



UNSW Engineering

# Bachelor of Engineering (Honours) (Telecommunications)

## What do telecommunications engineers do?

Telecommunications is the design, development, testing and maintenance of all aspects of voice and data communications systems. These range from satellite and optical fibre networks to data encoding, compression and encryption. Telecommunications is an area of specialisation within the field of Electrical Engineering.

## What will your study involve?

As telecommunications technology rapidly advances and broadens its scope, the demand for highly skilled graduates increases. Our degree gives students the ultimate skill set for the technology-based world and includes significant hands-on time working on designs and in the laboratory. The result is well-rounded, analytical thinkers who are sought-after graduates.

## UNSW Electrical Engineering and Telecommunications

- We are ranked #1 in Australia and 36th globally for Electrical Engineering in the 2024 QS World University Rankings.
- We educate the next generation of innovative engineers with the skills and knowledge to make a positive impact on industry and the community.
- Our strong industry links provide opportunities for industry partnerships and professional development.
- Our facilities are globally renowned for developing industry standard practical experience.

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## Program details

**Lowest Selection Rank (2024):** 90

**Duration:** Four-year embedded honours degree

**Study areas:** Data Communications Systems, Data Encoding, Compression and Encryption, Satellite and Optical Fibre Networks, Voice Communication Systems

**Assumed knowledge:** HSC level 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.edu.au/feas](https://unsw.edu.au/feas)

## Accreditation

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

## Career options

The telecommunications field is developing rapidly, with growing demand for graduates as technology advances. You can work for telecommunications service providers such as iiNet or Skype, and major equipment and device manufacturers such as Cisco, Apple or Huawei. Some graduates have gone on to start or join exciting start-ups.

## Student Testimonials

"As we come up with new ways to connect with each other and the world around us in this rapidly developing industry, we need telecommunications engineers to build and maintain the networks of the future. I hope to work on the cutting edge of networking technology and to improve internet access for everyone."

**Adeline Yeung, Telecommunications (Honours)**



### Example study plan

	TERM 1			TERM 2			TERM 3		
YEAR 1	Electrical Circuit Fundamentals	Introduction to Engineering Design and Innovation	Mathematics 1A	Programming Fundamentals	Mathematics 1B	Higher Physics 1A	Computer Systems Fundamentals	Higher Physics 1B	Mathematics 2A
YEAR 2	Circuits and Signals	Digital Circuit Design	General Education	Analogue Electronics	Engineering Design and Professional Practice	Mathematics 2B	General Education	Digital Signal Processing	Network Technologies
YEAR 3	Electronics	Electromagnetic Engineering	Analogue and Digital Comms	Electrical Engineering Design	Control Systems	Elective	Industrial Training		
YEAR 4	Strategic Leadership & Ethics	Elective	Thesis A	Elective	Elective	Thesis B	Electrical Design Proficiency	Trusted Networks	Thesis C

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

This is a sample degree outline only and may be subject to change. Please refer to the UNSW Handbook for further information and relevant course codes.