COMPUTING & IT

DESIGN & TECHNOLOGY INNOVATION
COMPUTER SCIENCE
COMPUTER SCIENCE (SIMULATION & SERIOUS GAMES)
ENGINEERING (COMPUTER & NETWORK SYSTEMS)
ENGINEERING (SOFTWARE)
GEOGRAPHICAL INFORMATION SYSTEMS
INFORMATION TECHNOLOGY
INFORMATION TECHNOLOGY (DIGITAL MEDIA)
INFORMATION TECHNOLOGY (NETWORK & CYBERSECURITY SYSTEMS)
YOUR NEW
STUDENT HUB
AND PLAZA

OPENING SEMESTER 1, 2016 | flinders.edu.au/studenthub
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University should be about much more than classes, coursework and exams. You deserve the chance to extend your learning, and develop new networks, skills and expertise that will enable you to succeed in your future career.

At Flinders we are enhancing our courses to offer an educational experience that you will enjoy and that will be valued by future employers.

Our new Student Plaza and Hub will open in Semester One in 2016 with state-of-the-art facilities, creating an inspirational space for you to learn, study and socialise. The new development incorporates individual and group study areas, cafés and student kitchens, outdoor performance areas, all embedded with the latest in technology and internet access. Simply put, we are investing in creating the best possible facilities for you at Flinders.

We encourage you to compare the quality of our courses with those offered at other universities and hope that you will recognise the value of undertaking a Flinders University degree.

Professor Colin Stirling
Vice-Chancellor and President
HANDS-ON
Flinders researchers teach cutting-edge theories and practices, maintaining close links with local employers to create learning experiences to equip you for your career.

21ST CENTURY LEARNING ENVIRONMENT
Students in the School of Computer Science, Engineering and Mathematics enjoy a world-class learning environment, with social learning spaces to problem solve with friends, and state-of-the-art learning laboratories in the new $120 million Tonsley campus of Flinders.

INDUSTRY LINKS
Our degrees are shaped by industry to equip you with the skills you need to be competitive in the employment market – or as a foundation for more specialised postgraduate qualifications.

FLEXIBILITY
Our degrees can be tailored to suit those who already know what they want to specialise in and those who are not yet sure. The wide variety of specialisations allows you to narrow down your interests to establish the field best suited to you.

WHY CHOOSE COMPUTING & IT AT FLINDERS
WHY WE’RE

SA’S

FASTEST GROWING UNIVERSITY
Flinders has a world-class reputation for research and innovation, informing the professions that shape our society and developing technologies that are transforming people’s lives. Flinders is ranked among the top 2% of research universities in the world, and the discoveries of our researchers drive what you learn in the classroom.

The $63 million Plaza Redevelopment and Student Hub will provide an extraordinary new facility for students commencing in 2016, with a 2,000 seat outdoor amphitheatre, new social learning spaces where students can gather to study and a range of services tailored to deliver an all-round campus experience for students.

Whether you are relaxing in the leafy surrounds of the Bedford Park campus, immersed in the CBD at the Victoria Square campus or contemplating the future of Australia’s economy at our brand new Tonsley building, Flinders prides itself on offering students a great on-campus experience.

Flinders offers an excellent staff-student ratio – rated as 5 stars by the 2015 Good Universities Guide, reflecting the University’s commitment to teaching. Flinders students frequently comment that they value access to lecturers and the learning environment created on campus. Our academics and teachers are connected to the current issues of the day, guiding you to question, challenge and think beyond the limits of convention, and equipping you with important skills for a successful career.

Flinders has close connections with industry, reflected in the relevance of our curriculum and the connections that a Flinders University experience offers students. Every year some Flinders students choose to do an internship at the US congress, study part of their degree in London or undertake work integrated learning opportunities with employers in Adelaide. Flinders courses are renowned for being rigorous and also work-oriented, providing graduates with a clear set of knowledge and skills that they will be able to use throughout their career.

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Flinders was ranked among the world’s top 400 universities by the 2014 Academic Ranking of World Universities and in the top 100 universities under the age of 50 by the Times Higher Education rankings. Flinders has earned a reputation for delivering high-impact research and courses that students love.

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Computing has become vital to all areas of science and technology, and plays an increasingly important role in commercial and social life.
INFORMATION TECHNOLOGY AND COMPUTING SKILLS ARE REQUIRED IN BUSINESSES, GOVERNMENTS AND ORGANISATIONS ACROSS THE WORLD.

FLINDERS UNIVERSITY’S COMPUTING AND IT DEGREES PROVIDE YOU WITH THE OPPORTUNITY TO EXPLORE AND SPECIALISE IN A RANGE OF FIELDS INCLUDING COMPUTER SCIENCE, INFORMATION TECHNOLOGY, DIGITAL MEDIA, NETWORK AND CYBERSECURITY SYSTEMS AND SOFTWARE ENGINEERING.

COMPUTING & INFORMATION TECHNOLOGY AT FLINDERS
Computing and information technology is offered at Flinders in the following areas:
- computer science
- computer science (simulation and serious games)
- engineering (computer and network systems)
- engineering (software)
- information technology
- information technology (digital media)
- information technology (network and cybersecurity systems)

Computing is concerned with the study of information and computation, which drive many facets of modern innovation and assist in areas such as medical research, climate change, the environment, and business. It also has a significant impact upon the creative industries and in the development of new products and services. Information technology covers everything from designing critical software to managing information systems.

While there is overlap between these areas, employers are looking for specific skills and knowledge. Flinders has designed its courses to reflect this, providing you with a broad understanding of computing in the early years of study and then enabling you to develop expertise by specialising in an area that best suits your interests and abilities.

DESIGN & TECHNOLOGY INNOVATION
The Bachelor of Design and Technology Innovation is available for students who want to take innovative, high-tech products and processes from concept to reality. It can be taken as a standalone course or in combination with one of our computing and information technology degrees to give your computing qualifications an entrepreneurial edge.

PRACTICAL EXPERIENCE
The computing and information technology courses at Flinders give you the opportunity to apply what you have learned in the real world through projects and industry placements. This experience, supported by the courses’ close ties with industry, prepares you with the hands-on computing skills that employers are looking for.

ACCREDITATION
Flinders University’s computing and information technology courses are accredited at the professional level with the Australian Computer Society, while our computer systems and software engineering courses also have full professional accreditation with Engineers Australia.
FLINDERS AT
TONSLEY
FLINDERS AT TONSLEY IS THE HEART OF SOUTH AUSTRALIA’S NEW INDUSTRIAL FUTURE
TAKE INNOVATIVE, HIGH-TECH PRODUCTS AND PROCESSES FROM CONCEPT TO REALITY WITH A BACHELOR OF DESIGN AND TECHNOLOGY INNOVATION.

The collaboration, innovation and entrepreneurship at the heart of Tonsley are embodied in the University’s Bachelor of Design and Technology Innovation. It takes more than just a great idea or invention to change the world. To put new technologies in the hands of the people who need them, you must be able to take technology concepts and make them a reality. The Bachelor of Design and Technology Innovation offers a holistic approach to designing, developing and commercialising advanced technology solutions.

The course is designed for people who possess or who would like to develop skills in creativity and problem solving, and who are interested in technology, science or engineering. If you are interested in how things work, and have good 2D visualisation, 3D modelling/prototyping and verbal communication skills, the bachelor of Design and Technology Innovation provides a great opportunity to work with people and create new things.

More information on the Bachelor of Design and Technology Innovation, including admissions details, can be found on page 8.

Pictured left: Tonsley building. Pictured below: Innovative working space at Tonsley.

TONSLEY EMBODIES WORLD’S BEST PRACTICE IN EDUCATION, TEACHING AND RESEARCH.

IT’S A PLACE WHERE INNOVATION, COLLABORATION AND ENTREPRENEURIAL SPIRIT COMBINE TO CREATE THE PRODUCTS AND PROCESSES OF THE 21ST CENTURY AND BEYOND.

With more than 150 staff and 2,000 students – and a 2,000-square-metre pod for heavy engineering equipment – this new precinct is a place where Flinders University students interact with business and where business interacts with Flinders researchers in areas such as engineering, medical devices and nanoscale technologies.

Flinders at Tonsley centrally locates the University’s School of Computer Science, Engineering and Mathematics, New Venture Institute, Flinders Partners, Medical Device Research Institute, and Centre for Nanoscale Science and Technology alongside some of Adelaide’s biggest businesses and industries, including South Australian-owned technology and communications company Hills.

Tonsley is located centrally between Flinders University’s Bedford Park campus and Adelaide city. It is connected to the city by train, offering convenient access 15 minutes from the city’s CBD.

It is a 5-minute car ride, a 15-minute ride on the Flinders loop bus, or a 30-minute walk from the Bedford Park campus.

“TONSLEY WILL BE A MAJOR CONTRIBUTOR TO BOTH TECHNOLOGICAL INNOVATION AND ECONOMIC GROWTH IN SOUTH AUSTRALIA IN THE DECADES TO COME.”

PROFESSOR JOHN RODDICK

DEAN OF THE SCHOOL OF COMPUTER SCIENCE, ENGINEERING AND MATHEMATICS
INNOVATION AT FLINDERS

DESIGN AND TECHNOLOGY

BACHELOR OF

DEGREE & TECHNOLOGY

INNOVATION

FIRST YEAR

First year provides you with a base from which to develop your knowledge and skills with topics including professional skills, engineering design and mathematics. You will then select topics in science, engineering or business to attach your design skills to a particular field.

SECOND AND THIRD YEARS

Second and third years enable you to specialise further by taking topics in innovation management, design for manufacture, product development and commercial viability assessment, and innovation in manufacturing devices. There is the opportunity to select from other areas including strategic marketing, entrepreneurship, consumer behaviour, and business planning.

In the third year you will undertake a capstone topic, design studio, which is an integrated high-technology design consulting project with a company, involving the design of revolutionary technology solutions. Alternatively, you can undertake a 12-week practical work experience placement in industry in Australia or internationally including in North America, Europe or Asia.

PRACTICAL EXPERIENCE

You will be able to take advantage of Flinders University’s new technology precinct at Tonsley, where collaboration and innovation are at the heart of the University’s activities. This will give you hand-on exposure to the cutting-edge equipment and facilities that are useful in product design and development.

The course lets you participate in a 12-week industry work experience placement or an integrated high-technology design consulting project to put what you learn into practice.

COMBINED DEGREES

You can combine the Bachelor of Design and Technology Innovation with any other bachelor degree in the Faculty of Science and Engineering, subject to meeting entry requirements.

STUDENT PROGRAM

FIRST YEAR

First year provides you with a base from which to develop your knowledge and skills with topics including professional skills, engineering design and mathematics. You will then select topics in science, engineering or business to attach your design skills to a particular field.

SECOND AND THIRD YEARS

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COMBINED DEGREES

You can combine the Bachelor of Design and Technology Innovation with any other bachelor degree in the Faculty of Science and Engineering, subject to meeting entry requirements.

CAREER OPPORTUNITIES

Graduates from the Bachelor of Design and Technology Innovation may be employed by a product/service based commercial organisation, a design consultancy or they may develop their own product/service based intellectual property and start their own business.

Some potential occupations for graduates include product designer, business development manager, commercialisation specialist, graduate consultant, innovation strategist, and technology transfer specialist.

Potential employers include Electrolux, Hills Industries, Google, Defence Science and Technology Organisation, the Department of State Development, and self-employment.

For more information on careers services and potential career opportunities go to: flinders.edu.au/careers

FIND OUT MORE

More course information can be found by navigating to the Bachelor of Design and Technology Innovation on our undergraduate courses page via: flinders.edu.au/courses/undergrad

PREREQUISITES

None

ASSUMED KNOWLEDGE

None

SATAC CODE

224771

2015 ATAR

No offers made

GUARANTEED ENTRY ATAR

75.00

TAFELINK

Cert IV or above

BONUS POINTS

UEQ, LLM

4 1-2 years if taken as a combination with an engineering, science, IT or environment degree

DESIGN AND TECHNOLOGY INNOVATION AT FLINDERS

The Bachelor of Design and Technology Innovation prepares you to take innovative, high-tech products from concept to reality. You will be equipped with an understanding of design processes and innovation management, supported by a strong background in science or engineering. The course enables you to contribute to design, innovation and technology commercialisation in an organisation, to carry out management tasks in a science or engineering–based enterprise, and to understand a company’s strategic development of competitive products and services.

The course integrates theoretical studies in design, engineering, science, technology, innovation management and business methods with practical projects with the University’s industry partners — allowing you to apply the knowledge you acquire throughout the course. The degree provides opportunities to design, develop and commercialise advanced technology products or services.

Design and technology innovation is concerned with problem solving and meeting user’s needs through design. It aims to solve problems using engineering, science, technology, marketing and innovation, and specifically focuses on aspects of design, innovation and technology:

• The design component involves design theory, methods, processes and creativity; human factors, ergonomics and user centred design; design for manufacturing; and design communication, documentation and simulation.

• The innovation component involves entrepreneurship and small business, innovation management, business planning and feasibility, strategic marketing, and consumer behaviour.

• The technology component involves science, engineering, mathematics, and data analysis.

This course brings these three areas together to prepare you with the knowledge and skills you need to change the world through advanced technology and manufacturing.
This course... prepares you to take innovative, high-tech products and processes from concept to reality.

It provides an understanding of industrial design, product design and the management of innovation in one degree.

It produces graduates who will possess highly attractive, vital skills in the rapidly changing advanced manufacturing sector.

It lets you participate in a 12-week industry work experience placement or an integrated high-technology design consulting project.
BACHELOR OF
COMPUTER SCIENCE

PREREQUISITES  Yes*
ASSUMED KNOWLEDGE  None
SATAC CODE  214821
2015 ATAR  72.50
GUARANTEED ENTRY ATAR  70.00
TAFELINK  Cert IV or above
BONUS POINTS  UEQ, LLM

COMPUTER SCIENCE AT FLINDERS
The Bachelor of Computer Science provides you with a strong theoretical understanding and practical experience in the design of efficient, reliable software to meet industry requirements, and of the hardware on which that software runs. There is a strong emphasis both on the fundamentals of computing and on practical skills and teamwork.

Flinders has strong expertise in computer science. Our computer scientists work with other professionals in solving real-world problems. For example, they work with engineers investigating areas such as computer architecture, embedded systems and image processing, with medical professionals to develop improved screening technologies, and with educational professionals to develop new ways of teaching and learning.

On completion of the Bachelor of Computer Science or Bachelor of Computer Science (Honours) you will be eligible for professional membership of the Australian Computer Society.

FURTHER STUDY
Further study options include Master of Science (Computer Science), Master of Science (research) and PhD (research).

CAREER OPPORTUNITIES
Some potential occupations for graduates include analyst programmer, business analyst, computer scientist, graduate software developer, information technology officer, and mobile app developer.


For more information on careers services and potential career opportunities available go to: flinders.edu.au/careers

BACHELOR OF
COMPUTER SCIENCE (HONOURS)

PREREQUISITES  Yes*
ASSUMED KNOWLEDGE  None
SATAC CODE  224431
2015 ATAR  92.10
GUARANTEED ENTRY ATAR  80.00
TAFELINK  Diploma or above
BONUS POINTS  UEQ, LLM

* SACE stage 2 mathematical methods or mathematical studies or equivalent.

STUDY PROGRAM
The programs of study for the Bachelor of Computer Science and the first three years of the Bachelor of Computer Science (Honours) are identical, enabling you to transfer between courses.

FIRST YEAR
In first year you will gain skills in the core computing technologies, and knowledge of general computing and introductory programming. Some of this is common to the Bachelor of Information Technology, Bachelor of Engineering (Computer Systems) (Honours) and Bachelor of Engineering (Software) (Honours), and students who are performing well can transfer between the courses.

SECOND AND THIRD YEARS
In second and third years you will further develop your expertise in programming and software development, and will be introduced to key facets of computer systems. You will study areas such as computer programming, network and operating systems, software engineering, project management and interactive computer systems. You will also be able to choose elective topics that interest you such as computer gaming, intelligent systems and information security.

Throughout, you have the opportunity to participate in group projects and attend guest lectures by computing and information technology professionals.

HONOURS
The honours year provides you with additional skills and qualifications. You will undertake selected topics and an honours thesis researching a topic of your interest in depth, and receive support from academic staff.

PRACTICAL EXPERIENCE
You will be engaged in developing applied skills throughout the degree. In the final year you can choose to undertake a computer science project where you further build on the practical experiences developed during the course or request a 12-week industry placement. The project will involve both document preparation and a presentation. You may also undertake group and industry-based projects.

ACCREDITATION
This program is accredited by the Australian Computer Society at the professional level. Courses accredited at this level by the Australian Computer Society are recognised internationally under the Seoul Accord.

COMBINED DEGREES
You can combine the Bachelor of Computer Science with the following bachelor degrees: behavioural science (psychology); engineering (computer systems, electronics, robotics, or software); mathematical sciences.

BONUS POINTS

UEQ, LLM

TAFELINK

Cert IV or above

BONUS POINTS

UEQ, LLM

GUARANTEED ENTRY ATAR

92.10

2015 ATAR

72.50

SATAC CODE

224431

ASSUMED KNOWLEDGE

None

PREREQUISITES

Yes*

ACCREDITATION
This program is accredited by the Australian Computer Society at the professional level. Courses accredited at this level by the Australian Computer Society are recognised internationally under the Seoul Accord.
APPEALS TO THOSE WITH AN INTEREST IN PROGRAMMING AND SOFTWARE SYSTEM DESIGN AND DEVELOPMENT

IS ACCREDITED AT THE PROFESSIONAL LEVEL WITH THE AUSTRALIAN COMPUTER SOCIETY

EQUIPS GRADUATES WITH THE APPLIED SKILLS, TOOLS AND TECHNIQUES TO WORK AS PROFESSIONAL SOFTWARE DESIGNERS AND DEVELOPERS IN INDUSTRY OR RESEARCH
The Bachelor of Computer Science (Simulation and Serious Games) can be combined with the Bachelor of Design and Technology Innovation, providing you with additional skills to take your simulation or serious game concepts through to commercialisation and deployment.

CAREER OPPORTUNITIES
Some potential occupations for graduates include graduate games designer / mathematician, game economy designer, digital content coordinator, java developer – video gaming technologies, flash/javascript developer, and games developer.

Potential employers include Imagination Games, Real Serious Games, EBGames, Gameloft New Zealand Limited, Academy of Interactive Entertainment, and Gamelearn.

For more information on careers services and potential career opportunities available go to: flinders.edu.au/careers

FURTHER STUDY
Further study options include Master of Science (Computer Science), Master of Science (research) and PhD (research).
FOCUS ON THE COMPUTING AND MATHEMATICAL SKILLS NEEDED TO DEVELOP SIMULATION AND SERIOUS GAMING SYSTEMS

ENABLES YOU TO DEVELOP SKILLS AND KNOWLEDGE WITH APPLICATIONS IN A RANGE OF CAREERS, FROM ENGINEERING TO GROUNDWATER MODELLING

HAS BEEN DESIGNED TO BE ACCREDITED BY THE AUSTRALIAN COMPUTER SOCIETY (ACS)

FIND OUT MORE

More course information can be found by navigating to the Bachelor of Computer Science (Simulation and Serious Games) and Bachelor of Computer Science (Simulation and Serious Games) (Honours) on our undergraduate courses page via: FLINDERS.EDU.AU/COURSES/UNDERGRAD
**BACHELOR OF ENGINEERING**

**COMPUTER & NETWORK SYSTEMS (HONOURS)**

PREREQUISITES: Yes

ASSUMED KNOWLEDGE: Yes

SATAC CODE: 234081


GUARANTEED ENTRY ATAR: 80.00

TAFELINK: Diploma or above

**STUDY PROGRAM**

**FIRST YEAR**

Flinders’ engineering degrees in civil, computer and network systems, electrical, electronics, mechanical, naval architecture and robotics engineering have a common first year. This means that you can transfer between degrees at the end of first year with no loss of time. First year comprises topics in fundamental science and engineering including engineering design, mechanics, electronics, materials, computer programming, mathematics, physics and professional skills.

**SECOND YEAR**

Second year builds on this base with topics from a variety of areas including microprocessors, design, computer programming, signal processing, computer networks and further study in digital and analogue electronics.

**THIRD YEAR**

Third year provides in-depth computer and network systems material such as computer organisation and design, network engineering, and incorporates an industry placement program.

**FOURTH YEAR**

Fourth year includes a major computer and network systems engineering honours thesis researching a topic of your interest in depth, a capstone topic in computer and network systems, and other specialised electives.

**ACCREDITATION**

This program is fully accredited by Engineers Australia at the level of professional engineer. Professional engineering courses accredited by Engineers Australia are recognised internationally under the Washington Accord. Graduates meet the academic requirements for attaining chartered professional engineering status. This course is also accredited by the Australian Computer Society at the professional level. Courses accredited by the Australian Computer Society are recognised internationally under the Seoul Accord.

**COMBINED DEGREES**

You can combine the Bachelor of Engineering (Computer and Network Systems) (Honours) with any other bachelor degree within the Faculty of Science and Engineering, subject to meeting entry requirements.

**FURTHER STUDY**

Further study options include Master of Engineering and PhD (research).

**FIND OUT MORE**

More course information can be found by navigating to the Bachelor of Engineering (Computer and Network Systems) (Honours) on our undergraduate courses page via: flinders.edu.au/courses/undergrad

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**THIS COURSE...**

- Allows you to participate in Flinders University’s nationally recognised 20-week industry placement program

- Is accredited by both Engineers Australia and the Australian Computer Society and is recognised internationally

- Provides a unique combination of computer systems engineering and study in networks and telecommunications

- Provides opportunities for employment in computer and network systems, which are integral to most aspects of modern life
Rebekah’s position has seen her work offsite in Whyalla, perform audits for BHP and provide advice on coal handling facilities for the Newcastle Coal Infrastructure Group.

Strength in maths and science at school influenced Rebekah to consider studying engineering. Rebekah felt that the Bachelor of Engineering (Computer Systems) reflected “where technology was at”. This, along with the broad range of subjects on offer, including electrical, electronic, control and instrumentation, gave her a well-rounded understanding of engineering.

Rebekah is very grateful to have undertaken work experience in software development for a defence operation; it sharpened her sense of what was and wasn’t right for her.

“The work experience component of the Bachelor of Engineering (Computer Systems) at Flinders is really valuable. Finding out what you don’t want to do is as important as working out what you do want to do.”

Rebekah is a TUV-certified functional safety engineer. She provides specialist engineering expertise for Aurecon, a global engineering consultant.

Rebekah Reilly
Functional Safety Engineer at Aurecon (South Australia)
Flinders Computer Systems Engineering Graduate
SOFTWARE ENGINEERING
(HONOURS)

STUDY PROGRAM
FIRST YEAR
First year is based around studies in software engineering including programming, digital and analog electronics, mathematics and professional skills. You will also begin choosing electronics or computer-based topics from first year.

SECOND AND THIRD YEARS
In second and third years you will develop technical skills in areas including programming, testing, network engineering operating systems, design and automation, and signals and systems. You will also complete a nationally recognised 20-week industry-based professional practicum, which is supported by Flinders University’s well-established links with a broad range of companies.

FOURTH YEAR
Fourth year includes a major software engineering honours thesis researching a topic of your interest in depth. The year also provides an opportunity to choose further biomedical, engineering, computing or mathematics elective topics.

ACCREDITATION
This program is accredited by Engineers Australia at the level of professional engineer. Professional engineering courses accredited by Engineers Australia are recognised internationally under the Washington Accord. Graduates meet the academic requirements for attaining chartered professional engineering status. This course is also accredited by the Australian Computer Society at the professional level. Courses accredited at this level by the Australian Computer Society are recognised internationally under the Seoul Accord.

COMBINED DEGREES
You can combine the Bachelor of Engineering (Software) (Honours) with any other bachelor degree within the Faculty of Science and Engineering, subject to meeting entry requirements.

CAREER OPPORTUNITIES
Some potential occupations for graduates include graduate software engineer, associate system engineer, C++ software engineer, engineering software developer, graduate Linux developer, Java developer / platforms engineer, and graduate technical analyst.

SOFTWARE ENGINEERING AT FLINDERS
The Bachelor of Engineering (Software) (Honours) is a future-oriented course that enables you to choose a course of study with either an electronics or computer science focus within the program. It provides you with a solid foundation in the technical and professional skills and knowledge required to pursue a successful career in the software industry.

The Bachelor of Engineering (Software) (Honours) at Flinders was the first software engineering degree in South Australia specifically created for students looking to work as professional software engineers and the first to be accredited with Engineers Australia.

Software engineering is a dynamic engineering discipline that is concerned with all aspects of software use, from design and development to maintenance and management. Combining the art and skill of engineering with the power of computer technology, software engineering develops programs and products that meet the demands of the modern economy.
COMBINES THE SCIENCE AND SKILL OF ENGINEERING WITH THE POWER OF COMPUTER TECHNOLOGY

IS ACCREDITED BY BOTH ENGINEERS AUSTRALIA AND THE AUSTRALIAN COMPUTER SOCIETY AND IS RECOGNISED INTERNATIONALLY

LETS YOU PARTICIPATE IN FLINDERS UNIVERSITY’S NATIONALLY RECOGNISED 20-WEEK INDUSTRY PLACEMENT PROGRAM

PREPARES YOU TO MEET THE ACADEMIC REQUIREMENTS FOR ATTAINING CHARTERED PROFESSIONAL ENGINEER STATUS UPON GRADUATION

One of the best parts of the degree was that we learnt more than the technical skills. We focused a lot on project management, which has helped me to remove a lot of the risks for projects and our clients and that helps us to build a strong company brand.

Ashley Leach
DIRECTOR AT SILHOUETTE STUDIOS (MELBOURNE)
FLINDERS SOFTWARE ENGINEERING GRADUATE
The Bachelor of Applied Geographical Information Systems (GIS) is designed to give you the skills to support change and growth in some of the most important areas of modern society. If you enjoy computing, graphics and digital mapping, and would like to use these skills to tackle real-world problems, GIS is the course for you.

The Bachelor of Applied Geographical Information Systems meets the growing need for specialists who know how to use these highly sophisticated systems. The University’s expanding GIS capability is based in the Flinders School of the Environment. The school leads Australia in spatial databasing and delivery systems. Our dedicated Spatial Information Systems Laboratory contains state-of-the-art workstations which run ArcGIS, ENVI and ERDAS IMAGINE – the primary GIS and remote sensing software packages. The school has ground-based LiDAR and image spectrophotometers used in teaching and research. The school also includes the internationally recognised Airborne Research Australia and engages its services on a range of environmental, atmospheric and climate projects.

GIS is a computer-based system capable of integrating, editing, sharing, modelling, and displaying geographically referenced information. It allows users to create interactive queries, analyse information, edit data, create maps and present the results of these operations. GIS is used extensively across a range of areas including biodiversity and natural resources management, urban planning, mining and exploration, archaeology and infrastructure management.

STUDY PROGRAM
The program includes studies in areas such as data analysis, GIS modelling, computing, statistics, remote sensing, digital image analysis, and an industry placement, field camp and project work.

You will also take a full major sequence across the three years of the course in any area offered within a Bachelor of Arts (except computing studies).

Popular majors include biological sciences, geography, earth sciences, environmental studies, archaeology and criminal justice. Students offered the opportunity to take an honours year extend their research skills by working on projects across the state, often in conjunction with agencies such as the Department of Environment, Water and Natural Resources, Natural Resource Management Boards, SAPOL and the Conservation Council.

PRACTICAL EXPERIENCE
The course has strong support from industry for its program of study and emphasis on developing practical skills that prepare graduates for a smooth transition into the workforce. Industry placements and applied project work will help you develop contacts and work skills.

TAFE SA DUAL OFFERS
Entry via a TAFE SA dual offer pathway is also available for the Bachelor of Applied Geographical Information Systems. Successful applicants will receive an offer to both TAFE SA and Flinders. Progression to Flinders requires successful completion of the TAFE SA qualification. For more information go to: flinders.edu.au/tafe

CAREER OPPORTUNITIES
Some potential occupations for graduates include graduate spatial information officer, land resource information officer, geospatial imagery intelligence analyst, graduate GIS analyst, GIS and knowledge management officer, and GIS data coordinator.

Potential employers include GHD, Mallee Catchment Management Authority, Reef Catchments, AECOM, City of Salisbury, and Treasury Wine Estates.

For more information on careers services and potential career opportunities go to: flinders.edu.au/careers

FURTHER STUDY
A Bachelor of Applied Geographical Information Systems (Honours) is available. Other further study options include Master of Science (research), PhD (research), Graduate Certificate and Graduate Diploma in Information Technology and Master of Information Technology.

FIND OUT MORE
More course information can be found by navigating to the Bachelor of Applied Geographical Information Systems on our undergraduate courses page via: flinders.edu.au/courses/undergrad
The two biggest things I learned at Flinders — apart from all the technical knowledge — were learning how to apply better logic and how to argue with reason. I am taking that and using GIS to present the best information and building business cases to help the right decisions to be made for both the people and environment.

Simon Callaghan
GIS COORDINATOR AT MOUNT BARKER COUNCIL (SOUTH AUSTRALIA)
FLINDERS GEOGRAPHICAL INFORMATION SYSTEMS GRADUATE
On completion of the Bachelor of Information Technology or Bachelor of Information Technology (Honours) you will be eligible for professional membership of the Australian Computer Society.

IT is integral to modern life – it drives innovation and assists us to solve problems in areas such as business and commerce, defence, medical research, climate change, and the environment. It has a significant impact upon the creative industries and in the development of new products and services. It covers everything from designing software and creating games to managing information, improving our security and developing systems for doing business through the web.

The programs of study for the Bachelor of Information Technology and the first three years of the Bachelor of Information Technology (Honours) are identical, enabling you to transfer between courses. You will undertake a mixture of core topics and electives and be involved in extensive practical work. Topics include computer-related subjects such as programming, web-based systems development, databases, application development, and software engineering as well as business, project management and communications subjects.

Java is the primary programming language used in the course but other languages are also covered. The design and implementation of internet services, websites and database applications are covered. These degrees also allow you to take elective topics from a variety of areas. Students in the past have selected topics in areas as varied as drama, languages, law and biology – it’s your choice.

The honours year provides you with additional skills and qualifications. You will undertake selected topics and an honours thesis researching a topic of your interest in depth, and receive support from academic staff. The honours year also provides a preparation for future doctoral study.

Industry-oriented project work is a feature of the degrees and there is also an opportunity to take part in an industry-based 12-week work placement.

This program is accredited by the Australian Computer Society at the professional level. Courses accredited at this level by the Australian Computer Society are recognised internationally under the Seoul Accord.
THIS COURSE...

- Is a comprehensive program with a focus on practical skills
- Produces graduates who are in demand in every industry
- Is both technical and people-oriented
- Is accredited at the professional level with the Australian Computer Society

INSPIRING ACHIEVEMENT
The course was excellent. It was a good teaching space. I loved being able to manage my own time and study, and to choose my own topics. I found the independent learning liberating, especially in comparison with high school.”

Nadine found the staff to be very friendly, supportive and understanding. “I had a nice relationship with all my lecturers. They were committed to helping you out with everything, especially if you showed that you cared about your work.”

The industry placements were highly beneficial to Nadine. “It’s such a huge learning curve. No matter how much people try to explain what working in the field is like, you don’t really grasp it until you get out there and do it.”

“The Uni organised for me to go to Flinders Partners to work on software for innovation management. I was so pleased when they offered me a full-time position.”
BACHELOR OF INFORMATION TECHNOLOGY (DIGITAL MEDIA)

PREREQUISITES
None

ASSUMED KNOWLEDGE
Yes*

SATAC CODE
224451

2015 ATAR
72.85

GUARANTEED ENTRY ATAR
70.00

TAFELINK
Cert IV or above

BONUS POINTS
UEQ, LLM

BACHELOR OF INFORMATION TECHNOLOGY (DIGITAL MEDIA) (HONOURS)

PREREQUISITES
None

ASSUMED KNOWLEDGE
Yes*

SATAC CODE
224551

2015 ATAR
82.85

GUARANTEED ENTRY ATAR
80.00

TAFELINK
Diploma or above

BONUS POINTS
UEQ, LLM

INFORMATION TECHNOLOGY (DIGITAL MEDIA) AT FLINDERS

The Bachelor of Information Technology (Digital Media) and Bachelor of Information Technology (Digital Media) (Honours) are designed to provide you with a strong foundation in both theoretical and practical aspects of information technology and digital media production, including the use of advanced tools in the area.

Developed with substantial input from the digital media and computer game development industries, they build on Flinders University’s strengths in digital media and its longstanding strengths in screen studies (especially film) and computing.

You will be prepared for a future role as an information technology professional with the ability to use professional skills and knowledge to develop complex computer-based systems, specifically in the digital media area. You will be able to develop computer-based solutions and digital media artefacts for a wide variety of industries.

On completion of the Bachelor of Information Technology (Digital Media) or Bachelor of Information Technology (Digital Media) (Honours) you will be eligible for professional membership of the Australian Computer Society.

Digital media is the growing and dynamic area formed by the convergence of computing technology and new media. It covers fields such as computer games, advanced human-computer interaction, animation, computer graphics and information visualisation. It is about understanding and applying modern communication methods and techniques.

STUDY PROGRAM
You will study the breadth of topics necessary for a career in digital media industries. The programs of study for the Bachelor of Information Technology (Digital Media) and the first three years of the Bachelor of Information Technology (Digital Media) (Honours) are identical, enabling you to transfer between courses.

FIRST YEAR
In first year you will study topics in computing, multimedia, professional skills for computing and mathematics, and be introduced to digital media. Students who do not have a background in mathematics are able to choose introductory mathematics topics, making these degrees available to those with no scientific background.

SECOND YEAR
Second year studies include multimedia production, web-based systems development and data modelling. A choice of electives can be taken in areas such as introduction to digital graphic design, virtual reality and web 2.0, software engineering, application development and computer programming.

THIRD YEAR
In third year you will take studies in computer game development, interactive computer systems and electives which can include 3D effects and 3D animation. A digital media technical project will also be undertaken. Throughout, you have the opportunity to participate in group projects and attend guest lectures by computing and information technology professionals.

HONOURS
The honours year provides you with additional skills and qualifications. You will undertake selected topics and an honours thesis researching a project of your interest in depth, and receive support from academic staff.

PRACTICAL EXPERIENCE
You will be engaged in digital media design and production throughout the degree. In the third year you will undertake a digital media technical project where you can further build on the skills and practical experiences developed during the course.

ACCREDITATION
This program is accredited by the Australian Computer Society at the professional level. Courses accredited at this level by the Australian Computer Society are recognised internationally under the Seoul Accord.

TAFE SA DUAL OFFERS
Entry via a TAFE SA dual offer pathway is also available for the Bachelor of Information Technology (Digital Media). Successful applicants will receive an offer to both TAFE SA and Flinders. Progression to Flinders requires successful completion of the TAFE SA qualification. For more information go to: flinders.edu.au/tafe

CAREER OPPORTUNITIES
Some potential occupations for graduates include digital media designer, 3D specialist, flash animator / developer, creative digital designer and developer, game programmer, and digital integration assistant.

Potential employers include Real Serious Games, Act3animation, Australian Broadcasting Corporation, Massive Interactive, Imagination Games, and Gamelearn.

For more information on careers services and potential career opportunities go to: flinders.edu.au/careers

FURTHER STUDY
Further study options include Master of Science (Computer Science), Master of Science (research) and PhD (research).

FIND OUT MORE
More course information can be found by navigating to the Bachelor of Information Technology (Digital Media) and Bachelor of Information Technology (Digital Media) (Honours) on our undergraduate courses page via: flinders.edu.au/courses/undergrad
DEVELOPS YOUR COMPUTING, APPLICATION DEVELOPMENT AND CREATIVE SKILLS

DEALS WITH CUTTING-EDGE TECHNOLOGIES IN ANIMATION, COMPUTER GAMES AND MULTIMEDIA

EXPOSES YOU TO WORKING WITH ACTORS, DIRECTORS AND FILMMAKERS THROUGH THE FLINDERS SCREEN STUDIES DEPARTMENT AND DRAMA CENTRE

The facilities at Flinders are great, as is the passion of the teachers. They have a huge knowledge base and give us a whole array of skills and techniques. The computer and program suites are great, as are the screen production facilities—we are taught to use professional cameras and microphones and we’re able to make short films. One of the best parts of our study is that you get to gain experience in so many areas of digital media so you can discover your passion and develop a whole range of skills within the field.

Kate van der Horst
FLINDERS DIGITAL MEDIA STUDENT
The course prepares you to understand why electronic communication operates (and in some cases why not), and teaches you how to design systems that maximise the safe and secure use of networks.

Network and cybersecurity systems is a broad area covering the technology of designing and implementing local and internet-scale communication systems, as well as the use of technology in social networks and business systems.

Networked systems include:
- the physical, exemplified by the NBN and by the prevalence of mobile devices
- the strategic, as shown by the rise of cloud computing and server and data storage farms
- the social, including social networking
- the organisational, including new business models for work that relies on networked systems, including e-research and enterprise systems

The importance of the network as central to the computing task is growing rapidly.

STUDY PROGRAM

FIRST YEAR
The first year of the Bachelor of Information Technology (Network and Cybersecurity Systems) has a high level of commonality with Flinders University’s other computing awards focusing on computing and networking technology, programming, enterprise and business systems, digital electronics and professional skills.

SECOND YEAR
These skills are then extended in second year with studies in social and information networks, web-based systems development, database systems and computer networks.

THIRD YEAR
Third year extends this further with studies in information security, network engineering, cloud systems and communications technologies and network administration. There is also either a major project or the opportunity to undertake work in industry.

HONOURS
Students obtaining a credit average will have the opportunity to complete a specialist fourth year and graduate with honours. This fourth year also acts as a preparation for a PhD.

PRACTICAL EXPERIENCE
The Bachelor of Information Technology (Network and Cybersecurity Systems) offers an optional industry-based practicum. This can be from 13 weeks to a full year in industry and gives you the opportunity to complete your degree having gained first-hand industry experience.
DEVELOPS YOUR COMPUTING, NETWORK AND CYBERSECURITY SYSTEMS DEVELOPMENT AND INFORMATION TECHNOLOGY SKILLS
IS BASED ON CUTTING-EDGE DEVELOPMENTS IN COMMUNICATIONS TECHNOLOGY
ENABLES YOU TO UNDERSTAND THE ROLE OF NETWORKED SYSTEMS, INCLUDING SOCIAL MEDIA, IN BUSINESS AND ENTERPRISE
ENABLES YOU TO PLAN AND MANAGE A SECURE NETWORK SYSTEM

“It’s really excellent that we’ve been ahead of the game in individual subjects, but we haven’t packaged it all together for an IT person. This degree is geared towards the person who’s going to use the product, the ‘power user’. These graduates will not only understand the underlying technology, but will also know how to use it and get the best out of it. More of our life is spent working with networked machines and technology, whereas previously it was the domain of big business. Now everyone is connected, and lots of people are doing work in the cloud; it’s a networked society.”

Dr Denise De Vries
COMPUTER SCIENTIST AT FLINDERS UNIVERSITY
**TERMINOLOGY**

**ASSUMED KNOWLEDGE**
Some courses assume that you will have certain knowledge and skills from previous study (eg SACE).

**ATAR**
Australian Tertiary Admission Rank. The ATAR selection rank listed for each course is the minimum year 12 rank in 2015 which guaranteed selection for applicants competing in the year 12 sub-quota. The ATAR selection rank includes any university equity and subject bonus points that may have been applied.

**BACHELOR DEGREE**
Normally a first tertiary-level degree – also known as an undergraduate degree.

**COMBINED DEGREES**
Two courses studied at the same time for which you receive two parchments upon successful completion, eg laws and legal practice/commerce. Cross-credit reduces the total time you study.

**DOUBLE DEGREES**
Two courses studied at the same time for which you receive one parchment upon successful completion, eg education/arts.

**ELECTIVE/OPTION TOPICS**
Topics in a study area of your interest which can be chosen in addition to core topics.

**EXTERNAL STUDENT**
A person undertaking all of their study online on either a full-time or a part-time basis.

**GPA**
Grade point average. Your GPA is a measure of your academic achievement at university based on your results for each topic studied.

**HONOURS**
A degree involving both coursework and a research thesis generally undertaken after an undergraduate degree and before a postgraduate research degree. Honours usually adds one year to the duration of a regular undergraduate degree and is either applied for separately or as part of an undergraduate degree with honours included.

**IB**
International baccalaureate. IB qualifications are recognised by Flinders for entry into undergraduate programs.

**LLM**
SA Language, Literacy and Mathematics Bonus Scheme. Students who have successfully completed a secondary school subject in specific language, English and mathematics categories will be eligible for between two and four bonus points under the scheme (excludes Bachelor of Clinical Sciences/Doctor of Medicine applicants).

**MODE**
Mode refers to how a course is delivered. Most Flinders courses are delivered internally – ie on-campus; however, some are available externally or as a combination of both.

**POSTGRADUATE COURSE**
A university course studied after completion of an undergraduate degree.

**PREREQUISITE**
Some courses require you to have completed specific subjects in your previous study (eg SACE).

**SACE**
South Australian Certificate of Education. The SACE is awarded to South Australian students who successfully complete year 12.

**SEMESTER**
The academic year is divided into two semesters – usually late-February to mid-June, and late-July to November. Some individual topics are also available to study over the summer break.

**STAT**
Special Tertiary Admissions Test. You can sit the STAT if entering Flinders via the Adult Entry Scheme. The test is designed to assess your ability to study at university.

**TOPIC**
A subject studied as part of a degree program. Core topics are compulsory subjects that form the basis of a study program.

**UEQ**
SA Universities Equity Scheme. Students from certain specified secondary schools, and students from other schools who are able to demonstrate their individual disadvantage, are eligible for five bonus points under the scheme.

**UNDERGRADUATE DEGREE**
A first tertiary-level degree – also known as a bachelor degree.

**UNIT**
Each topic is given a weighting in units. Flinders topics are weighted in multiples of 4.5 units. Full-time students normally complete 18 units each semester, or 36 units a year.
**ENTRY OPTIONS**

**COMPETITIVE ATAR ENTRY**
The majority of year 12 applicants enter university via the traditional competitive entry method, where offers are made to eligible applicants with the highest ATARs until all places in the course are filled. The 2015 ATAR cut-offs for each course entry listed are provided only as a guide for 2016 entry and may change with the 2016 intake.

**GUARANTEED ENTRY ATAR**
Achieve an ATAR equal to or above the published guaranteed entry ATAR and you will be guaranteed a place at Flinders. All you need to do is ensure you have listed Flinders courses first in your preferences and you will be offered a place in the highest Flinders course preference that you are eligible for in 2016. More information can be found at: flinders.edu.au/guaranteedatar

**BONUS POINTS**
Bonus points may contribute to your ATAR when applying for university. Two bonus schemes are available for South Australian year 12 students applying for entry to Flinders in 2016: the SA Universities Equity Scheme and the SA Language, Literacy and Mathematics Bonus Scheme. More information about your eligibility for bonus points is available at: flinders.edu.au/bonuspoints

**TAFE LINK**
Flinders offers guaranteed entry to selected courses for applicants who have completed a TAFE/VET certificate IV or higher level qualification, so long as course prerequisites are met. Importantly, your TAFE/VET qualification does not need to be related to your selected area of study at Flinders. More information is available at: flinders.edu.au/tafe

**FOUNDATION STUDIES**
The Foundation Studies Program has been designed to introduce you to university study in a supportive learning environment. Open to people from all backgrounds, the Foundation Studies Program provides a pathway to gain entry to degrees at Flinders University. For more information go to: flinders.edu.au/foundation

**ADULT ENTRY**
The Adult Entry Scheme enables people aged 18 years and over to apply to study at Flinders via the Special Tertiary Admissions Test (STAT). Applications are made via SATAC. Find out more at: flinders.edu.au/adultentry

**ENTRY PATHWAYS**
At Flinders we recognise that every prospective student is an individual and that what works for one might not be right for another. That’s why we provide various entry pathways into Flinders University and your preferred course, including uniTEST, Flinderslink, and TAFE SA dual offers. You are encouraged to explore your options and find the entry path that’s right for you at: flinders.edu.au/pathways

**ENHANCE YOUR DEGREE**

**COMBINED DEGREES**
A combined degree is a combination of two Flinders bachelor degrees. As a combined degree graduate you will gain two qualifications in just one to one-and-a-half years of extra study. Our combined degree programs are designed to enhance your educational, academic and professional qualifications whilst minimising the cost and length of your studies. Flinders combined degrees allow you to undertake in-depth study in exciting combinations that aren’t usually available in single degrees. Many graduates believe that a combined degree gives them an advantage for employment. More information on the combined degree options available for each course at Flinders can be found on the undergraduate course pages at: flinders.edu.au/courses/undergrad

**HOW TO APPLY**
Flinders offers two admissions cycles each year for undergraduate courses.
- Semester 1 – February start. Applications open in August for commencement the following year.
- Semester 2* – July start. Mid-year applications open in August for commencement in July the following year.
*Not all courses are offered for semester 2 entry.

**SUBSCRIBE FOR A CHANCE TO WIN PRIZES**
Flinders Explorer is a great way to find out everything you need to know about studying at Flinders University. Flinders Explorer is an e-newsletter, written for students by students.

Our current students will provide tips, tell you their stories and share advice. Basically they will tell you what to expect and help you to decide which course best suits you because they’ve been where you are now.

Along the way, we will provide you with information on our courses, entry pathways, scholarships and reminders of upcoming events and important application dates.

Subscription is free and gives you the chance to win cool prizes like an iPad, shopping vouchers and movie, concert and event tickets.

Subscribe at: flinders.edu.au/explorer
Every effort has been made to ensure the information in this brochure is accurate at the time of publication: May 2015. Flinders University reserves the right to alter any course or topic contained herein without prior notice. Alterations are reflected in the course information available on the University’s website.
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