

WESTERN SYDNEY
UNIVERSITY

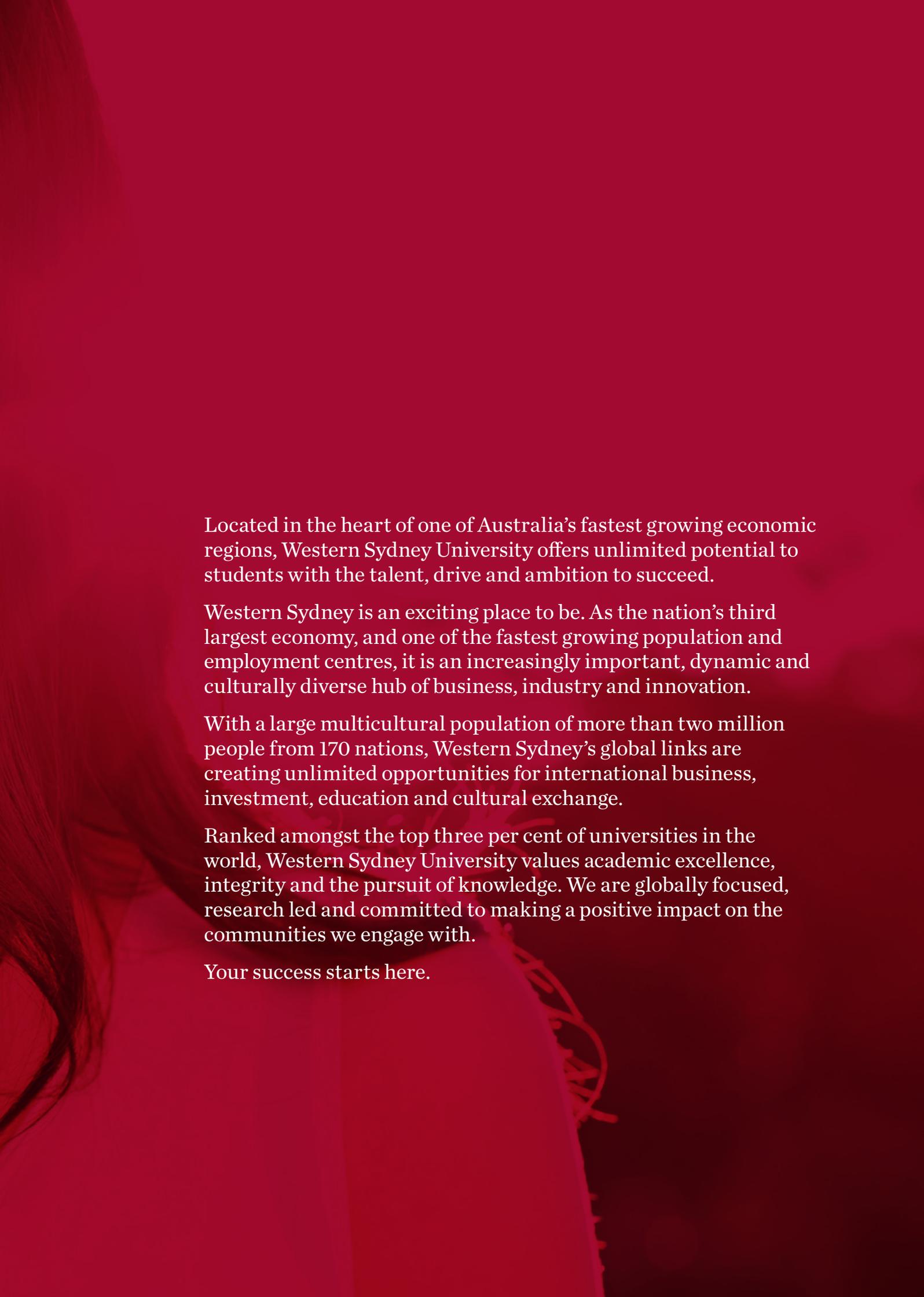


SUSTAINABLE
AGRICULTURE AND
FOOD SECURITY
2018





**WE ARE
WESTERN
SYDNEY**



Located in the heart of one of Australia's fastest growing economic regions, Western Sydney University offers unlimited potential to students with the talent, drive and ambition to succeed.

Western Sydney is an exciting place to be. As the nation's third largest economy, and one of the fastest growing population and employment centres, it is an increasingly important, dynamic and culturally diverse hub of business, industry and innovation.

With a large multicultural population of more than two million people from 170 nations, Western Sydney's global links are creating unlimited opportunities for international business, investment, education and cultural exchange.

Ranked amongst the top three per cent of universities in the world, Western Sydney University values academic excellence, integrity and the pursuit of knowledge. We are globally focused, research led and committed to making a positive impact on the communities we engage with.

Your success starts here.







→ **PREPARE FOR A DYNAMIC, EXCITING AND CHALLENGING CAREER**

Offering a wide range of contemporary and innovative degrees, Western Sydney University's Sustainable Agriculture and Food Security program combines advanced academic knowledge with practical real-life training. With inspiring academics, smaller class sizes and state-of-the-art facilities, our units ensure you will have everything you need to pursue an exciting career.

→ **TRADITION OF AGRICULTURAL RESEARCH AND SERVICES**

Get your hands dirty and see agriculture in action at our experimental field sites, which include:

- cleared agricultural lands
- many farm dams within close proximity for replicated studies
- climate-controlled plant-growth cabinets
- a post-harvest controlled environment system and physiology laboratories
- a plant biotechnology facility with PC2 certification and plant cell physiology and entomology laboratories
- stone fruit and citrus orchards
- a vineyard
- an olive grove and cleared plots.

Animals kept on campus include cattle, sheep, reptiles, marsupials and deer.

→ **WORLD CLASS RANKING**

Western Sydney University's growing reputation has been reinforced with a top 200 ranking of universities worldwide in Agriculture and Forestry by QS World University Rankings. The rankings are based on academic reputation and research impact, with ten subject areas at Western Sydney University ranked in the top 400 or higher worldwide.

→ **HAWKESBURY AGRIPARK**

The Hawkesbury campus, situated on 880ha of peri-urban land adjacent to the North West Growth Centre, is ideally placed to drive economic growth in a key 'next wave' industry for NSW. The food and agriculture sector employs 175,000 people and generates over \$7.3 billion annually for the state, and \$48.6 billion nationally. Research undertaken by Deloitte, identifies agribusiness as one of the 'fantastic five' next wave growth industries to follow in the wake of the mining boom (Deloitte Growth 25, March 2014).

In 2016, a joint Western Sydney University industry partnership has completed construction of a new \$7.5 million greenhouse research and teaching facility, utilising expert knowledge from the Netherlands. Our students have the opportunity to be involved in learning and research training in this world-class high-tech greenhouse. The combination of these leading agricultural education and research providers will present a 'one-stop-shop' for knowledge exchange, educational integration, research investment, professional development, and recruitment. The Hawkesbury Agripark will deliver the next phase of agribusiness growth.

→ **LEARN FROM LEADERS IN THEIR FIELD**

The University has a reputation for teaching and learning excellence. You will be challenged and stretched to learn from inspiring, enthusiastic teaching staff at the forefront of their fields. The University has an extensive and diverse array of analytical capabilities that address a range of industry needs. Staff provide expert advice on the right techniques to use, conduct experiments, and then work with clients and research partners on the interpretation of results.

WHY STUDY AT WESTERN SYDNEY?

Future thinking. Unlimited possibilities. The Academy at Western Sydney University.

Success is not just about getting a degree, but developing the critical thinking and leadership skills to support a successful career.

It's about learning skills for your chosen life, not just a job.

The Academy at Western Sydney University offers advanced degrees that prepare you to thrive in the face of change and seize success at every opportunity. Whether your dream is to achieve as a professional, an entrepreneur or an academic, you will learn to think differently and creatively in whatever you do.

The Academy offers high-achieving students a unique, hands-on approach to learning in an interdisciplinary environment. It draws on the unique experience of leading thinkers, social change agents, community leaders, and high-achieving students both past and present.

With a focus on ethical leadership and critical thinking, built on the pillars of academic rigour, community engagement, and professional and personal development, The Academy offers students access to:

- unprecedented opportunities for industry and real life experience
- world-class research, researchers, teachers, experts and innovation labs
- travel to national and international leadership experiences and conferences
- a range of professional and personal development workshops
- internship, service learning and volunteering opportunities
- personalised career planning
- applied leadership experience in student-led, community-focused projects.

Visit westernsydney.edu.au/theacademy for more information.





**THINK
BIG**







HAWKESBURY INSTITUTE FOR THE ENVIRONMENT

Climate change and the availability of clean energy are among the biggest problems currently facing Australia. The Hawkesbury Institute for the Environment is a beacon for the best and brightest climate change and energy researchers from around Australia and the world. The Hawkesbury Institute for the Environment is researching a suite of crucial environmental problems, including those related to landscape revegetation and reforestation, biofuel production, remediation of contaminated soils and adaptation to climate change.

Western Sydney University farm is a 900 hectare commercial entity and educational resource, based on our Hawkesbury campus.

FACILITIES INCLUDE:

- EucFACE: designed to predict the effects of rapidly rising atmospheric carbon dioxide on Australia's unique native forests
- Whole Tree Chambers: providing fully enclosed, controlled environments for trees up to nine metres tall
- Hawkesbury Forest: a continuing rise in the atmospheric CO₂ concentration is inevitable, and its impact on Australia's forest and woodland ecosystems must be considered in our environmental management and water catchment strategies
- Large Rainout Shelters: enabling us to exclude natural rainfall on tree stocks up to ten metres in height, to impose drought or altered rainfall conditions in either pot-grown or in-field plantings
- DRI-GRASS (Drought and Root Herbivore Impacts on GRASSlands): investigates the effects of drought and variable rainfall in a grassland ecosystem in terms of carbon and nutrient cycling, biodiversity and root herbivory
- Greenhouses and Insectary: the institute's greenhouse facilities were recently updated to implement the best in controlled climate technology, including full temperature, CO₂ and light control
- Labs and Growth Chambers: these recently constructed PC2-compliant laboratories enable researchers to access the latest technology including controlled growth rooms and chambers, industry-certified Next Generation Sequencing labs, laser dissection microscopy, a range of analytical instrumentation for environmental chemistry and the nearby Confocal Microscopy Centre.

Research at the Hawkesbury Institute for the Environment is having a global impact. In the 2017 QS World University Rankings by Subject, Western Sydney University was ranked in the top 200 Universities in Agriculture and Forestry.



Bachelor of Sustainable Agriculture and Food Security

COURSE	UAC CODE	CRICOS CODE	WS CODE	INTAKE	LOCATION	DURATION	ATAR
B Sustainable Agriculture and Food Security	728028	089441F	3726	February/ July	Hawkesbury	3F/6P	70.00

Assumed knowledge: Any two units of English and any two units of Mathematics.

Key: B=Bachelor of; F=Full-time; P-Part-time.

Note: Part-time refers to study load, not to timetabling of evening classes.

The Bachelor of Sustainable Agriculture and Food Security examines the food system through a uniquely transdisciplinary curriculum.

The contemporary content of the curriculum encourages you to view agriculture from the perspective of sustainable consumption and apply your learning toward the design of innovative solutions for a sustainable food future.

Opportunities are rapidly emerging for entrepreneurs to lead a new food future. Immersed in an approach that integrates social, economic and environmental values, you will view plant and animal production from consumer contexts to explore personal and community perceptions about food sustainability.

This innovative degree merges topics of agriculture, food and health to empower you to design solutions for international development, community education and the urban-rural interface. The course includes disciplines of sustainability science, social sciences and business studies.

PRACTICAL EXPERIENCE

In your final year of study, you will undertake a real-world project for a professional client. This will provide you with first-hand professional experience in project management and problem solving. Through this project you will gain critical thinking skills and the ability to contribute innovative solutions to the complex challenge of a food secure future.

FURTHER STUDIES

Postgraduate research programs are available to our high-achieving students. Information and details on how to apply will be provided to you as you progress through your Bachelor degree, or you can find out more at westernsydney.edu.au/study/MResearch

CORE UNITS AND ELECTIVES

The major units of study in first year include feeding a growing global population, communicating science effectively and leadership in a complex world. This degree offers a contextually rich first year experience that showcases the importance of agriculture to the sustainable wellbeing of communities. Exposure to the complexities of global food security will demonstrate the breadth of disciplines involved under a contemporary, consumer-focused definition of agriculture.

As your studies progress, you will gain awareness of the differing roles for specialists and generalists and understand the critical importance of knowledge sharing across disciplines. You can focus your studies into one of three majors (Sustainability Science, Business or Social Sciences) or adopt a more flexible approach that balances units of choice from the three majors and across the University.

For detailed information about the course structure and units, visit westernsydney.edu.au/courses

Justin Whittle

BACHELOR OF SUSTAINABLE AGRICULTURE AND FOOD SECURITY

"The career prospects are endless in agriculture today and I plan to build my career in international development, in advocacy and policy roles for sustainable agriculture. I want to work where I can make an impact. I see myself eventually working for the United Nations."

CAREER OPPORTUNITIES

With more than half of jobs in agriculture based in metropolitan areas, a city-based career is just as likely as employment in more rural settings.

The distinct advantage of the Bachelor of Sustainable Agriculture and Food Security is the transdisciplinary approach to education. The course has been carefully designed to foster development of transferable professional skills that will enable graduates to bridge challenging divides like science and policy, country and city, and global cultural diversity.

Depending on units chosen, students studying this course can prepare for roles in areas such as business management, policy and planning, communication and community education, project management and program implementation. For example, as a graduate of the Business major, you might start your own small business, delivering local fresh food direct from farm to consumer. As a graduate of the Sustainability Science major, you might work under the corporate social responsibility arm of a food manufacturer, sourcing ethical supplies. As a graduate of the Social Sciences major, you might work for an international aid agency, developing the capacity of impoverished villagers to move beyond subsistence farming.

Graduates can find employment in major corporations, small consulting companies, and/or government agencies on local, state and national scales. Significant opportunities also exist for international roles. After further postgraduate research study, you may conduct research in private industry, universities, and national and international scientific organisations.

Sean Andrews-Marney

BACHELOR OF SUSTAINABLE AGRICULTURE AND FOOD SECURITY

Sean chose to study agriculture because he saw the flexible career paths on offer. "I see myself travelling across the world in order to help people. I'm not exactly sure where my career is going to take me, but I know a great number of pathways are available when I finish my degree."



Megan Hounslow

BACHELOR OF NATURAL SCIENCE
(ADVANCED)

“Learning about Agriculture at Western has gone above and beyond my expectations of what university would be like. The learning experiences I have had have enriched my life and cemented my desire to work towards a better food future for all.”



Bachelor of Applied Leadership and Critical Thinking

Western Sydney University will offer a Bachelor of Applied Leadership and Critical Thinking in 2017. This unique degree can be taken in combination with a cross-section of Bachelor degrees, including Natural Science.

The Bachelor of Applied Leadership and Critical Thinking combines a cross-section of units with a focus on high-level critical thinking and innovative problem-solving practices.

The degree prepares students for challenges and opportunities yet to be imagined. It also provides cross-disciplinary practical experience and ethical leadership based on building relationships. The course is designed for today's leaders who are looking to build a better tomorrow.

Note: The Bachelor of Applied Leadership and Critical Thinking is not a stand-alone degree. It can only be taken in combination with another existing Bachelor degree. Students enrolled in a degree linked with the Bachelor of Applied Leadership and Critical Thinking will gain entry into The Academy. A minimum ATAR of 85.00 is required for the degree. However, course specific ATARs may be higher. You will only be able to select courses where you meet the required ATARs.

All units in these concurrent degrees are delivered on the Parramatta campus only.

For more detailed information about the course structure and units, visit westernsydney.edu.au/courses



A ONE OF A KIND DEGREE IN DATA SCIENCE.

In the world of tomorrow, data skills will be essential – no matter what other qualifications you may have. Western's new Bachelor of Data Science is a one of a kind. It's unique because it can only be studied in conjunction with another degree. This is a real advantage in a competitive environment. Graduates who understand the intricacies of extracting information and knowledge from data are highly sought after, whatever their discipline.

Blend Data Science with courses like Marketing, Engineering, Information and Communications Technology, Science or Psychology to graduate with a combined degree.

It will all add up to an unstoppable future. Find out more about what our Bachelor of Data Science degree can offer.

WESTERNSYDNEY.EDU.AU/DATASCIENCE

ALTERNATIVE ENTRY PATHWAYS

THE COLLEGE

Western Sydney University The College (The College) provides a range of pathway options and support services to help you on your journey to university. Through its comprehensive range of University Foundation Studies and Diploma programs featuring small class sizes and individual attention from academic staff, The College provides a well-supported environment for you to succeed in your tertiary studies.

DIRECT ENTRY ADVANTAGE

After successfully completing the University Foundation Studies program and meeting the entry requirements, you will be guaranteed direct entry into first year of the corresponding undergraduate degree at Western Sydney University.

Alternatively, successful completion of a Diploma program will guarantee you direct entry into the second year of the corresponding undergraduate degree.

Extended Diplomas offered by The College are open access programs which have alternative entry requirements. These courses

provide additional teaching support over a longer time frame. Successful completion also guarantees direct entry into the second year of the corresponding undergraduate degree.

The College provides pathways in the following fields:

- Arts (for students wishing to study Arts, Education, Humanities, Law, Psychology and Social Sciences)
- Building Design Management
- Business
- Communication
- Construction Management
- Criminology
- Design
- Engineering
- Health Science
- ICT Health Informatics
- Information and Communications Technology
- Nursing
- Policing
- Science
- Social Science

HECS-HELP loans are available to eligible students. For more information, visit westernsydney.edu.au/thecollege



APPLICANT CHECKLIST

1

FIND OUT ABOUT OUR COURSES

- Read the information within this Guide
- Talk with careers advisors, your parents and teachers/mentors
- Refer to the Future Students site, visit westernsydney.edu.au/future_students

2

TALK TO US

- Attend Western Sydney University events – find out more at westernsydney.edu.au/events
- Call the Course Information Centre on **1300 897 669** or email study@westernsydney.edu.au
- Get the inside information on Alternative Entry Pathways, Advantage Entry programs, Bonus Points and scholarships

3

APPLY TO US

- Apply through UAC, visit uac.edu.au or apply direct to Western at <https://westernsydney.uac.edu.au/ws>
- Place your Western Sydney University preferences
- Check your eligibility and submit a scholarship application, visit westernsydney.edu.au/scholarships

INTERNATIONAL STUDENTS

If you are an international student completing one of the following qualifications in 2017, you must apply through UAC International:

- an Australian Year 12 in or outside Australia
- an International Baccalaureate
- a New Zealand National Certificate of Educational Achievement (NCEA) Level 3.

You can lodge your application online at uac.edu.au/international

All other international students must apply direct to Western Sydney University. Western Sydney University international application forms, 2018 international tuition fees and further information about studying and living in Australia can be found at westernsydney.edu.au/international

If you have any questions about applying as an international student, call **02 9852 5499** or email internationalstudy@westernsydney.edu.au

ADVANTAGE ENTRY PROGRAMS

Western Sydney University provides the following Advantage Entry programs*:

BEFORE THE ATAR

→ Schools Recommendation Schemes (SRS)

If you apply to the SRS through UAC, you may be eligible for a guaranteed offer even before your ATAR is released. Apply through UAC by 30 September 2017.

WHEN THE ATAR IS RELEASED

→ Guaranteed Entry Offer

Want to secure your entry into Western Sydney University for 2018? Take part in our Guaranteed Entry program to receive an offer from Western on ATAR Release Day, December 15 2017. Details and Guaranteed Entry registration will be released later this year. Visit westernsydney.edu.au/guaranteedentry to find out more and to register your interest.

* Conditions apply. For more information, visit westernsydney.edu.au/advantage

PROVIDING OPPORTUNITIES THROUGH SCHOLARSHIPS

Western Sydney University is not only about obtaining an education. We also challenge ourselves to engage students who will get involved and make a difference to the University and wider communities. The University has a unique set of scholarships on offer, reflecting our strong commitment to academic excellence and opportunity for Western Sydney students. Our scholarships support students who have diverse interests and skills, and who make an active contribution to the community.

The University works closely with business, industry and the community to ensure we offer scholarships that meet the needs of our students. Our scholarships provide our students with support and give them the opportunity to establish professional relationships while they study.

Take the time to examine our scholarships and make the most of your opportunities for success. For details on scholarships, including the eligibility criteria and how to apply, refer to westernsydney.edu.au/scholarships or call **1300 897 669**.

IMPORTANT DATES

2017

August
27 Open Day

September
Aboriginal and Torres Strait Islander Future Students Information Evenings
12 Campbelltown campus
14 Penrith campus

May
20 Mid-Year Information Day

July
Parent Information Sessions

More information:
westernsydney.edu.au/events

GET CONNECTED

Future students
westernsydney.edu.au/future_students

Events
westernsydney.edu.au/events

Facebook
facebook.com/westernsydneyu

Twitter
twitter.com/westernsydneyu

Instagram
#westernsydneyu

Call
1300 897 669

Email
study@westernsydney.edu.au

DISCLAIMER

Western Sydney University reserves the right at all times to withdraw or vary courses listed within this publication. Variations may include but are not limited to location of its courses on the University's campuses or other locations. In the event that a course within this publication is to be changed or withdrawn, applicants will be advised by mail to the address specified by them on their UAC application before the last date for the change of preferences for the main round. In respect of course location change, students should be aware of the need to accommodate such changes for the whole or part of courses for which they enrol. The University also reserves the right to update, amend or replace online versions of this publication without notice.

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