



UNSW Engineering

Bachelor of Cyber Security (Sydney)

What do cyber security professionals do?

Cyber Security professionals protect people and businesses against cybercrime. Cybercrime is rising rapidly around the world, with hundreds of millions of dollars being lost as a result every year. Forty-seven percent of Australian computer users respondents experienced at least one cybercrime in 2023, according to the Australian Institute of Criminology, with nearly half of all victims experiencing more than one type of cybercrime.

Cyber Security professionals analyse security failures and as a result continually design secure systems, networks and data platforms to safeguard us against cyber threats.

What will your study involve?

Gain skills in designing secure systems, networks and data platforms using industry-standard technologies. Discover how human behaviour affects security and learn to analyse security failures. Plus, you'll learn about the ethical and legal aspects of cyber security, including data privacy laws.

This degree includes both applied and theoretical elements, teaching students from both an attack and defense perspective with an Engineering mindset and approach to security. With a Bachelor of Cyber Security from UNSW Sydney, you'll be equipped with the skills to meet the growing demand for cyber security professionals and be prepared for a career in this exciting and ever-evolving field.

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 2024.
- Our teaching is informed by the latest research and emerging cyber security technologies. [UNSW Institute for Cyber Security \(IFCYBER\)](#) brings together over 100 leading academics and is renowned for its multi-disciplinary approach to cyber security and collaboration with government and industry.
- For more than 20 years, CSE has built a national reputation for excellence in cyber security education. Our alumni hold senior and leadership roles in the cyber industry, and our undergraduate students have won every major inter-university cyber competition in the past decade.

Program details

Duration: 3-year degree

Study areas: Foundational Cyber Security Principles, Programming, System Architecture, Human Factors, Ethical Issues, Data Structures & Algorithms

Assumed knowledge: Mathematics Extension 1

Portfolio Entry: Faculty of Engineering Admission Scheme (FEAS), as an alternative pathway for students who want to study at UNSW but don't meet the required selection rank, find out more at unsw.to/feas

Accreditation

Accreditation by the Australian Computer Society will be sought for this new degree

Career options

There is an increasing need for experts in cyber defence across corporate organisations, primary industries, Government agencies and departments, and critical infrastructure to counter the rising number of cyber-attacks.

"Studying cyber security is not just about learning to defend against attacks; it's about understanding the mindset of attackers and staying one step ahead. It's a field that requires constant learning and adaptation, making it both challenging and incredibly rewarding."

Professor Richard Buckland
Professor of Cybercrime, UNSW School of Computer Science and Engineering



Example study plan

	TERM 1			TERM 2			TERM 3		
YEAR 1	Programming Fundamentals	Foundations of Cyber Security	General Education	Computer Systems Fundamentals	Elective		Cyber Security Workshop 1 – Penetration Testing	Data Structures & Algorithms	Elective
YEAR 2	Human Centric Security	Algorithm Design & Analysis*	General Education	Cyber Elective	Elective		Cyber Security Workshop 2 – Defence	Discrete Mathematics	Cyber Elective
YEAR 3	Elective	Cyber Elective	Professional Issues & Ethics in Information Technology	Cyber Elective	Cyber Elective	Elective	Cyber Security Workshop 3 – Capstone	Elective	

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.

* One of the following options can be taken at this time: Algorithm Design & Analysis or Extended Algorithm Design & Analysis or Web Application Security & Testing or Extended Web Application Security & Testing or Psychology 1A or Psychology 1B