

### **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 user 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 2025.
- Our teaching is informed by the latest research and emerging cyber security technologies. <u>UNSW Institute for Cyber Security (IFCYBER)</u> 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**

Lowest Selection Rank (2025): 92.00

**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.

#### **Student testimonials**

"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



|        | Year 1   |
|--------|--|
| Term 1 | COMP1511<br>Programming Fundamentals                     |
|        | COMP1337 Foundations of Cyber Security                   |
|        | General Education Course                                 |
| Term 2 | COMP1521<br>Computer Systems Fundamentals                |
|        | Free Elective  |
|        |  |
| Term 3 | COMP1939 Cyber Security Workshop 1 – Penetration Testing |
|        | COMP2521 Data Structures and Algorithms                  |
|        | Free Elective  |

| Year 2 |   |  |
|--------|---|--|
| Term 1 | COMP2218<br>Human Centric Security              |  |
|        | MATH1081 Discrete Mathematics                   |  |
|        | General Education                               |  |
| Term 2 | Cyber Elective                                  |  |
|        | Free Elective                                   |  |
|        |   |  |
| Term 3 | COMP2949<br>Cyber Security Workshop 2 – Defence |  |
|        | Core Course*                                    |  |
|        | Cyber Elective                                  |  |

| Year 3 |   |
|--------|---|
| Term 1 | COMP4920 Professional Issues and Ethics in Information Technology |
|        | Free Elective   |
|        | Cyber Elective  |
| Term 2 | Cyber Elective  |
|        | Cyber Elective  |
|        | Free Elective   |
| Term 3 | COMP3959<br>Cyber Security Workshop 2 – Capstone                  |
|        | Free Elective   |
|        |   |

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 <a href="https://www.unsw.edu.au/academic-calendar-project">https://www.unsw.edu.au/academic-calendar-project</a>.

\*Students can choose from the following courses: COMP3121 Algorithm Design and Analysis OR COMP3821 Extended Algorithm Design and Analysis OR COMP3443 Web Application Security and Testing OR COMP6843 Extended Web Application Security and Testing OR PSYC1001 Psychology 1A.



Visit the Degree Finder Page here! CRICOS Provider Code 00098G

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