Bachelor of Engineering (Computer and Network Engineering)(Honours)

Computer and network engineering are taught together so you learn the fundamental ideas related to both fields. You can choose to specialise in either area to ensure that you graduate work ready.

Computer and network engineers specialise in design, implementation, integration and application of programmable and/or reconfigurable computers/devices or computer-based systems.

They also look into their communications or interworking in networked environments and provide ongoing support as technology is updated.

Applying knowledge and skills in the field, computer and network engineers can find better solutions to engineering challenges in design, construction and maintenance of software and hardware components of computing and computer-controlled devices, equipment and systems including those used in:

- communication networks and automation of electrical and electronic systems
- audio and visual information acquisition, processing and communications
- human-machine interaction, industrial or medical instrumentation and monitoring
- provision of security for computer systems and networks.

As a computer engineer you’ll create new opportunities for businesses by driving new technologies, and devise engineering solutions to make businesses more productive and competitive. You’ll assist businesses to design and develop new computer, microprocessor or microcontroller-based products and systems, or embedded computer systems to enhance functionalities of an existing communication, instrument, audiovisual, or automatic control product or system to meet ever-changing market needs and consumer demands.

Network engineers design, implement and maintain the digital communication networks that surround us. In this program, network engineering looks at technology, audio and visual communications over wired and wireless networks, optimising network performance and network security.

At RMIT, your work will be largely laboratory-based, where you’ll conduct experiments and design your own projects.

Industry connections

In the final year of your studies you’ll undertake a major project that is either industry-based or simulates an industrial situation. You’ll work with industry leaders using the theory and practical experience gained through the program to solve a problem.

In order to graduate from this program you must complete a minimum 12 weeks of engineering industry experience that allows you to gain first-hand experience in an engineering practice environment under the supervision of a practising professional engineer. The nature and timing of this engineering experience can take a range of forms.

Opportunities exist for an overseas work placement of between six and 12 months (this satisfies the work experience requirement). These placements are normally taken during a one-year break in the middle or at the end of the third year of the degree.

Career outlook

As a graduate you can work in industry and business to design and build computer and communication networks. You may also be sought after by universities and research organisations to improve computer technologies. Job opportunities exist with governments to improve defence, security and emergency services.

Telecommunication operators such as Telstra and Optus employ network engineers as do equipment manufacturers such as Cisco and Huawei and the IT departments of many organisations.

You’ll also have the skills to run your own computer or network services business.

Professional recognition

This program is fully accredited by Engineers Australia. Graduates of the program are eligible for graduate membership of Engineers Australia. Full membership as a professional engineer may be obtained after an appropriate period of professional practice.

Australia is one of 15 countries that are signatories to the International Engineering Alliance, also known as the Washington Accord, for professional engineers. The qualification of graduates from this degree is recognised in all countries that are signatories to the Accord.
This information is designed for Australian and New Zealand citizens and permanent residents of Australia.

Disclaimer: Every effort has been made to ensure the information contained in this publication is accurate and current at the date of printing. For the most up-to-date information, please refer to the RMIT University website before lodging your application. Visit www.rmit.edu.au.


Program structure

Years 1 and 2
The first two years of the program will introduce you to the basic principles of computer and network engineering. You’ll also study mathematics and physics – critical disciplines for engineers.

Through project work, you’ll gain teamwork, communication and leadership skills and learn how to be an effective leader.

Years 3 and 4
You’ll delve deeper into your specialist area. There are five compulsory courses plus electives from computer and/or network engineering.

By completing individual and team-based projects that mirror the work of practising engineers, you’ll graduate industry-ready.

Program elective examples
– Advanced Digital Design 2
– Network Access Systems
– Wireless Sensor Networks

International opportunities
RMIT encourages you to aspire to a global career, not just a local one.

Through partner organisations in Europe, Asia and the United States, the RMIT International Industry Experience and Research Program (RIIERP) offers workplace training and academic research placements of between six and 12 months.

There are also opportunities to study abroad through Education Abroad.

Entrance requirements
Successful completion of an Australian Year 12 senior secondary certificate of education or equivalent.

Prerequisites
Current Year 12 prerequisites units 3 and 4 – a study score of at least 20 in one of Mathematical Methods (CAS) or Specialist Mathematics; and a study score of at least 25 in any English (except EAL) or at least 30 in English (EAL).

Additional information
Non-Year 12 applicants may submit additional information if they would like it to be considered. For semester 1 intake, this can be completed through the VTAC Personal Statement online. For semester 2 intake, this can be completed through the personal statement in the Apply Direct application.

Pathways
Graduates of the RMIT Associate Degree in Engineering Technology with a major in electrical and electronics engineering or a major in computer and network engineering who achieve a grade point average (GPA) of at least 2.0 out of 4.0 are guaranteed entry with two years credit (equivalent to 192 credit points).

Please note that you will need to complete some courses that are only offered in first semester. While the total number of credits in advanced standing equates to 144 credits points (equivalent to 1.5 years of study), the amount of time required to complete the remaining study may exceed 2.5 years.

Graduates with a GPA of less than 2.0 can still apply and may be eligible for credit.

Graduates of the RMIT Advanced Diploma of Computer Systems Engineering who achieve a GPA of at least 3.0 out of 4.0 may be eligible for 1.5 years of credit (equivalent of 144 credit points) if successful in gaining a place.

Please note that you will need to complete some courses that are only offered in first semester. Whilst the total number of credits in advanced standing equates to 144 credits points (equivalent to 1.5 years of study), the amount of time required to complete the remaining study may exceed 2.5 years.

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