WESTERN SYDNEY
UNIVERSITY

School of Computer, Data and Mathematical Sciences

A Guide for Students

2024 SNAPSHOT

Western Sydney University

For international recruitment agents

48,279	3,437	11,667
students	staff FTE	international students

Student mix

36,612 domestic — 11,667 international

24.2% of WSU students are international

School of Computer, Data and Mathematical Sciences

Computing | Mathematics & Data Science

53.6†	6,020*	35.7%*
academic staff FTE	field-aligned enrolments	international share

Why this matters for international students

224,123 businesses | ~92k employing SMEs | up to 200k jobs

* 2024 WSU field-aligned public-data proxy. † Latest public school-level academic staff FTE figure located.

Who are we?

The School of Computer, Data & Mathematical Sciences empowers future innovators with industry-aligned programs in computing, data analytics, cybersecurity, mathematics, and statistics. Backed by world-class research and strong industry partnerships, we equip students with the skills and experience to thrive in Australia's fast-growing technology sector.

Western places international students in Australia's third-largest economy, with 224,123 businesses in Western Sydney including about 92,000 employing SMEs. CDMS study aligns with demand in AI, software, data and cyber security through ACS-accredited ICT programs, work-integrated learning and Cisco/AWS-linked training as the Aerotropolis grows toward up to 200,000 new jobs.

Why study with us?

THE World University Rankings 2026

Western Sydney University's School of Computer, Data and Mathematical Sciences is rising fast on the global stage. In the Times Higher Education (THE) University Subject Rankings 2026, Computer Science jumped an entire global band—from 401–500 to 301–400. In

This significant leap positions Computer Science as one of the University's strongest-performing disciplines this year and showcases the School's growing international reputation for excellence in computing, data, and mathematical innovation.

Meet the Lecturers

We have 65 academics teaching in the areas of:

Computer Science

Professor
Bahman Javadi

Associate Prof.
Rodrigo Neves Calheiros

Doctor
Heidi Bjering

Information Technology

Associate Prof.
Ana Hol

Doctor
Kanaka Sai Jagarlamudi

Doctor
Jim Basilakis

Data Science

Associate Prof.
Laurence Park

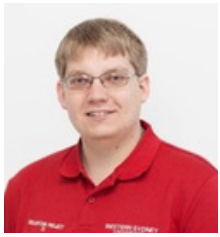
Doctor
Gizem Intepe

Doctor
Munazza Zaib

Artificial Intelligence

Associate Prof.
Rosalind Wang

Doctor
Zhigang Lu



Doctor
Kieran Luken

Statistics

Associate Prof.
Kenan Matawie

Doctor
Nishanthi Raveendran

Doctor
Liwan Liyanage

Mathematics

Professor
Roozbeh Hazrat

Associate Prof.
James East

Doctor
Mehdi Tavakol

Our Programs

Undergraduate (3 years)

Accredited by

Computer Science

Overview:
The Bachelor of Computer Science provides a strong foundation in the theory and practice of computing, preparing students to understand, design, and develop software systems and solve complex technical problems. It builds capability across core areas such as programming, algorithms, computer systems, networking, databases, software engineering, artificial intelligence, cloud computing, information security, and professional project work. The program also allows students to deepen their expertise through specialisations while gaining real-world experience through industry-focused projects and professional experience.

Work Integrated Learning:
Industry sponsored capstone project working with real-life projects with industry contacts

Potential Employment Opportunities:
Software Developer, Programmer, Systems Developer, Systems Analyst, AI Engineer and Cyber Security Analyst

Potential Annual starting salary ranges:
$65K-$110k per annum

Handbook:
https://studenthandbook.westernsydney.edu.au/course/2026/3506

Accredited by

Information Technology/Information Systems

Overview:
These programs offer a comprehensive education in modern digital and computing systems, equipping students to design, develop, and manage technology solutions in real organisations. They build skills in areas such as programming, systems development, databases, cloud computing, cyber security, and digital technologies, while emphasising strategic technology use through systems analysis, digital transformation, and project management. Graduates develop strong problem-solving, communication, and ethical skills, preparing them to apply emerging technologies like AI and big data to solve complex industry challenges.

Work Integrated Learning:
Students gain valuable real-world experience through an industry-sponsored capstone project, working on authentic industry problems in direct contact with industry partners. Depending on their chosen specialisation, they may also have the opportunity to undertake an industry placement, further strengthening their practical skills, professional networks, and career readiness.

Potential Employment Opportunities:
Cybersecurity Analyst, Business Systems Analyst, Network Engineer, Health Informatics Officer and Data Analyst

Potential Annual starting salary ranges:
$60K - $100K per annum

Handbooks:
BICT - https://studenthandbook.westernsydney.edu.au/course/2026/3639
BIS- https://studenthandbook.westernsydney.edu.au/course/2026/3687

Accredited by

Data Science

Overview:

The Bachelor of Data Science prepares students to turn diverse forms of data into meaningful insights that support decision-making across business, science, finance, and digital environments. It develops broad capability in data analysis, statistics, mathematics, programming, machine learning, artificial intelligence, data visualisation, and predictive modelling. The program also builds skills in working with complex data relationships, including the storage, management, and retrieval of large-scale data. Alongside strong technical foundations, it emphasises ethical and responsible use of data, effective communication of analytical findings, and the ability to solve real-world problems through data-driven projects. Students can also extend their expertise through related areas such as health informatics, entrepreneurship, cybersecurity, and artificial intelligence.

Work Integrated Learning:

Students can build work-integrated learning experience through Discovery Project, where they apply their data science skills in a real-life project under academic supervision, transforming data into knowledge while developing project planning and research capabilities relevant to industry practice.

There are potential industry placement opportunities, subject to the security clearance required in Australia.

Potential Employment Opportunities:

Data Analyst, Business Intelligence Analyst, Junior Data Scientist, Data Engineer and Customer Insights Analyst.

Potential Annual starting salary ranges:

$70K - $120K per annum

Handbook:

https://studenthandbook.westernsydney.edu.au/course/2026/3769

Accredited by Australian Mathematical Society Inc.

Mathematics

Overview:
The Bachelor of Mathematics gives students a strong foundation in mathematical thinking, logic, and problem-solving. It covers broad study areas such as pure and applied mathematics, statistics, modelling, and analytical reasoning. Students also develop skills to apply mathematics to real-world problems across scientific, technical, and professional contexts. The program prepares graduates for further study and careers in areas such as data, finance, teaching, science, and industry.

Work Integrated Learning:
The Bachelor of Mathematics offers WIL-style learning through supervised project subjects where students investigate a problem, apply mathematical or data-driven methods, and communicate their work through professional reports and presentations. In particular, Mathematics Project builds independent project and communication skills, while Discovery Project provides experience applying mathematics and data skills to a real-life project under academic mentoring.

Potential Employment Opportunities:
Quantitative Analyst, Actuary, AI Software Developer, Algorithms Engineer and Data Scientist

Potential Annual starting salary ranges:
$75K -$140K per annum

Handbook:
https://studenthandbook.westernsydney.edu.au/course/2026/3778

Postgraduate (2 years)

Accredited by

Information Technology (Coursework)

Overview:
The Master of Information and Communications Technology program provides advanced study in contemporary ICT, building capability across programming, systems analysis, databases, networks, cybersecurity, project management, user-system interaction, and research practice. It also allows students to specialise in major areas such as artificial intelligence, cloud and distributed computing, cybersecurity, data analytics, and web/mobile computing.

Work Integrated Learning:
The program combines this technical depth with practical experience through a capstone project and a compulsory industry placement component (if required, organised by the university), preparing graduates for professional ICT roles in a fast-changing digital environment.

Potential Employment Opportunities:
Systems Analyst, Cyber Security Analyst, Cloud Engineer, Data Scientist and Software Engineer

Potential Annual starting salary ranges:
$85K - $115k per annum

Handbook:
https://studenthandbook.westernsydney.edu.au/course/2026/3699

Accredited by

Data Science (Coursework)

Overview:
The Master of Data Science provides advanced preparation for working in a data-driven world by combining mathematics, statistics, and computing with a strong applications focus. It develops broad capability in areas such as big and unstructured data, data lifecycle management, programming, machine learning, predictive analytics, visualisation, and computational analysis. The program also builds skills in evidence-based decision-making, ethical and legal awareness, communication, collaboration, and professional project or research work, with options to extend into areas such as artificial intelligence, cybersecurity, digital health, public health, and business.

Work Integrated Learning:
project-based learning through Postgraduate Project A and Postgraduate Project B, together with the program's emphasis on professional practice, collaboration, and applied data science project work.

Potential Employment Opportunities:
Data Scientist, Data Engineer, Data Analyst, Business Intelligence Analyst and Machine Learning Engineer

Potential Annual starting salary ranges:
$90K - $110K per annum

Handbook:
https://studenthandbook.westernsydney.edu.au/course/2026/3778

Accredited by

Artificial Intelligence (Coursework)

Overview:
The Master of Artificial Intelligence provides advanced study from AI foundations to contemporary applications, giving students broad capability in areas such as machine learning, intelligent agents, knowledge representation and reasoning, natural language processing, computer vision, cybersecurity, data analytics, and AI ethics and governance. It prepares students to evaluate, design, implement, and critique AI technologies for complex real-world problems while also building collaboration, communication, and human-centred design skills. The program also allows students to deepen their expertise through further study in areas such as cybersecurity, data analytics, and web/mobile computing, supported by capstone, research, and practicum experiences.

Work Integrated Learning:
This program includes applied and professional learning opportunities through the ICT Practicum (a compulsory placement, if needed, organised by the university), Postgraduate Capstone Project (real-life industry-sponsored project), and Postgraduate Research Project.

Potential Employment Opportunities:
Machine Learning Engineer, Data Scientist, Software Engineer, Cyber Security Analyst and Business Intelligence Analyst

Potential Annual starting salary ranges:
$90K - $120K per annum

Handbook:
https://studenthandbook.westernsydney.edu.au/course/2026/3778

Higher Degree Research

Master Information and Communication Technology (Research) - 2 years

Overview:
The Master of Information and Communications Technology (Research) program combines advanced coursework in contemporary ICT with a substantial supervised research component, preparing students to engage deeply with both technical practice and research. It develops high-level capability across areas such as programming, systems analysis, databases, networks, cybersecurity, big data, user systems interaction, project management, and emerging ICT specialisations, while building strong research design, communication, and professional skills. The program is particularly suited to students seeking advanced ICT expertise, research training, and a pathway to higher degree research (e.g. PhD) or research-informed industry roles.

Work Integrated Learning:
Potential for industry internships depending on the project and placement availability.

Potential Employment Opportunities:
IT Research Scientist, Cybersecurity Researcher, Data Scientist or Big Data Analyst or ICT Consultant

Potential Annual starting salary ranges:
$85K - $130 per annum

Handbook:
https://studenthandbook.westernsydney.edu.au/course/2026/3778

Doctor of Philosophy (PhD) - 3 years

Overview:
The Doctor of Philosophy (PhD) degree provides training and education with the objective of producing graduates with the capacity to conduct research independently at a high level of originality and quality. A PhD candidate will uncover new knowledge either by the discovery of new facts, the formulation of theories or the innovative re-interpretation of known data and established ideas.

Work Integrated Learning:
Potential for industry internships depending on the project and placement availability.

Potential Employment Opportunities:
Research Scientist, Senior Data Scientist, Machine Learning / AI Engineer, R&D Lead or Innovation Scientist, Post doctoral Research Fellow or University Academic / Lecturer

Potential Annual starting salary ranges:
$90K - $160K per annum

Handbook:
https://www.westernsydney.edu.au/future/study/courses/research/doctor-of-philosophy

Fees and University Costs

https://www.westernsydney.edu.au/students/fees

Employer and Industry Engagement

Industry-Sponsored Capstone Projects in UG and PG programs

COMP3018 Professional Experience and **INFO6002 Postgraduate Capstone Project** are strong Work Integrated Learning (WIL) opportunities that place students into industry-sponsored, real-life projects where they work with genuine clients on authentic problems.

The handbook describes COMP3018 as a final-year capstone subject in which students work in groups, guided by an academic supervisor or industry mentor, to achieve goals set by a client on projects sourced from external organisations or within the University.

Similarly, INFO6002 organises postgraduate students into groups to undertake industry-based projects involving requirements analysis, design, implementation, data processing and testing in a real-world context.

These subjects help students build the skills needed for professional practice, including teamwork, project management, analytical problem-solving, communication, reflective practice, and the experience of working collaboratively with peers from diverse programs in ways that closely mirror real workplace environments.

This WIL model has been strongly recognised by accreditation, students and industry partners alike:

> "The Professional Experience is well designed and supported within the School and industrial communities. Excellent capstone unit."
>
> **ACS Accreditation Report**

> "I just wanted to thank you for helping to get the database up and running..... Previous attempts seemed to tread water but this attempt has really made some inroads into our society being able to see some live data."
>
> **President of the NSW Clydesdale Society**

> "Capstone was excellent for learning to learn"
>
> "Only subject with real-life client was capstone"
>
> **Undergraduate students**

Industry partners looking for top talent from projects

Matt Abrahms (Stanford University) giving the keynote speech

Optimize Celebrating student success

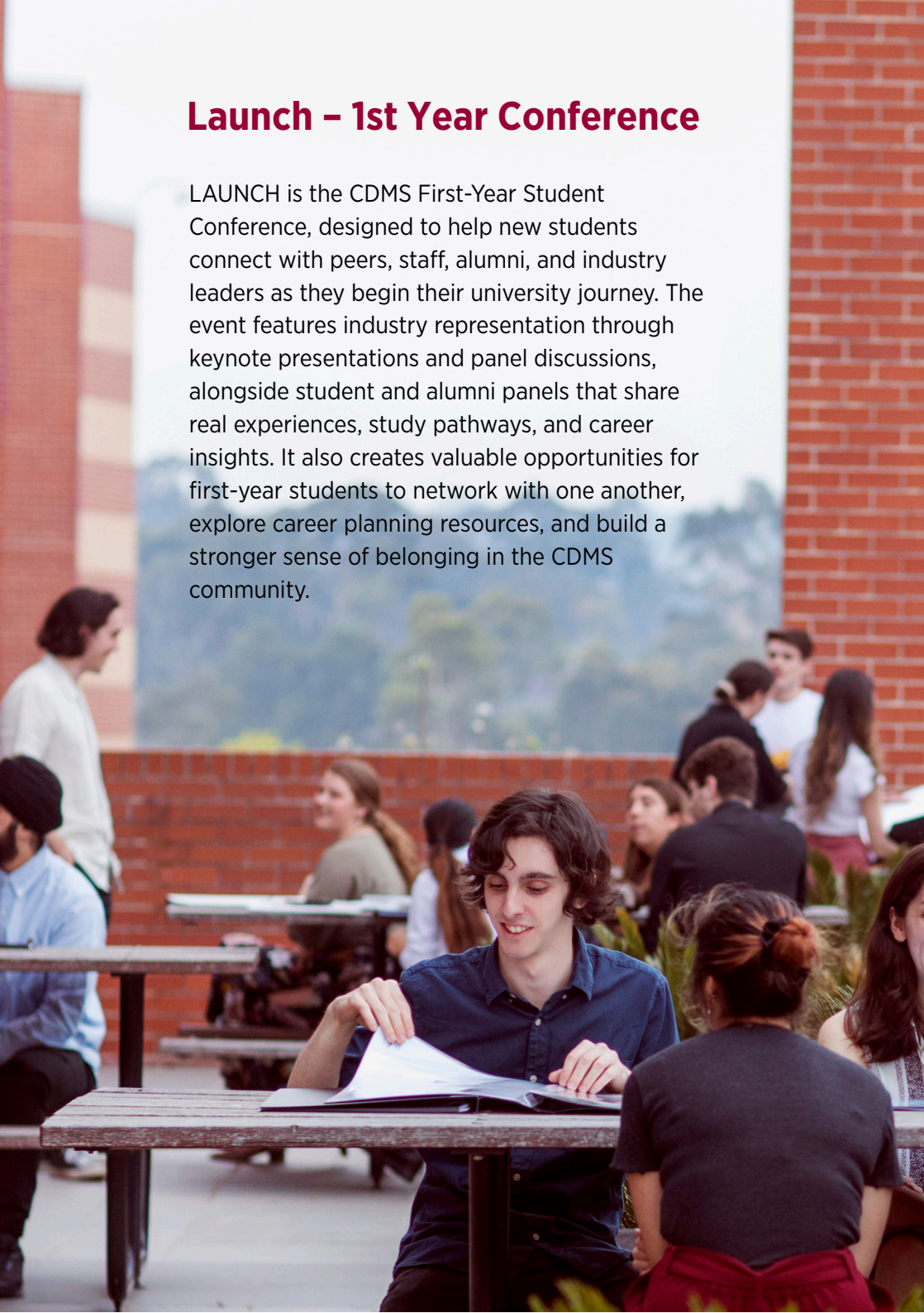
Optimize – Award Ceremony

Optimize is a formal showcase and awards event that celebrates excellence in student projects and research across the CDMS community. It provides a platform to recognise outstanding industry-based work from undergraduate, postgraduate and research students, while also creating opportunities for students to connect with industry representatives, university leaders and invited guests, build professional networks, and gain confidence in their future potential.

Running since 2020, Optimize has grown into an established event that showcases innovative work, inspires students through exposure to high-quality projects and experts, and recognises achievement through a judged presentation and awards night.

Launch – 1st Year Conference

LAUNCH is the CDMS First-Year Student Conference, designed to help new students connect with peers, staff, alumni, and industry leaders as they begin their university journey. The event features industry representation through keynote presentations and panel discussions, alongside student and alumni panels that share real experiences, study pathways, and career insights. It also creates valuable opportunities for first-year students to network with one another, explore career planning resources, and build a stronger sense of belonging in the CDMS community.



Peer Assisted Study Sessions (PASS)

PASS is a free and voluntary, student-centred learning program. In PASS, students meet and work collaboratively with peers from their units to understand unit content and develop effective study strategies that can enhance academic performance. By actively learning with others, students become more engaged and gain a deeper understanding of the material.

PASS sessions are facilitated by a senior student who has successfully completed the unit and has been trained in collaborative learning techniques.

PASS is designed for everyone—from students striving for a high distinction to those aiming to pass the unit.

Website: https://www.westernsydney.edu.au/students/services-and-facilities/study-and-life-skills-workshops/pass-peer-assisted-study-sessions

Mathematics Education Support Hub (MESH)

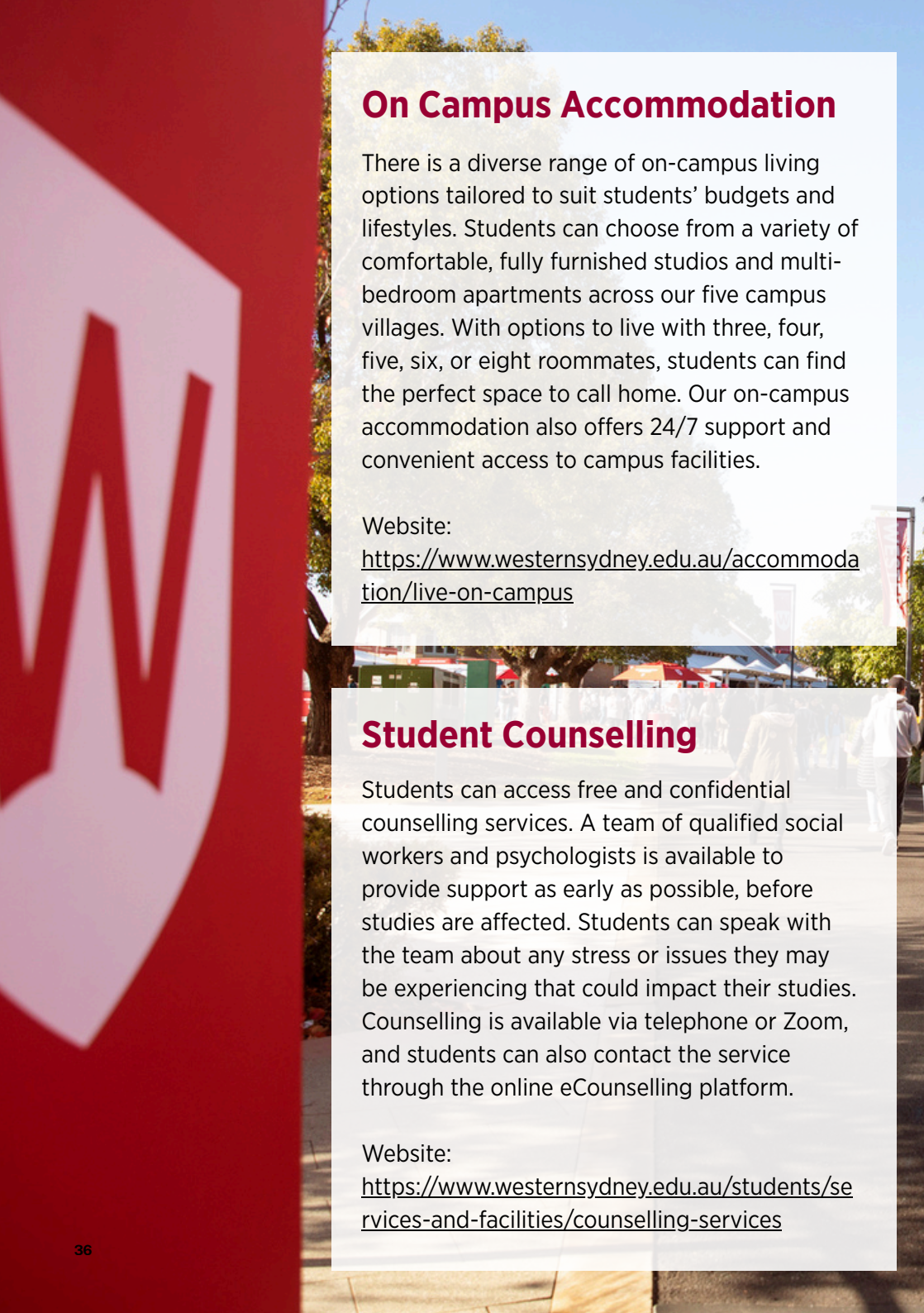
MESH provides mathematics and statistics support to students at all stages of their studies.

Each semester, MESH runs regular drop-in maths and statistics help sessions for students. They also offer the Maths Start Refresher program in February, along with various workshops tailored to specific subjects and programs.

In addition, MESH provides a range of online resources for students who want to:

- revise or refresh their basic mathematical skills
- understand and practise the mathematical calculations relevant to their discipline
- develop statistical skills needed in their industry

Website: https://www.westernsydney.edu.au/mesh



On Campus Accommodation

There is a diverse range of on-campus living options tailored to suit students' budgets and lifestyles. Students can choose from a variety of comfortable, fully furnished studios and multi-bedroom apartments across our five campus villages. With options to live with three, four, five, six, or eight roommates, students can find the perfect space to call home. Our on-campus accommodation also offers 24/7 support and convenient access to campus facilities.

Website:
https://www.westernsydney.edu.au/accommodation/live-on-campus

Student Counselling

Students can access free and confidential counselling services. A team of qualified social workers and psychologists is available to provide support as early as possible, before studies are affected. Students can speak with the team about any stress or issues they may be experiencing that could impact their studies. Counselling is available via telephone or Zoom, and students can also contact the service through the online eCounselling platform.

Website:
https://www.westernsydney.edu.au/students/services-and-facilities/counselling-services

Student Life and Social Activities

Our vibrant campus life goes beyond academics, offering everything from pizza parties and the Graduand Ball to engaging student clubs like the Robotics Club. With friendly student vs staff soccer matches and hands-on projects such as the solar car.

Contact us

dean.scdms@westernsydney.edu.au
Lindsay Liu – Executive Assistant

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Western Sydney University

www.westernsydney.edu.au/schools/socdms
CRICOS provider code: 00917K