WE ARE WESTERN SYDNEY
Located in the heart of one of Australia’s fastest growing economic regions, Western Sydney University offers unlimited potential to students with the talent, drive and ambition to succeed.

Western Sydney is an exciting place to be. As the nation’s third largest economy and one of the fastest growing population and employment centres, it is an increasingly important, dynamic and culturally diverse hub of business, industry and innovation.

With a large multicultural population of more than two million people from 170 nations, Western Sydney’s global links are creating unlimited opportunities for international business, investment, education and cultural exchange.

Ranked amongst the top two per cent of universities in the world, Western Sydney University values academic excellence, integrity and the pursuit of knowledge. We are globally focused, research-led and committed to making a positive impact on the communities we engage with.

Your success starts here.
WHY STUDY AT WESTERN SYDNEY?
With a degree in Engineering, Information and Communications Technology (ICT) or in the area of construction and design, you will be able to pursue a career in the fields of design, construction and management, hardware and software development, structural design, system architecture, project management, environmental engineering, machinery design and development. You can also pursue a role as a building surveyor, site manager or property developer. Our robotic assembly systems are unique to any Australian university and one of the most advanced of its kind in the world.

Our Engineering, Information and Communications Technology (ICT) and Construction Management and Design programs are at the forefront of Australian technology education, research and development. The programs offer a balance of theory and practical field studies, broad unit choices, flexible course structures, extensive industry-based projects and placements, and local and international work experience opportunities.

Graduates can pursue a range of exciting Engineering, ICT, Construction and Design career paths, including software development and database design, computer forensics and systems security, system analysis, design and integration, computer network design and management, e-business and internet technologies, water, roads and buildings, robotics and mechatronics, design of consumer, industrial products and many more.

MakerSpace is a facility open to students, teachers, industry and members of the public, where ideas can be brought to life.

If you have ever wanted to build or program a robot, then we have classes and programs available to students and teachers. Currently, we offer one-off workshops using the LEGO® EV3 Mindstorm Robots. We also house a robotic assembly and you can meet Baxter, our human-interactive production robot.

You can experience virtual reality with Liquid Galaxy, Google Cardboard and Oculus Rift.

The Institute has four research themes:

**Infrastructure Systems:** This program involves the analysis, assessment, design, maintenance and repair of infrastructure systems, an area of wide application. The research is concerned with the safety and reliability and mitigation strategies of infrastructure systems such as bridges, buildings, dams, hoppers and silos, roads, and water distribution systems (pipe networks).

**Infrastructure Computations:** One of the research foci is on computational methods. Computational methods have played a major role in the advancement of many engineering disciplines over the last few decades. Computational methods can be used as efficient and reliable tools to solve challenging engineering problems when conventional experimental approaches become intractable or inefficient.

**Infrastructure Materials:** This program covers the development, application, characterisation, recycling, remediation, disposal, modelling and monitoring of engineering materials as part of infrastructure design, development and management. Engineering materials include both natural resources and man-made materials such as soil, water, cemented soil, geofoam, concrete, steel, composite materials and recycled concrete.

This program includes two primary non-contact techniques for structural health monitoring. These include image processing and signal processing techniques. In addition, this theme will incorporate smart structures and structural control methods.

At Western Sydney University, high-achieving international students have access to a number of scholarship programs. They reflect our strong commitment to academic excellence and opportunity for our students. More information is available on page 29.

Last year, a team of talented students competed in the World Solar Car Challenge. The work continues this year, with a team of 20 students working on a new car named ‘Inertia’ to compete in the 2015 World Solar car race. In the event, challengers from universities across the globe race from Darwin to Adelaide – covering a huge 3,000km!
Bachelor of Engineering

RECOMMENDED SEQUENCE

YEAR 1
- Mathematics for Engineers 1
- Engineering Computing
- Engineering Physics
- Introduction to Engineering Practice
- Mathematics for Engineers 2
- Electrical Fundamentals
- Fundamentals of Mechanics
- Engineering Materials

YEAR 2 - YEAR 4
Students must then select one of the following key programs:
- Civil
- Construction
- Electrical
- Mechanical
- Robotics and Mechatronics

The future presents significant challenges for managing the environment, infrastructure and technological developments.

Effective solutions to these challenges will require innovative engineering, applied science and design strategies. At Western Sydney University, we prepare our students to take on those challenges and succeed.

The Bachelor of Engineering degree covers all major engineering domains, and you can experience many facets of engineering before deciding your area of specialisation at the end of your first year.

CORE UNITS AND ELECTIVES

To graduate with a Bachelor of Engineering (Honours), you will be required to complete 32 units for a total of 320 credit points, as well as practical industrial experience. For more information on the Engineering key programs, please see the descriptions starting on page 10.

The core common first year units include: Mathematics for Engineers; Engineering Physics; Fundamentals of Mechanics; Engineering Computing; Electrical Fundamentals; Introduction to Engineering Practice; and Engineering Materials. You will have the opportunity to complete multiple specialist electives, depending on the key program you select. For detailed information about the course structure and units, visit westernsydney.edu.au/courses

PRACTICAL EXPERIENCE

You will complete 12 weeks of industrial experience, which is required after the end of the third year. The Engineering Summer Placement program, available through our Cooperative Programs, offers our high-achieving students the opportunity for paid placements.

PROFESSIONAL RECOGNITION

The course has been designed to meet the requirements of Engineers Australia. Three key programs, namely, Civil, Electrical, and Robotics and Mechatronics, have received full accreditation from Engineers Australia at the level of Professional Engineer and the Construction and Mechanical key programs have received provisional accreditation at the level of Professional Engineer. Engineers Australia only accords full accreditation to a course after the first student cohort has graduated.

FURTHER STUDIES

Our students can study for an Honours award during their fourth year. Entry to the Honours stream is based on superior academic performance in the first three years. Find out more at westernsydney.edu.au/honours

COURSE | CODE | CRICOS | INTAKE | LOCATION | DURATION | FEES*
---|---|---|---|---|---|---
B Engineering (Civil, Construction, Electrical, Mechanical, Robotics and Mechatronics) | 3689 | 041037C | February/July | Penrith | 4 years | $27,680

*Indicative 2016 tuition fee shown in Australian dollars.
Bachelor of Engineering Advanced (Honours)

The Bachelor of Engineering Advanced (Honours) is designed for high-achieving students to undertake advanced engineering topics and gain substantial research experience.

During the course, you will have the opportunity to work closely with an academic mentor to develop high level research skills.

The Bachelor of Engineering Advanced (Honours) follows the structure of the Bachelor of Engineering, with extension activities and alternative assessments designed to stimulate and realise your full academic potential.

PRACTICAL EXPERIENCE

You will complete 12 weeks of industrial experience, which is required at the end of the third year of studies. The Engineering Summer Placement program, available through our Cooperative Programs, offers high-achieving students the opportunity for paid placements.

PROFESSIONAL RECOGNITION

The course has been designed to meet the requirements of Engineers Australia. Three key programs, namely, Civil, Electrical, and Robotics and Mechatronics, have received full accreditation from Engineers Australia at the level of Professional Engineer and the Construction and Mechanical key programs have received provisional accreditation at the level of Professional Engineer. Engineers Australia only accords full accreditation to a course after the first student cohort has graduated.

KEY PROGRAMS/MAJOR STUDIES

The key programs of the Bachelor of Engineering Advanced (Honours) are Civil, Construction, Electrical, Mechanical, and Robotics and Mechatronics. For more information on each of these key programs and the units you may study, please see the descriptions starting on page 10.

CORE UNITS

To graduate with a Bachelor of Engineering Advanced (Honours), you will be required to complete (including thesis) a total of 320 credit points, as well as practical industrial experience. Units include: Mathematics for Engineers; Engineering Physics; Fundamentals of Mechanics; Engineering Computing; Electrical Fundamentals; Introduction to Engineering Practice; and Engineering Materials. For detailed information about the course structure and units, visit westernsydney.edu.au/courses

CAREER OPPORTUNITIES

As an Engineering graduate, you can look forward to career opportunities in:

- water, roads and buildings
- robotics and mechatronics
- manufacturing and utilities
- commercial, medical and industrial product design
- product management, project management and consultancy
- industrial, commercial or residential development.
Bachelor of Engineering
Key Programs

After a common first year in the Bachelor of Engineering (Honours), you can specialise in one of the following key programs.

CIVIL
The Civil program covers the fields of structural design, construction management and water engineering, together with environmental and geotechnical engineering.

Career opportunities include: designing, constructing and managing roads, transportation, airports, water supply, sewerage systems and large buildings.

CONSTRUCTION
Construction provides the skills necessary for performing at a professional level in construction management and structural design.

Career opportunities include: working in the fields of construction, structural design and project management. You may work in the private or public sector on projects covering roads, bridges, airports, and residential and commercial buildings.

ELECTRICAL
The Electrical program covers electronic components, computers, power generation and distribution systems, and communications and control.

Career opportunities include: working in communications, electromagnetics, power and energy systems, public utilities, telecommunications, manufacturing, electrical systems and renewable energy systems.

MECHANICAL
This program is concerned with the design of mechanical systems for a wide range of applications, including manufacturing, transportation and energy conversion. The course delivers fundamental engineering principles, as well as an intensive hands-on laboratory program to provide skills necessary for the design of machines, ensuring their functionality, safety and reliability.

Career opportunities include: working in all sectors of industry that involve the development and use of machineries, such as the mining industry, biomedical applications, building services, energy generation and conversion, manufacturing, transportation and aerospace. You may focus on design and development, process control and management, or service and maintenance.

ROBOTICS AND MECHATRONICS
This program is concerned with automation and the design and construction of intelligent mechanical systems. The course includes an intensive hands-on laboratory program and provides the skills necessary for the design of smart machines of all types, such as auto cruise control, pilotless spacecraft, automated factories and medical telerobotics. You will have access to our robotic assembly system, one of the most advanced of its type and unique as a mechatronic engineering educational facility.

Career opportunities include: designing, developing and controlling automated machinery, designing smart mechanical equipment and systems, and marketing and management in fields such as manufacturing, packaging, materials handling, aerospace and mining. Examples include, designing manufacturing solutions, processes and equipment, or developing robotic devices to solve important health issues in the areas of diagnosis of body malfunction and the improvement of body movements.
Bachelor of Engineering Science

**Recommended Sequence**

**YEAR 1**
- Mathematics for Engineers Preliminary
- Engineering Computing
- Engineering Physics
- Introduction to Engineering Practice
- Mathematics for Engineers 1
- Electrical Fundamentals
- Fundamentals of Mechanics
- Engineering Materials

**YEAR 2 - YEAR 3**
Students must then select one of the following key programs:
- Civil
- Construction
- Electrical
- Robotics and Mechatronics

**Further Studies**

The Bachelor of Engineering Science course is similar to the first three years of the Bachelor of Engineering course. Our students may apply to transfer from Bachelor of Engineering Science to Bachelor of Engineering during their course of study. Students who graduate from Bachelor of Engineering Science may apply for admission to Bachelor of Engineering (Honours) so as to complete a second degree.

**Career Opportunities**

Engineering Technologists make an important contribution to the engineering profession. Our Bachelor of Engineering Science graduates can:
- Use their strong knowledge base to carry out specific and complex engineering tasks
- Analyse and modify new and existing engineering technologies and apply them in the testing and implementation of engineering projects
- Focus on interactions within engineering systems
- Identify and solve complex, specialised engineering problems by applying innovative practices and procedures.

**Core Units and Electives**

To graduate with a Bachelor of Engineering Science, you will be required to complete 24 units for a total of 240 credit points, as well as practical industrial experience. The key programs in the Bachelor of Engineering Science are Civil, Construction, Electrical, Mechanical, and Robotics and Mechatronics.

For more information on these Key Programs please see the descriptions starting on page 12.

The core common first year units may include: Mathematics for Engineers; Engineering Physics; Fundamentals of Mechanics; Engineering Computing; Electrical Fundamentals; Introduction to Engineering Practice; and Engineering Materials. You will have the opportunity to complete up to two electives, depending on the key program you select.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses
Bachelor of Computer Science

RECOMMENDED SEQUENCE

YEAR 1
- Statistical Decision Making
- Programming Fundamentals
- Principles of Professional Communication 1
- Discrete Mathematics
- Computer Organisation
- Object Oriented Programming
- Database Design and Development
- Computer Networking

YEAR 2
- Wireless and Mobile Networks
- Data Structures and Algorithms
- Technologies for Web Applications
- And one elective
- Mobile Applications Development
- Information Security
- Distributed Systems and Programming
- And one elective

YEAR 3
- Professional Development
- Systems Programming I
- And two electives
- Professional Experience
- Formal Software Engineering
- And two electives

Western Sydney University offers specialist Computer Science degrees to equip you with the skills you need to be career-ready. This is a three-year degree with distinct majors which allow you to specialise in different applications of computer science and computer systems.

PROFESSIONAL RECOGNITION

The Bachelor of Computer Science is currently accredited with the Australian Computer Society at Professional Level.

This will enable you, following graduation, to join the Society at full professional level. As a member of the Australian Computer Society, you are also eligible to join the Association of Computing Machinery (ACM), which is one of the world’s oldest and most prestigious professional bodies for the computing and information technology industry.

CORE UNITS AND ELECTIVES

To graduate with a Bachelor of Computer Science, you will be required to complete 24 units. Within this degree, you can choose one of the following majors:

NETWORKED SYSTEMS

Recent advances in computer and telecommunications networked systems have increased the importance of network technologies in the discipline of computer science. This major gives you a thorough technical understanding of modern networked computer systems, how they work and the principles that govern them.

Based on this solid foundation, you have the opportunity to learn the practical skills required to design, develop and integrate the networked computer systems needed by today’s large organisations.

This major covers a wide range of topics, including computer communication network concepts and protocols, multimedia systems, internet standards and technologies, network security, wireless and mobile computing, and distributed systems. Core and elective units for this major may include: Principles for Professional Communication; Computer Networking; Computer Networks and Internet; Network Security; Networked System Design; and Systems and Network Management.

SYSTEMS PROGRAMMING

If you want to develop advanced programming skills, this is the major for you. It will give you strong systems programming and systems administration skills, focusing on programming at the level of the underlying operating system.

This major emphasises the development of highly efficient and reliable code that can provide support services for higher-level application programs, as well as the development of programs suitable for systems administration and management. Practical work utilises C/C++ (the industry standard language for systems programming), as well as both the Unix and Windows environments.

Core and elective units for this major may include: Programming Fundamentals; Database Design and Development; Systems Programming; Internet Programming; and Distributed Systems and Programming.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

SYSTEMS SECURITY

The widespread use of computer systems means that systems security is an important issue and data protection is an essential part of today’s information systems.

This major provides graduates with sound skills in the discipline of information systems security. Our students gain broad foundational information security knowledge and security protocols from basic security algorithms to their applications in computer systems and networks. You also learn fundamental security concepts as well as the practical implementation of the security application programs.

CAREER OPPORTUNITIES

Career possibilities include work in:
- computer security
- systems programming
- systems administration
- network support and management
- network and systems security support
- real-time programming
- systems engineering
- distributed software development
- communications and distributed systems support
- research and development in computer science.

FURTHER STUDIES

An Honours year is available to our high-achieving students. Information and details on how to apply for Honours will be provided to you as you progress through your Bachelor degree, or you can find out more at westernsydney.edu.au/honours

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<td>Penrith</td>
<td>3 years</td>
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*Indicative 2016 tuition fee shown in Australian dollars
Bachelor of Computer Science (Advanced)

Any computer science degree can teach you general programming and technical systems skills, but few give you a competitive edge for your career. Our Computer Science (Advanced) program is an elite degree aimed at transforming today’s brightest computing minds into tomorrow’s computing leaders. Throughout the degree, you will be mentored and guided by leading computing academics and you will develop superior knowledge and confidence so you can maximise your career opportunities. The course is designed especially for people with a strong interest and aptitude for computer science who are seeking a career involving research and development at the cutting edge of technology. It is a challenging program that includes advanced coursework, extension activities and research training. A mentoring program links you with experienced academic staff and research groups within the University, allowing you to take part in the University’s research activities.

PROFESSIONAL RECOGNITION
The Bachelor of Computer Science is currently accredited with the Australian Computer Society at Professional Level. This will enable you, following graduation, to join the Society at full professional level. As a member of the Australian Computer Society, you are also eligible to join the Association of Computing Machinery (ACM), which is one of the world’s oldest and most prestigious professional bodies for the computing and information technology industry.

FURTHER STUDIES
An Honours year is available to our high-achieving students. Information and details on how to apply for Honours will be provided to you as you progress through your Bachelor degree, or you can find out more at westernsydney.edu.au/honours

CORE UNITS AND ELECTIVES
Major studies cover networked systems, systems programming and systems security. You will participate in industry and research-based extension activities. These activities have been designed with the goal of exposing students early in their degree and integrating them into a culture of academic enquiry, problem solving, knowledge generation and scholarship, and an awareness of the challenges and current issues confronting the industry. You can also choose electives from areas such as artificial intelligence, computer graphics, computer organisation and architecture, database design, distributed systems, information security, operating systems, and network management and security. For detailed information about the course structure and units, visit westernsydney.edu.au/courses

CAREER OPPORTUNITIES
Our Computer degree is highly practical and developed in close consultation with the industry. Depending on the units completed, you may be able to program real-time, fault-tolerant, mission-critical software systems and simulated environments, including gaming and entertainment software. You will graduate career-ready and look forward to opportunities in:

- computer security
- systems programming
- systems administration
- network support and management
- network and systems security support
- real-time programming
- systems engineering
- distributed software development
- communications and distributed systems support
- research and development in computer science.

Cameron Attard
BACHELOR OF COMPUTER SCIENCE (ADVANCED)

“Western Sydney University gives you plenty of opportunities to develop as a well-rounded professional. Talk to people who are studying or working in the fields you’re interested in to see if the areas are suitable for you. And ask lots of questions!”
Bachelor of Information Systems

Information Systems are becoming integral to modern culture and are a primary engine behind much of the world’s economic and social change. In essence, they represent the knowledge and skills that are required to be a part of the competitive business environment.

Today, to implement technology, practising professionals need to not only have knowledge and skills in information and communications technology, but they also need to understand the context in which computer technology can best be selected, applied and implemented.

Within this program you will learn how to plan, develop and integrate applications and information systems into a global business environment. Furthermore, within this course you will carry out a real-life project where you will need to demonstrate you can design and develop an information system solution that can solve a real community/business based problems.

PROFESSIONAL RECOGNITION
The Bachelor of Information Systems is accredited with the Australian Computer Society at Professional Level. This will enable you, following graduation, to join the Society at full professional level. As a member of the Australian Computer Society, you are also eligible to join the Association of Computing Machinery (ACM), which is one of the world’s oldest and most prestigious professional bodies for the computing and information technology industry.

CORE UNITS AND ELECTIVES
To graduate with a Bachelor of Information Systems, you are required to complete 24 units. The core units you may study within this degree include: Programming Fundamentals; Principles of Professional Communication; Systems Analysis and Design; Information Systems in Context; Computer Networking; Database Design and Development; Human Computer Interaction; Mobile Applications Development; Information Systems Deployment and Management; Technologies For Mobile Applications; Emerging Trends in Information Systems; Social Computing and Professional Development; Professional Experience and Statistics for Business.

You will have eight electives (out of 24 units) and you may broaden your studies based on your interests and ambitions by choosing units, sub-majors or a major from: Information and Communications; Computing; or other disciplines. There is a range of sub-majors or minor studies you may undertake in this degree. They are: Social Media Analytics; Mobile Applications Development and Mobile Computing; Systems Administration; Systems Security; Networking; Health Information Applications; Health Information Management; Entertainment Computing; Web Applications Development; Statistics and Mathematics.

Furthermore, you may also extend your studies by choosing, as elective subjects, sub-majors or a major from other disciplines such as health, science, business, marketing, management, accounting or design, as well as other specialised areas of computing and information technology (subject to timetabling constraints).

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

CAREER OPPORTUNITIES
As an Information Systems graduate, you can look forward to roles such as:
- business analyst
- information systems manager
- project manager
- mobile applications developer
- games developer
- network developer
- software quality analyst
- systems developer
- database administrator
- systems architect
- analyst programmer
- systems integrator
- web systems designer/developer.

With experience, you may become the Chief Information Officer (CIO) of an organisation.
Bachelor of Information Systems (Advanced)

The Bachelor of Information Systems (Advanced) is a three-year degree accredited by the Australian Computer Society.

The Bachelor of Information Systems (Advanced) focuses on computing and information technology in the context of business. In addition to the general content in the Bachelor of Information Systems, this course utilises advanced activities, extension projects, research training and hands-on work on real business projects.

During this program, you will have a mentor who will support and guide you throughout the degree. This course will also link you with experienced academic staff and industry partners who will provide you with continuous training and supervision. In addition, you will be invited to join research groups, which will allow you to take part in large research projects.

PRACTICAL EXPERIENCE

You will be required to undertake a real life project in your final semester of study, often for a local business or organisation.

PROFESSIONAL RECOGNITION

The Bachelor of Information Systems (Advanced) is accredited with the Australian Computer Society at Professional Level. This will enable you, following graduation, to join the Society at full professional level. As a member of the Australian Computer Society, you are also eligible to join the Association of Computing Machinery (ACM), which is one of the world’s oldest and most prestigious professional bodies for the computing and information technology industry.

To graduate with a Bachelor of Information Systems (Advanced) you must maintain a Grade Point Average (GPA) of above five. Those who do not will be transferred to the Bachelor of Information Systems.

Students who apply for the Bachelor of Information Systems (Advanced) but do not meet initial entry requirements may be offered a place in the Bachelor of Information Systems. Students who complete the first year of the Bachelor of Information Systems with a GPA above five may be invited to join the Advanced program.

CORE UNITS AND ELECTIVES

The majors in the Bachelor of Information Systems (Advanced) are: Mathematics; Mobile Computing; Networking; Health Informatics; and Entertainment Computing.

There is a range of sub-majors or minor studies you may undertake in this degree. They are Social Media Analytics; Mobile Applications Development and Mobile Computing; Systems Administration; Systems Security; Networking; Health Information Applications; Health Information Management; Entertainment Computing; Web Applications Development; and Statistics and Mathematics.

Furthermore, you may also extend your studies by choosing, as elective subjects, sub-majors or a major from other disciplines such as health, science, business, marketing, management, accounting or design, as well as other specialised areas of computing and information technology (subject to timetabling constraints).

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

CAREER OPPORTUNITIES

As a graduate of the Bachelor of Information Systems (Advanced) degree career opportunities may include:

- business analyst
- information systems manager
- project manager
- mobile applications developer
- games developer
- network developer
- software quality analyst
- systems developer
- database administrator
- systems architect
- analyst programmer
- systems integrator
- web systems designer/developer.

With experience, you may become the Chief Information Officer (CIO) of an organisation.
Bachelor of Information and Communications Technology

**RECOMMENDED SEQUENCE**

**YEAR 1**
- Programming Fundamentals
- Principles of Professional Communication
- Systems Analysis and Design
- Statistical Decision Making
- Computer Networking
- Programming Techniques
- Database Design and Development
- And one elective

**YEAR 2**
- Technologies for Web Applications
- Computer Networks and Internets
- Object Oriented Analysis
- And one elective
- Web Systems Development
- Social Web Analytics
- And two electives

**YEAR 3**
- Human-Computer Interaction
- Professional Development
- Operating Systems Programming
- And one elective
- Professional Experience
- And three electives

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**CORE UNITS AND ELECTIVES**

The Bachelor of Information and Communications Technology (ICT) is a professional three-year course that will provide you with solid skills and a knowledge base in ICT. As well as the ability to apply practical solutions across the ICT arena, it will also allow you to develop skills in systems analysis and design, application development, programming design, networks, web design and the implementation of technology.

As a graduate of the Bachelor of ICT, you will be able to:

- **Investigate** – draw on a solid technological and software core of ICT knowledge and practice to analyse and develop current applications
- **Integrate** – amalgamate knowledge and skills to develop new applications and new application areas
- **Innovate** – keep up-to-date with the rapid development in technology and practice across ICT, and find innovative solutions that move the field forward.

**ADVANCED STANDING**

TAFE graduates who have completed their qualifications may be granted exemptions/credits depending on their completed subjects and grades.

**PROFESSIONAL RECOGNITION**

The Australian Computer Society (ACS) recognises graduates of this course at the Professional Level. This will enable you, following graduation, to join the Society at full professional level. As a member of the Australian Computer Society, you are also eligible to join the Association of Computing Machinery (ACM), which is one of the world’s oldest and most prestigious professional bodies for the computing and information technology industry.

**CAREER OPPORTUNITIES**

As an ICT graduate, you can look forward to career opportunities, such as:

- network administrator or engineer
- systems architect
- systems integrator
- database administrator or programmer
- web analyst
- community/commercial web systems designer/developer
- software quality analyst
- business programmer
- software engineer analyst
- systems developer
- games developer
- information systems manager.

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**Tuition Fees**

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*Indicative 2016 tuition fee shown in Australian dollars
Bachelor of Information and Communications Technology (Advanced)

The Bachelor of Information and Communications Technology (Advanced) is a three-year course accredited by the Australian Computer Society. It provides a solid foundation in Networks; Databases; Systems Analysis and Design; Programming; Web Technologies; Project Management; Professional Communications and Operating Systems; and associated Computer Security.

The degree also covers the necessary mathematical and statistical skills as needed by an ICT practitioner. A mentoring program will link you with experienced academic staff and research groups within the University. You must maintain a grade-point average (GPA) of above five to remain in this program. Students falling below this threshold will be advised to transfer to the Bachelor of Information and Communications Technology.

Students who do not meet the entry standards of the Bachelor of Information and Communications Technology (Advanced) course but who are offered a place in the BICT may be invited to transfer to the Advanced program after first year if they achieve a GPA of five or above, subject to resource limitation.

By completing this degree you will understand how to:

- **Investigate** – the ability to draw on a solid technological and software core of Information and Communications Technology (ICT) knowledge and practice in analysing and developing applications
- **Integrate** – the ability to amalgamate the knowledge and skills in developing new applications and new application areas
- **Innovate** – the required skills and knowledge base to keep up-to-date with the rapid development in technology and practice across ICT, as an extension of current understandings and the ability to find innovative ICT solutions and move the ICT field forward.

**PROFESSIONAL RECOGNITION**

The Bachelor of Information and Communications Technology is accredited by the Australian Computer Society (ACS). This program allows you to develop skills in application development, program design, systems analysis and design, networks, web design, and the implementation of technology.

**MAJORS AND SUB-MAJORS**

The majors in the Bachelor of Information and Communications Technology (Advanced) degree are: Advanced Programming; Computational Decision Making; Computer Systems; Entertainment Computing; Health Informatics; Information Technology; Knowledge Discovery and Data Mining; Mathematics; Networking; Statistics; and Web Systems Development. For detailed information about the course structure and units, visit westernsydney.edu.au/courses

**CAREER OPPORTUNITIES**

As a graduate of the Bachelor of Information and Communications Technology (Advanced) degree you may find career opportunities as a:

- network administrator or engineer
- systems architect
- systems integrator
- database administrator or programmer
- web analyst
- community/commercial web systems designer/developer
- software quality analyst
- business programmer
- software engineer analyst
- systems developer
- games developer
- information systems manager.

Research and development opportunities also exist in many areas of advanced Information and Communications Technology.
Bachelor of Information and Communications Technology (Health Information Management)

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<td></td>
<td></td>
<td>Penrith</td>
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</tbody>
</table>

*Indicative 2016 tuition fee shown in Australian dollars

The increasing use of electronic health records requires the accurate and efficient capture, maintenance, security and reporting of health information. The Bachelor of Information Communications Technology (Health Information Management) course will provide you with the knowledge and skills required to build software systems and undertake roles relating to the classification, coding and management of health information within a healthcare setting. The course also offers direct industry experience via a 20 day work placement.

**CORE UNITS AND ELECTIVES**

Qualification for this award requires the successful completion of 240 credit points.


**ADVANCED STANDING**

Recognition of prior learning may be considered for applicants with Certificate III or Certificate IV in conjunction with relevant industry experience.

**CAREER OPPORTUNITIES**

This course offers you the opportunity to seek employment in health information management and/or clinical coding, recognised as workforce skills shortage areas.

Examples include:

- database administrator or programmer,
- health information manager
- medical records manager, network administrator or engineer
- software engineer analyst
- software quality analyst
- system architect, systems developer,
- web systems designer/developer
- researcher.
Bachelor of Industrial Design

**RECOMMENDED SEQUENCE**

**YEAR 1**
- Introduction to Industrial Design Methods
- Design Science
- Design Studio 1: Patterns and Products
- Graphics 1: 2D and 3D Industrial Design
- Communication
- Design Studio 2: Form and Production
- Graphics 2: Visual Simulation
- Sustainable Design 1: Materials and Technology
- Mathematics for Industrial Design

**YEAR 2**
- Design Studio 3: Design, Process and Function
- Graphics 3: 3D Engineering Specifications and Visualisation
- Human-Computer Interaction
- And one Major/Submajor Alternate unit or Elective
- Design Studio 4: Innovation through Systems Thinking
- Sustainable Design 2: Product Service Systems
- Design Management 2: Operation and Supply Chain
- And one Major/Submajor Alternate unit or Elective

**YEAR 3**
- Design Studio 5: Symbol and Meaning Making
- Design Management 3: Organisational Skills for Designers
- And two Major/Submajor Alternate units or Electives
- Design Studio 6: Ambience, Place and Behaviour
- Contextual Inquiry
- And two Major/Submajor Alternate units or Electives
- Industrial Experience

**YEAR 4**
- Major Project Commencement
- And two Alternate units - selected based on final year theme/issue
- Major Project Completion
- And one Alternate unit - selected based on final year theme/issue

Industrial design is a vital part of modern-day living. Every day of our lives, we encounter products designed and manufactured with the intention of making our lives easier. It is industrial designers, incorporating a lateral and cross-disciplinary approach to problem solving, who create the most useful products.

The primary focus of our Industrial Design program is ensuring that our graduates are completely industry-ready, able to think strategically and provide innovative design solutions in a commercial context. The course promotes an awareness of the place of design in society and its effect on people, the environment and the economy, and provides students with the ability to work independently or collaboratively.

Students unlikely to obtain entry to this course on the basis of academic qualifications can be considered for alternative entry by attending an interview. Details on the format of the interview are available on the automated audition and interview booking system at westernsydney.edu.au/admissions

**PRACTICAL EXPERIENCE**
You will be required to undertake 10 weeks of industry placement, which encourages professional development and often leads to projects for the final year of the program and, in some instances, direct employment upon graduation.

**PROFESSIONAL RECOGNITION**
Our graduates are eligible for professional membership of the Design Institute of Australia - the professional body representing designers in Australia.

You can also choose electives in areas such as design management, industrial graphics, sustainable design or other units from courses offered by the University.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

**FURTHER STUDIES**
An Honours year is available to high-achieving students. Information and details on how to apply for Honours will be provided to you as you progress through your Bachelor degree, or you can find out more at westernsydney.edu.au/honours

If you are interested in becoming a secondary teacher, you can apply to study the Master of Teaching (Secondary) on completion of the Bachelor of Industrial Design degree.

**CAREER OPPORTUNITIES**
As a graduate of the Industrial Design program, career opportunities may include in-house or consultant industrial designer in areas such as:
- product management
- environmental planning
- systems design
- exhibition design and marketing management.

Work includes the development of new products and systems, as well as the updating and improvement of existing products and systems.

**CORE UNITS AND ELECTIVES**
To graduate with a Bachelor of Industrial Design, you will be required to complete 24 units, as well as a major project. The final year of the degree is dedicated to the management of the major design project. The year-long design project culminates in WideVision, a unique exhibition and showcase of students’ projects and skills.

Major studies cover innovation design management, interactive industrial graphics and international design management.

The core units you may study in this degree include: Engineering, Design and Construction Practice; Design Science; Industrial Graphics 3: 3D Solids; Applied Ergonomics; Marketing Principles; Design Studio 2; Design Studio 3; The Design Proposal; Product Realisation; Sustainable Design: Materials Technology; and Design Management: Organisational Skills for Designers.

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CODE</th>
<th>CRICOS</th>
<th>INTAKE</th>
<th>LOCATION</th>
<th>DURATION</th>
<th>FEES*</th>
</tr>
</thead>
<tbody>
<tr>
<td>B Industrial Design</td>
<td>3730</td>
<td>TBA</td>
<td>February/July</td>
<td>Penrith</td>
<td>4 years</td>
<td>$27,680</td>
</tr>
</tbody>
</table>

*Indicative 2016 tuition fee shown in Australian dollars
Bachelor of Building Design Management

Building Design Management involves the synthesis of technical knowledge with an understanding of building occupant needs, site context and aesthetics. This new degree enables you to develop expertise in designing integrated, practical, spatial, technical and environmentally sustainable building projects.

The Bachelor of Building Design Management course provides you with the knowledge and skills required to undertake lead roles in the 'Design and Construct' stream of building procurement, as well as, becoming team members in the design of large and complex building development projects.

Our construction graduates are known within the industry to be highly motivated and commercially adept. With the additional skill set in building design, they will be well placed to lead adaptive and more sustainable construction project solutions.

PRACTICAL EXPERIENCE

You will be required to undertake 1200 hours of industry related employment prior to graduation.

CORE UNITS AND ELECTIVES

This four year degree is made up of 18 Construction Management units; a specialist law unit; a business unit; four Building Design units; plus two Building Design Project units in the final year.

The program also contains four electives.


You can also choose electives in areas such as material science in construction, building regulation studies, construction planning, and building law.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

CAREER OPPORTUNITIES

As a graduate of the Building Design Management program, career opportunities may exist in design teams for building and construction companies, architecture (with further study), building design or design management.
Bachelor of Design and Technology

Our Design and Technology degree delivers a sound knowledge of design from both a theoretical and a practical standpoint. This can lead to multiple career outcomes, including product design, packaging, rapid prototyping, 3D modelling, exhibition design and secondary school teaching, with additional qualifications.

The course provides you with a comprehensive knowledge of all design areas, but also offers the flexibility to specialise. It combines the University’s own state-of-the-art technologies and processes with an extensive network of external industry-based resources.

Students unlikely to obtain entry to this course on the basis of academic qualifications can be considered for alternative entry by attending an interview. Details on the format of the interview are available on the automated audition and interview booking system at westernsydney.edu.au/admissions

PRACTICAL EXPERIENCE

Throughout the course, you will have the opportunity to participate in practical work experience projects and to network within the industry. During or at the end of your third year of study, the practical component of the course culminates in a 10-week session of industry experience, giving you priceless real-life experience in developing new products within a company or organisational environment.

PROFESSIONAL RECOGNITION

Our graduates are eligible for membership of the Design Institute of Australia (DIA).

CORE UNITS AND ELECTIVES

To graduate with a Bachelor of Design and Technology, you are required to complete 24 units, as well as practical industry experience. You are required to complete a sub-major and this can be in the areas of design management, industrial graphics or sustainable design.

The core units you may study in this degree include: Engineering, Design and Construction Practice; Engineering and Design Concepts; Design Science; Applied Ergonomics; Sustainable Design: Materials Technology; Marketing Principles; Sustainable Design: Life Cycle Analysis; Industrial Graphics 3: 3D Solids; Design Management: Organisational Skills for Designers; Designed Inquiry; and Approved Industrial Experience.

FURTHER STUDIES

If you are interested in becoming an industrial designer, you are able to apply to transfer to the Bachelor of Industrial Design and complete a fourth year of study. Alternatively, if you are interested in becoming a secondary teacher, you can apply to study the Master of Teaching (Secondary) on completion of the Bachelor of Design and Technology degree. Please refer to the Teaching and Education Area of Study brochure for further details.

CAREER OPPORTUNITIES

As a graduate of our Design and Technology program, you will enjoy a range of career options. Graduates typically work in creating and producing designs for consumer, medical and industrial products, and in making models and prototypes of these designs for mass or specialist production.
Bachelor of Construction Management

With a Bachelor of Construction Management degree, you will be in a position to direct the delivery process for quality building projects.

The program encourages work experience while studying in order to achieve a mix of theoretical, practical and hands-on knowledge, which is greatly valued in the construction industry.

In addition to receiving high-calibre academic guidance, your study will include practical experiments in building technology, including acoustics, heat flow through a building, corrosion of materials, concrete testing, and much more.

**PRACTICAL EXPERIENCE**
You will be required to undertake a total of 1,200 hours of approved practical experience during the course. There are a number of opportunities during the course for obtaining a cadetship in the building industry in areas including building surveying, construction economics and construction management.

**CORE UNITS AND ELECTIVES**
To graduate with a Bachelor of Construction Management, you are required to complete 32 units, as well as practical industry experience. Major studies cover construction technology, management, law and economics.

The core units you may study in the first year of the Bachelor of Construction Management are Building 1 and 2; Graphic Communication and Design; Engineering, Design and Construction; Design Science; Introduction to Business Law; Accounting Information for Managers; and Management Foundations.

There are four electives and you may consider units from other courses offered by the University. You may like to complete units that relate to construction economics, for example: Construction Information Systems; Quality and Value Management; Estimating or Quantity Surveying.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

**FURTHER STUDIES**
This course has an embedded Honours stream available to high-achieving students. Information about the embedded Honours option will be provided to you as you progress through your Bachelor degree.

**CAREER OPPORTUNITIES**
As a Western Sydney University Construction Management graduate, you can look forward to career opportunities such as:
- site manager
- building surveyor
- estimator
- facilities manager
- building economist or consultant
- design and construction manager
- project manager.

**ADVANCED STANDING**
Applicants who have completed TAFE Diplomas in Building, Quantity Surveying, Architectural Technology or Engineering may be eligible for academic credit. Other relevant TAFE qualifications will be considered on merit. Students who are employed in the industry on a part-time basis may negotiate a reduced study load per annum.

Nicholas Dennis
BACHELOR OF CONSTRUCTION MANAGEMENT

“Work hard to achieve your goals at University. Make yourself proud and be happy with what you do. Western Sydney University will give you all the support you need.”
Closely related to the Bachelor of Construction Management, the Bachelor of Construction Technology degree is suitable for those who are interested in delivering quality residential building projects. There is a strong emphasis on housing construction and the legal and economic context of the housing market.

The course emphasises applied and practical knowledge of the building sciences that are relevant to residential construction. These include: acoustics, heat flow through a building, corrosion of materials, concrete testing, and much more.

PRACTICAL EXPERIENCE
Our lecturers and tutors will actively encourage you to independently gain work experience during your studies in order to enhance practical skills and future employment prospects.

ADVANCED STANDING
Applicants who have completed TAFE Diplomas in Building, Quantity Surveying, Architectural Technology or Engineering may be eligible for academic credit. Other relevant TAFE qualifications will be considered on merit.

CORE UNITS AND ELECTIVES
To graduate with a Bachelor of Construction Technology, you are required to complete 24 units. Major studies cover housing construction, housing design, property development and investment, project management and urban planning.

The core units you may study in this degree include: Graphic Communications and Design; Introduction to Business Law; Engineering, Design and Construction Practice; Design Science; Construction Technology (Civil and Substructure); Quantity Surveying; Material Science in Construction; Estimating; Development Control; and Project Management.

You will complete three electives and you may consider units from other courses offered by the University. You may choose units that relate to building, which includes; Construction Information Systems; Construction Technology 3 (Concrete Construction); Quality and Value Management; Quantity Surveying; and Construction Technology 4 (Steel Construction).

For detailed information about the course structure and units, visit westernsydney.edu.au/courses.

CAREER OPPORTUNITIES
The current shortage of building industry professionals means that graduates of the Construction Technology program can choose from a wide variety of careers, including:

→ property developer
→ housing project manager
→ site supervisor
→ estimator.
Bachelor of Data Science

The University will offer a Bachelor of Data Science in 2016. The Bachelor of Data Science is not a stand-alone degree, but is designed to be undertaken in combination with any bachelor degree.

Digital data plays an increasingly important role in many areas of endeavour. Extracting information from data has become a science in itself – Data Science. Graduates from many disciplines, will benefit from skills in Data Science.

The course teaches a blend of skills, including mathematics, statistics and computing.

To graduate with a Bachelor of Data Science you are required to complete 240 credit points. The units you will study include: Introduction to Data Science; Thinking About Data; Analytics Programming; Predictive Modelling; Visual Analytics; Applications of Big Data; Social Web Analytics; Discovery Project; as well as 160 credit points of Advanced Standing. At least 80 credit points must be completed while enrolled in the Bachelor of Data Science.

Our graduates will know how to embark on data driven investigations, and conduct visual and computational analytics for application in their own primary research.

For more details, visit westernsydney.edu.au/courses

#This course is designed to be undertaken in combination with another bachelor degree, the total length of study will be either four years or five years depending on the duration of the undergraduate degree.

Students may be required to travel between campuses in order to complete study for the relevant bachelor degree.
Double Degrees

Your study options at Western Sydney University are increasing. Now you can tailor your studies to your specific goals by combining more degrees. Apart from Data Science (see page 26) your combined degree options include Computer Science: Construction Management; Engineering; and Information and Communications Technology.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

For more information, please call the Western Course Information Centre on +61 2 9852 5499 or email internationalstudy@westernsydney.edu.au

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CODE</th>
<th>CRICOS</th>
<th>INTAKE</th>
<th>LOCATION</th>
<th>DURATION</th>
<th>FEES*</th>
</tr>
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<tbody>
<tr>
<td>B Construction Management Studies/ B Laws</td>
<td>2769</td>
<td>084734M</td>
<td>February/July</td>
<td>Campbelltown</td>
<td>5 years</td>
<td>$25,080</td>
</tr>
<tr>
<td>B Information and Communications Technology/B Arts</td>
<td>3654</td>
<td>068787J</td>
<td>February</td>
<td>Parramatta</td>
<td>4 years</td>
<td>$25,880</td>
</tr>
<tr>
<td>B Information and Communications Technology/B Business</td>
<td>3737</td>
<td>089213G</td>
<td>February/July</td>
<td>Bankstown</td>
<td>4 years</td>
<td>$25,880</td>
</tr>
<tr>
<td>B Information and Communications Technology/B Business (Accounting)</td>
<td>3738</td>
<td>089214F</td>
<td>February/July</td>
<td>Campbelltown</td>
<td>4 years</td>
<td>$25,880</td>
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<tr>
<td>B Information and Communications Technology/B Laws</td>
<td>2768</td>
<td>084731C</td>
<td>February/July</td>
<td>Campbelltown</td>
<td>5 years</td>
<td>$25,080</td>
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<tr>
<td>B Information and Communications Technology/B Arts</td>
<td>3737</td>
<td>089213G</td>
<td>February/July</td>
<td>Parramatta</td>
<td>4 years</td>
<td>$25,880</td>
</tr>
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*Indicative 2016 tuition fee shown in Australian dollars
FEES AND COSTS

International students are required to have genuine access to sufficient funds while studying in Australia. Funds should be sufficient to contribute to the cost of tuition, travel, living costs and school costs of any dependants.

For more information visit westernsydney.edu.au/international/fees

EXPENSES PER TYPE

<table>
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<tr>
<th>PER PERSON</th>
<th>AMOUNT REQUIRED IN AUD</th>
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<tr>
<td>Travel</td>
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<tr>
<td>Applicant</td>
<td>Return airfare to Australia</td>
</tr>
<tr>
<td>Family members</td>
<td>One return airfare to Australia per person</td>
</tr>
<tr>
<td>Tuition</td>
<td></td>
</tr>
<tr>
<td>Applicant</td>
<td>Course fees - refer to the courses in this guide</td>
</tr>
<tr>
<td>School-age children aged 5-18</td>
<td>Refer to internationalschool.edu.au/trp</td>
</tr>
<tr>
<td>Living</td>
<td></td>
</tr>
<tr>
<td>Applicant</td>
<td>AU $25,000 per year</td>
</tr>
<tr>
<td>Partner</td>
<td>AU $6,515 per year</td>
</tr>
<tr>
<td>First child</td>
<td>AU $3,720 per year</td>
</tr>
<tr>
<td>Second child</td>
<td>AU $2,790 per year</td>
</tr>
</tbody>
</table>

APPLICANT CHECKLIST

1. FIND OUT ABOUT OUR COURSES
   ➤ Read the information within this Guide
   ➤ Talk with education agents, your parents and teachers/mentors
   ➤ Refer to the Future Students site, visit westernsydney.edu.au/future_students
   ➤ Check the entry requirements for courses, visit westernsydney.edu.au/international/apply

2. TALK TO US
   ➤ Talk to an education agent, visit westernsydney.edu.au/international/find_an_agent
   ➤ Meet a Western Sydney University adviser in your home country, visit westernsydney.edu.au/meet_us
   ➤ Call the Course Information Centre on +61 2 9852 5499 or email internationalstudy@westernsydney.edu.au

3. APPLY TO US
   ➤ Apply via an education agent or direct to the university, visit westernsydney.edu.au/international/apply
   ➤ If you are an international student completing one of the following qualification in 2016, you must apply through UAC International:
     ➤ an Australian Year 12 in or outside Australia
     ➤ an International Baccalaureate
     ➤ a New Zealand National Certificate of Educational Achievement (NCEA) Level 3
   Visit uac.edu.au/international
PROVIDING OPPORTUNITIES THROUGH SCHOLARSHIPS

We believe in a world of unlimited opportunity for those with talent, drive, confidence and ambition.

At Western Sydney University, high-achieving international students have access to the Vice-Chancellor’s Academic Excellence Undergraduate Scholarship.

Vice-Chancellor’s Academic Excellence Undergraduate Scholarship

- Will cover 50% of the cost of the annual tuition fee for a maximum three years.
- Applies to any undergraduate degree (except B Surgery, B Medicine).
- You must achieve a minimum ATAR of 90 or equivalent in higher secondary studies.
- You must provide a statement in support of your application indicating how you believe the scholarship will assist you with your studies and future career.

For more details on our scholarships, including the eligibility criteria and how to apply, refer to westernsydney.edu.au/internationalscholarships.

FURTHER INFORMATION

For more information about studying at Western Sydney University, including course information, English language requirements, intakes, tuition fees, assessment methods, accommodation options, financial obligations and living in Australia, please visit westernsydney.edu.au/international

If you have any questions about studying as an international student at Western Sydney University, call +61 2 9852 5499 or email internationalstudy@westernsydney.edu.au

IMPORTANT DATES

2016

February
12th
International Orientation Day
22nd
Autumn Session starts

July
8th
International Orientation Day
18th
Spring Session starts

GET CONNECTED

Future students
westernsydney.edu.au/future_students

Facebook
facebook.com/westernsydneyuinternational
facebook.com/westernsydneyu

Twitter
twitter.com/westernsydneyu

Instagram
#westernsydneyu

Call
+61 2 9852 5499

Email
internationalstudy@westernsydney.edu.au

Weibo
西悉尼大学

Wechat
UWS_China