230C |
| ATAR (February 2011 cut-off) | n/a |
| Program length | 0.5 years |
| Prerequisites | None |
| Assumed knowledge | None |
| Home campus | Mawson Lakes |
| Accepts Special Entry (STAT) | No |
| External study available | No |
| Part-time study available | No |
| TAFE credit available | No |
| Honours study available | No |
| Program fees | Commonwealth supported |
| Program fees | |
| (international students only) | (A\$) 11,375 |
| Scholarships available | No |

Program overview

This program has been designed to augment the Bachelor of Engineering degree by developing skills, knowledge and experience relevant to professional engineering practice. It is open to recent engineering graduates and engineering students who have completed at least 99 units of a 144 unit engineering degree.

The aim of the program is to provide an understanding of the professional engineering work environment, practices and culture and provide a structured work placement within an engineering enterprise.

What will I study?

You will commence with 4.5-unit professional engineering practice course that develops valuable generic skills including communications, project management, OH&S and networking skills that are relevant to the engineering industry. This is followed by a 13.5-unit structured work experience course (internship) of 15 weeks of full-time work.

What does it take?

This program is ideal for engineering students who have substantially completed their 3rd year of study. Opportunities exist for a structured program of work as an intern, and the development of relationships that will assist with future employment.

Who will employ me?

UniSA has strong links with engineering enterprises in South Australia, as well as national and international links with organisations who may support the internship. Over half of the interns are paid by the company during their internship.

Program requirements

FIRST YEAR

Electives

[Small Business Accounting](#)

[Project Management for Business](#)

[Resource Management](#)

[Mobile Enterprise Workshop](#)

[Community Service](#)

[Learning Project 1](#)

[Community Service](#)

[Learning Project 2](#)

[Community Service](#)

[Learning Project](#)

[Learning in the Workplace 2](#)

[Learning in the Workplace Project](#)

[Research Internship](#)

[Negotiation and Conflict](#)

[Management](#)



Entry requirements

For Undergraduate Bachelor Degrees and Associate Degrees

Applicants are required to have:

- » Completed SACE;
- » Completed at least 80 credits of SACE at Stage 2 of which 60 must be Tertiary Admission subjects (TAS) and the other 20 either TAS, Recognised Studies or a mix of the two;
- » Completed any prerequisites for your chosen program;
- » Obtained a competitive ATAR;
- » Completed interstate or overseas qualifications that the University considers equivalent to the SACE;
- » Completed the International Baccalaureate Diploma;
- » Completed or partly completed a recognised higher education program at a recognised higher education institution;
- » Completed at least four Open Universities Australia (OUA) courses at the appropriate level;
- » Completed an award from TAFE or from another registered training organisation at AQF Certificate IV or above;

- » Qualified for Special Entry and completed the Special Tertiary Admissions Test (STAT). A personal competencies statement and/or employment experience may also be considered;
- » Completed the University Foundation Studies program.

Please note that some programs have prerequisites. Applicants should check all entry requirements before applying. For some programs, applicants may also be required to attend an interview or present a folio.

For more information on entry requirements, visit unisa.edu.au/future

Participation and Access

UniSA offers various programs and services to assist rural and/or socio-economically disadvantaged students, Indigenous Australians and people with a disability. For more information, contact (08) 8302 2376 or 1300 UNINOW or email study@unisa.edu.au

UniSA Advantage

UniSA Advantage is a bonus points scheme that encourages participation in education as well as rewards achievement in selected Year 12 subjects that better prepare students for university study. The scheme includes two strands – **Achievement** and **Aspire**.

Achievement bonus points will automatically be awarded if students score a C or better in Year 12 Tertiary Admission Subjects (TAS) relevant to their intended UniSA program. Find out more here www.unisa.edu.au/future/year12/bonuspoints

Aspire bonus points are awarded automatically to students who attend a school recognised by UniSA as 'under represented' with respect to students going on to higher education. Students from rural and remote areas are also eligible for automatic bonus points while those students on School Card (or state equivalent) and/or Youth Allowance, and do not attend a recognised school, can apply for bonus points by downloading an application form at unisa.edu.au/future/year12/bonuspoints

For more information, visit unisa.edu.au/future/year12/bonuspoints. You can also contact Future Student Enquiries by phone (08) 8302 2376 or 1300 UNINOW (local call cost) or email study@unisa.edu.au

Student contributions

Student contributions are the amount you pay towards the cost of your program. The University determines the amount that you contribute within a range set by the Australian Government. The contribution that applies depends on which courses you choose to study and the contribution band in which those courses are classified. The amount of your student contribution also depends on the unit value of your courses of study (the equivalent full-time student load (EFTSL) value of the course).

As per the Australian Government guidelines, the student contribution amounts for 2011 are:

| Band | Fields of study | Student contribution |
|---------------------|--|----------------------|
| National priorities | Mathematics, statistics, science | \$0 – \$4,355 |
| Band 1 | Humanities, behavioural science (including clinical psychology), social studies, foreign languages, visual and performing arts, education, nursing | \$0 – \$5,442 |
| Band 2 | Computing, built environment, health (allied health and other health), engineering, surveying, agriculture | \$0 – \$7,756 |
| Band 3 | Law, dentistry, medicine, veterinary science, accounting, administration, economics, commerce | \$0 – \$9,080 |

Note: These amounts are for 1 EFTSL in 2011. The student contribution amounts for 2012 will be advised by the Federal Government in October 2011, and these will be available to view via unisa.edu.au/future/fees at that time.

Glossary

WHAT WILL YOU STUDY?

Associate degree

An award for completing a two-year (or part-time equivalent) tertiary program.

Direct Entry

Programs for which applications are not processed through SATAC but are made direct to UniSA.

Bachelor degree

A program of three or more years duration (or part-time equivalent). Bachelor degree programs provide the relevant qualifications for many professions.

Honours

An additional year of study in a Bachelor degree during which students specialise in a chosen area of study. In some cases, Honours study can actually be done as part of the degree.

Graduate Certificate

An award for completing a postgraduate program of at least six months in duration (or part-time equivalent).

Graduate Diploma

An award for completing a postgraduate program of at least one year in duration (or part-time equivalent).

Master degree

A postgraduate degree undertaken after completion of a Bachelor degree (normally with Honours) which focuses on one area of specialisation.

PhD

Doctor of Philosophy (PhD) programs normally extend over three years (or part-time equivalent) and involve significant research work.

HOW DOES YOUR PROGRAM WORK?

Major

A set of related courses which comprises 36 units of study within a Bachelor degree.

Sub-major

A set of related courses which comprises between 19 and 35 units of study within a Bachelor degree. In some programs these may be called 'general studies sub-majors'.

Minor

A set of related courses which comprises up to 18 units of study within a Bachelor degree. In some programs these may be called 'cognates'.

Program

Award in which you are enrolled, eg Bachelor of Arts.

Course

A component of study within a program (previously known as a 'subject').

Unit

A value assigned to a course which measures the amount of work involved in that course. Full-time students normally undertake 36 units of study per year (18 units per study period).

UNISA GLOSSARY

Assumed knowledge

Some first-year courses require knowledge of certain SACE Stage 2 subjects.

Free Electives

A course chosen from any on offer outside your Division, provided that individual course prerequisites are met. Free elective courses are designed to broaden your knowledge and skills beyond your professional field of study.

CRICOS code

Code identifying that a UniSA program has been registered on the Commonwealth Register of Institutions and Courses for Overseas Students (CRICOS).

Division

UniSA is split into four academic Divisions – Business; Education, Arts and Social Sciences; Health Sciences; and Information Technology, Engineering and the Environment – each offering a range of specialised programs and courses.

Prerequisites

Are SACE Stage 2 (Year 12) subjects, or equivalent qualifications which are required for admission into the program.

SACE

Is the South Australian Certificate of Education or a recognised equivalent qualification.

SATAC Guide

A publication that lists every program offered by South Australian higher education institutions. The SATAC Guide provides information about the selection process, includes instructions on how to apply and is available every year from newsagents Australia-wide.

Special Entry (STAT)

Special Tertiary Admissions Test (STAT) is an alternative tertiary admissions test for people who do not have a recent Year 12 certificate.

ATAR (Australian Tertiary Admission Rank)

A ranking of all students who have completed SACE in a particular year. The minimum ATAR required for the previous year is often a guide to how well you will need to perform to gain entry into a particular program. ATARs can vary from year to year and should be used as a guide only.



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Whyalla and Mount Gambier Programs

The University of South Australia reserves the right to alter, amend or delete any program, fee, course, admission requirement, mode of delivery or other arrangement, without prior notice.

CRICOS provider number 00121B

Information correct at time of printing, April 2011.