UNSW Engineering

Bachelor of Engineering (Honours) (Computer Engineering)

What do computer engineers do?

Computer engineering is the study of hardware and software components for the integrated design of computerised systems. It incorporates the theory of electrical engineering with the methods of computer science. This degree covers the theory, design, development and application of computer systems for any purpose, including consumer electronics, transportation systems, medical equipment and telecommunications.

What will your study involve?

Computer engineering combines both hardware and software design to create general or special-purpose systems. These range from mobile phones to game design to aircraft flight control systems and everything in between. You'll study maths and physics as well as core computing, digital design and electronics courses. You also have the choice to study electives in areas like networks, operating systems, embedded systems, telecommunications, and artificial intelligence.

UNSW Computer Science and Engineering

- UNSW Engineering is ranked #1 in Australia for Engineering and Technology, our school of Computer Science and Engineering is ranked #4 in Australia by QS Rankings 2025.
- UNSW Computer Science and Engineering is one of the largest schools of its kind in Australia which provides the most technically challenging computing degrees in the country.
- UNSW Computer Science and Engineering is home to five-time world robot soccer champions, the UNSW 'rUNSWift' team.

Program details

Lowest Selection Rank (2025): 92.00
Duration: Four-year embedded honours degree

Study areas: Advanced Computing, Digital Design, Electronics, Embedded Systems, Systems and Control, Telecommunications

Assumed knowledge: Mathematics Extension 1, Physics

Portfolio Entry: UNSW offers the Faculty of Engineering Admission Scheme (FEAS) which is a pathway for students interested in studying undergraduate engineering to support their academic results, find out more at **unsw.to/feas**

Accreditation

Your Bachelor of Engineering (Honours) degree is recognised globally, is accredited with Engineers Australia, and is also acknowledged by the Washington Accord, which lets you work in over 20 countries across the globe upon graduation.

This degree is also accredited by the Australian Computer Society.

Career options

Graduates can work in fields as diverse as agricultural technology, embedded systems, very large-scale integration (VLSI) design, and the banking and finance sectors. Jobs are available in computer systems design, data analysis, consulting, development, digital services, health, logistics, research, software engineering, computer security and many other fields.

Student Testimonials

"I'm fascinated by the creative potential in Computer Engineering and this degree has provided the right balance of electrical and software subjects to mix my creative and analytical skills rewardingly. I was particularly inspired by the sheer power of the computers available in the iCinema Centre."

Ojasvi Chavali, Computer Engineering (Honours)

Example Study Plan

	Year 1
Term 1	**MATH1081** Discrete Mathematics
	DESN1000 Engineering Design and Innovation
Term 2	**COMP1511** Programming Fundamentals
	PHYS1121 Physics 1A OR **PHYS1131** Higher Physics 1A
	MATH1131 Mathematics 1A
Term 3	**MATH1231** Mathematics 1B
	ELEC1111 Electrical Circuit Fundamentals
	PHYS1221 Physics 1B OR **PHYS1231** Higher Physics 1B

	Year 2
Term 1	**COMP1521** Computer Systems Fundamentals
	COMP1531 Software Engineering Fundamentals
	ELEC2134 Circuits and Signals
Term 2	**DESN2000** Engineering Design & Professional Practice
	MATH2099 Mathematics 2B
	ELEC2133 Analogue Electronics
Term 3	**COMP2521** Data Structures and Algorithms
	Free Elective Course

	Year 3
Term 1	**COMP2511** Object-Oriented Design & Programming
	COMP3222 Digital Circuits and Systems
	Discipline Elective Course
Term 2	**COMP3211** Computer Architecture
	Discipline Elective Course
	Free Elective Course
Term 3	**COMP3601** Design Project A
	COMP3231 Operating Systems

	Year 4
Term 1	**COMP4951** Research Thesis A (4 UoC)
	General Education Course
	Level 4 or Higher Discipline Elective Course
Term 2	**COMP4952** Research Thesis B (4 UoC)
	COMP4601 Design Project B
	General Education Course
Term 3	**COMP4953** Research Thesis C (4 UoC)
	Level 4 or Higher Discipline Elective Course
	COMP4920 Professional Issues and Ethics in Information Technology

NOTES

You'll be required to complete 60 days of Industrial Training throughout your degree.

This degree example is indicative only and subject to change at any time without prior notice.
For the latest degree information visit the relevant UNSW Handbook page at www.handbook.unsw.edu.au.

UNSW's new 'flex-semester' calendar is scheduled to start in 2028.
For more information see https://www.unsw.edu.au/academic-calendar-project.

Visit the Degree Finder page here!