



THE UNIVERSITY  
of ADELAIDE

# 2022 SCIENCES

## UNDERGRADUATE DEGREES

Agriculture, Food and Wine  
Animal and Veterinary Sciences  
Biomedical Science and Biotechnology  
Earth and Environmental Sciences  
Sciences

# CREATE

# DISCOVER

At the University of Adelaide, we take curious minds and help them to grow. We're pushing the boundaries of scientific research and teaching in areas like vaccine discovery, smart-agriculture, environmental sustainability and space, to create a better world. We're equipping a new generation with the skills to tackle global problems, and making a difference in our communities

# LEAD

# INNOVATE

[adelaide.edu.au](http://adelaide.edu.au)





# WHY THE UNIVERSITY OF ADELAIDE?



**RANKED IN TOP 1% OF UNIVERSITIES WORLDWIDE\***

**01**

**SA'S NO. 1 UNI FOR GRADUATE EMPLOYABILITY\***



**G08**

**MEMBER OF THE GROUP OF EIGHT**

**05**

**ASSOCIATED WITH 5 NOBEL PRIZE WINNERS**



**PRODUCED OVER 100 RHODES SCHOLARS**

## Education that enlightens

Studying with South Australia's highest ranked university—consistently placed among the world's top 1%—equips students to be tomorrow's leaders.

Having learnt from, and with, teachers and researchers who are themselves international leaders in their fields, our graduates are highly regarded and professionally recognised around the globe. What's more, they're well prepared to take advantage of the opportunities this recognition can bring; with a complementary emphasis on practical career skills, we're also the state's leading university for graduate employability\*.

Our long and proud tradition instils confidence in our students. We are Australia's third-oldest university and have a history of excellence in education spanning more than 145 years.

We are distinguished by a commitment to equality and an ongoing focus on delivering outstanding research for the benefit of society. The University has played key roles in many of the world's important discoveries and advancements, and our alumni have contributed significantly to shaping the educational, political and social arenas of their day.

At the University of Adelaide, students are taught, supported and inspired to be everything they can be.

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\* QS Graduate Employability Ranking 2020.  
^ Times Higher Education and QS Ranking



# IF YOU CAN WONDER YOU CAN DO SCIENCE

## Curiosity. We're all born with it.

As children it starts with the desire to examine the world around us. But as we grow, it's easy to get caught up with what we know, rather than what we are yet to find out.

Science uses our innate curiosity. It challenges us to start asking 'Why?' again, and importantly, 'How can we do better?'.

The greatest scientific breakthroughs are not driven by talent alone. They're realised by people who start with a question and are single-minded in their quest to find a solution.

At the University of Adelaide, we take curious minds and help them to grow. We're pushing the boundaries of scientific research and teaching in areas like vaccine discovery, smart-agriculture, environmental sustainability and space, to create a better world.

We're equipping a new generation with the skills to tackle global problems, and making a difference in our communities; and we've done so throughout our entire history.



In fact, University of Adelaide scientists recently discovered a vaccination to tackle a bacterium that kills up to two million children around the world each year. So, follow your own curiosity and join us. We can't wait to see where it takes you.

### Teaching led by acclaimed research

Studying here you will join a community of world-class researchers—both seasoned explorers and rising stars—discovering answers to some of the biggest questions of our time.

You'll rub shoulders with academics leading internationally recognised projects, like the breakthrough discovery of gravitational waves and the development of advanced new techniques in gene editing.



**The greatest scientific breakthroughs are not driven by talent alone. They're realised by people who start with a question and are single-minded in their quest to find a solution. At the University of Adelaide, we take curious minds and help them to grow.**







## FIT UNI INTO LIFE

This diary snapshot is an *example* of how a student may choose to schedule their university study and life. Attendance at university is less structured than at high school. Hours spent on campus in lectures, tutorials, practicals or in the field—known as ‘contact hours’—depend on the degree enrolled in, study mode selected (internal, external, online or flexible learning) and course choices.

### MONDAY

**10.10am** Chemistry lecture  
**11.10am** Biology lecture  
**12pm** Meet Dan and Mia in Hub Central for lunch  
**1.10pm** Biochem lecture  
**2.10pm** Biomed lecture  
**5pm** Dinner with family!

### TUESDAY

**9.30am** Work on Biology assignment  
**11.10am** Chemistry lecture  
**12.10pm** Biochem lecture  
**1pm** Quick nibble on Barr Smith Lawns  
**1.10pm** Biomed lecture  
**2.10–5pm** Biology practical  
**7pm** Film club night

### WEDNESDAY

**10.10am** Biomed tutorial  
**11.10am** Biology lecture  
**12.10pm** Biochem tutorial  
**2.10–3pm** Biochem lecture  
**5pm** Meet up with tutorial classmates for test revision  
**6–9pm** Part-time work scheduled

### THURSDAY

**9.30am** Workout at Uni gym  
**11.10am** Biochem practical  
**12.10pm** Biomed practical  
**2.10–5pm** Chemistry practical  
**5pm** Heat up dinner in Hub Central kitchen  
**7pm** Hockey match, Uni oval 2

### FRIDAY

**11.10am** Biology lecture  
**12.10pm** Chemistry lecture  
**1.10pm** Biology tutorial  
**2pm** Walk to the market for dinner  
**6pm** Shopping in Rundle Mall  
**9pm** Meet up with Alex at UniBar

Our researchers’ work informs our teaching and gives you the unique opportunity to work with them on active research projects. Our students have directly helped to tackle environmental challenges, advance technology and even map distant galaxies.

The University’s campuses are also home to a number of co-located industry partners, affiliated researchers and research institutes of international significance.

#### Support

Studying at university can be exciting, but also challenging, so we ensure there’s plenty of help on-hand. Our First Year Experience Program makes the transition as easy as possible. It starts before you enrol, providing face-to-face enrolment advice and support to get you off to a good start.

The Sciences Mentoring Program is an initiative which aims to help first-year students transition into their studies and connect with the University of Adelaide community.

And if you need help with your studies, we offer drop-in services across the main first-year courses, including biology, chemistry, maths and physics. We also give you access to our Peer-Assisted Study Sessions program, in which students help each other learn.

#### Guaranteed entry

A wide range of University of Adelaide degrees now have a pre-set entry score, known as ‘guaranteed entry’, instead of a cut-off that varies each year. For guaranteed entry into our science degrees\*, students must meet the degree prerequisites and achieve a 75 Selection Rank or above (including adjustment factors, if eligible). It’s that straightforward.

For more details, visit [www.adelaide.edu.au](http://www.adelaide.edu.au) and search Guaranteed Entry.

\*There are some exceptions—check the University website for full details.

## LIFE EXPERIENCE THROUGH GLOBAL LEARNING

[www.adelaide.edu.au/global-learning](http://www.adelaide.edu.au/global-learning)

All students will have the opportunity to study overseas (subject to any travel restrictions) through a range of programs, including student exchange, study tours and summer and winter schools. There are many exciting opportunities in Europe, Asia, the Americas and Africa.

## ABORIGINAL AND TORRES STRAIT ISLANDERS

[www.adelaide.edu.au/wirltu-yarlu](http://www.adelaide.edu.au/wirltu-yarlu)

The University of Adelaide values diversity where the rich cultures of Aboriginal and Torres Strait Islanders are taught, supported and celebrated. Wirltu Yarlu provides a range of services, schemes and preparation programs that are designed to support your desire to gain educational outcomes. Wirltu Yarlu is a place where students can soar to new heights.

## WANT TO GET A HEADSTART ON UNI?

[www.adelaide.edu.au/headstart](http://www.adelaide.edu.au/headstart)

The University of Adelaide’s Headstart scholarship program gives high-achieving students the opportunity to study at university while still in Year 12, and have these university studies count towards their SACE and their university aggregate/ATAR.

While studying at the University part-time, Headstart students not only have the opportunity to find out what university life is like before they finish school, but also contribute to, and benefit from, the diverse cultural and intellectual life of the University of Adelaide.

**For further information:**  
Telephone: +61 8 8313 0165  
Email: [start@adelaide.edu.au](mailto:start@adelaide.edu.au)

# SELECTION RANK ISN'T THE ONLY WAY INTO UNIVERSITY

Choose subjects at school that will help you prepare for success at university and take advantage of the subject-based entry to some of our most popular degrees. Apply as normal through SATAC, and list the University of Adelaide in your preferences, and we'll assess your application against your subjects as well as your Selection Rank.

Note: you must complete your SACE and have achieved an ATAR to be considered.

Subject-based pathways are available into:

- Arts
- Commerce
- Engineering
- Health and Medical Science
- Media
- Psychological Science
- Science

University of Adelaide degree	Subject-based entry criteria	Grade
<b>Bachelor of Arts</b> All varieties except Advanced	English Literary Studies (2ELS20) or English (2ESH20)	B or better
	<i>and</i> Any other Humanities or Social Science subject	B or better
<b>Bachelor of Commerce</b>	English Literary Studies (2ELS20) or English (2ESH20)	B or better
	<i>and</i> Specialist Mathematics (2MSC20) or Mathematical Methods (2MHS20) or General Mathematics (2MGM20)	B or better
<b>Bachelor of Engineering (Honours)</b> (Chemical), (Environmental)	Specialist Mathematics (2MSC20)	B or better
	<i>and</i> Mathematical Methods (2MHS20)	B or better
	<i>and</i> Chemistry (2CEM20)	C or better
<b>Bachelor of Engineering (Honours)</b> (Architectural and Structural), (Civil), (Electrical and Electronic), (Mechanical), (Mining), (Petroleum), (with/without major), (Software)	Specialist Mathematics (2MSC20)	B or better
	<i>and</i> Mathematical Methods (2MHS20)	B or better
	<i>and</i> Physics (2PYI20)	C or better
<b>Bachelor of Media</b> All varieties	English Literary Studies (2ELS20) or English (2ESH20)	B or better
	<i>and</i> Any other Humanities Social Science subject	B or better
<b>Bachelor of Psychological Science</b>	English Literary Studies (2ELS20) or English (2ESH20)	B or better
	<i>and</i> Specialist Mathematics (2MSC20) or Mathematical Methods (2MHS20) or General Mathematics (2MGM20)	B or better
<b>Bachelor of Health and Medical Science</b>	Biology (2BGY20) or Chemistry (2CEM20) or Physics (2PYI20)	B or better
	<i>and</i> Biology (2BGY20) or Chemistry (2CEM20) or Physics (2PYI20) or Specialist Mathematics (2MSC20) or Mathematical Methods (2MHS20) or General Mathematics (2MGM20)	B or better
<b>Bachelor of Science</b>	Biology (2BGY20) or Chemistry (2CEM20) or Physics (2PYI20) or Earth and Environmental Science (2EES20)	B or better
	<i>and</i> Biology or Chemistry (2CEM20) or Physics (2PYI20) or Earth and Environmental Science (2EES20) or Specialist Mathematics (2MSC20) or Mathematical Methods (2MHS20)	C or better

# THE UNIVERSITY OF ADELAIDE IS RANKED IN THE TOP 1% OF UNIVERSITIES WORLDWIDE AND SOUTH AUSTRALIA'S LEADING UNIVERSITY

118

2020 Times Higher Education world ranking

106

2020 QS World University ranking

152


2019 Academic Rankings of World Universities (ARWU)




Member of the Group of Eight

RANKED TOP IN SOUTH AUSTRALIA FOR:

COMPUTER SCIENCE  
(Times Higher Ed, QS, ERA)

ALL 6 ENGINEERING FIELDS (QS)

MATHEMATICS  
(QS, ERA)

ARTS AND HUMANITIES  
(Times Higher Ed, QS, ERA)

SCIENCES  
(Times Higher Ed, QS, ERA)

NURSING (QS)  
9th in Australia  
Top 50 in the world

HEALTH  
(Times Higher Ed, QS, ERA)

STEM  
(QS, ERA)

#1

FOR GRADUATE EMPLOYABILITY\*  
Our graduates are the most employable in South Australia  
\* QS Graduate Employability ranking 2020

ONLY SOUTH AUSTRALIAN UNIVERSITY WITH QS RANKING IN VETERINARY SCIENCE AND DENTISTRY



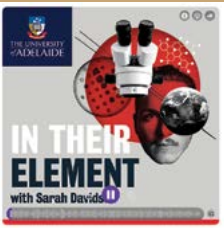
# CAREERS AND STUDY

## INDICATIVE STUDY-TO-CAREER PATHWAYS

Disciplinary areas	Degrees	Career			
Agriculture, Food and Wine	<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Agricultural Sciences</li><li>• Applied Data Analytics (Agriculture)</li><li>• Food and Nutrition Science</li><li>• Viticulture and Oenology</li></ul>	<ul style="list-style-type: none"><li>• Agricultural consultant</li><li>• Agronomist</li><li>• Biosecurity specialist</li><li>• Brewer or distiller</li><li>• Data analyst</li><li>• Data farmer</li><li>• Environmental consultant</li><li>• Food chain specialist</li><li>• Food chemist</li></ul>	<ul style="list-style-type: none"><li>• Food microbiologist</li><li>• Food technologist</li><li>• Horticulturist</li><li>• Nutritionist</li><li>• Product development coordinator</li><li>• Plant biotechnologist</li><li>• Precision viticulturist</li></ul>	<ul style="list-style-type: none"><li>• Resource manager</li><li>• Rural banker</li><li>• Science communicator</li><li>• Soil scientist</li><li>• Urban agriculturist</li><li>• Vineyard manager</li><li>• Viticulturist</li><li>• Winemaker</li></ul>	
Animal and Veterinary Sciences	<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Animal Behaviour)</li><li>• Science (Animal Science)</li><li>• Science (Veterinary Bioscience)*</li><li>• Bachelor of Veterinary Technology</li></ul>	<ul style="list-style-type: none"><li>• Animal health officer</li><li>• Animal management officer</li><li>• Animal trainer</li><li>• Animal/Veterinary technician</li><li>• Animal welfare officer</li><li>• Behaviourist</li></ul>	<ul style="list-style-type: none"><li>• Behaviourist in private veterinary practice</li><li>• Behaviourist trainer for assistance dogs</li><li>• Biosecurity officer</li><li>• Nutritionist</li><li>• Precision livestock breeder</li></ul>	<ul style="list-style-type: none"><li>• Vet</li><li>• Veterinary nurse</li><li>• Veterinary practice manager</li><li>• Veterinary technologist</li><li>• Vertebrate pest manager</li><li>• Wildlife conservationist</li><li>• Zookeeper</li></ul>	
Biomedical Science and Biotechnology	<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Biomedical Science)</li><li>• Science (Biotechnology)</li><li>• Applied Data Analytics (Bioinformatics)</li></ul>	<ul style="list-style-type: none"><li>• Bioinformatic scientist</li><li>• Biostatistician</li><li>• Biotechnologist</li><li>• Clinical data manager</li><li>• Clinical scientist</li></ul>	<ul style="list-style-type: none"><li>• Diagnostic technician</li><li>• Embryologist</li><li>• Genetic counsellor</li><li>• Gene therapist</li><li>• Medical research scientist</li></ul>	<ul style="list-style-type: none"><li>• Microbiologist</li><li>• Neuroscientist</li><li>• Pharmaceutical scientist</li><li>• Plant biotechnologist</li><li>• Public health</li></ul>	
Earth and Environmental Sciences	<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Applied Data Analytics (Environment)</li><li>• Applied Data Analytics (Geoscience)</li><li>• Science (Marine Biology)</li><li>• Science (Mineral Geoscience)</li><li>• Science (Wildlife Conservation Biology)</li></ul>	<ul style="list-style-type: none"><li>• Big data conservation</li><li>• Climate change analyst</li><li>• Ecologist</li><li>• Environmental education instructor</li><li>• Environmental informatics</li><li>• Environmental manager</li></ul>	<ul style="list-style-type: none"><li>• Environmental prediction</li><li>• Geochemist</li><li>• Geologist</li><li>• Geomicrobiologist</li><li>• Geophysicist</li><li>• Life scientist</li></ul>	<ul style="list-style-type: none"><li>• Marine biologist</li><li>• Palaeontologist</li><li>• Research scientist</li><li>• Seismologist</li><li>• Sustainability specialist</li><li>• Wildlife conservation</li></ul>	
Sciences	<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science</li><li>• Applied Data Analytics (Physics)</li><li>• Science (Honours)</li><li>• Science (Advanced)</li><li>• Science (Advanced)(Honours)</li><li>• Science (High Performance Computational Physics)(Honours)</li><li>• Science/Teaching</li><li>• Science (Space Science and Astrophysics)</li></ul>	<ul style="list-style-type: none"><li>• Analytical chemist</li><li>• Astronomer</li><li>• Astrophysicist</li><li>• Biochemical engineer</li><li>• Botanist</li><li>• Business development manager</li><li>• Business scientist</li><li>• Computational physicist</li><li>• Data scientist</li><li>• Drone technologist</li><li>• Econophysicist</li></ul>	<ul style="list-style-type: none"><li>• Environmental biologist</li><li>• Forensic scientist</li><li>• Government researcher</li><li>• Innovation manager</li><li>• Life scientist</li><li>• Materials scientist</li><li>• Merchant banker</li><li>• Meteorologist</li><li>• Nanotechnologist</li><li>• New science ethicist</li></ul>	<ul style="list-style-type: none"><li>• Petrophysicist</li><li>• Physicist</li><li>• Research and development manager</li><li>• Research scientist</li><li>• Science communicator</li><li>• Science entrepreneur</li><li>• Science teacher</li><li>• Space entrepreneur</li><li>• Space scientist</li></ul>	

\* Please note that the Bachelor of Science (Veterinary Bioscience) is the first part of the veterinary program. Graduates gain direct entry to the Doctor of Veterinary Medicine degree and completing both degrees makes them eligible to register and practise as a veterinarian. For more specific degree requirements visit: [www.adelaide.edu.au/degree-finder](http://www.adelaide.edu.au/degree-finder)

# LEARN MORE ABOUT CAREERS IN SCIENCE



**In Their Element podcast**  
Inspiring stories from University of Adelaide science graduates who’ve turned their innate spark of curiosity into awesome, real-world careers.  
[www.sciences.adelaide.edu.au/in-their-element](http://www.sciences.adelaide.edu.au/in-their-element)



**Careers in Science brochure**  
Check out our Careers in Science brochure for a list of science-related jobs, descriptions of what they involve and study pathways.  
[www.sciences.adelaide.edu.au/study](http://www.sciences.adelaide.edu.au/study)

## PREREQUISITES AND RECOMMENDED STUDY BACKGROUND

Degrees	Prerequisite (essential SAGE Stage 2 subjects)	Assumed knowledge (recommended SAGE Stage 2 background)
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science</li><li>• Science (Honours)</li><li>• Science (Advanced)</li><li>• Science (Advanced)(Honours)</li></ul>	None, however Chemistry, Mathematical Methods, Physics or Specialist Mathematics are prerequisites for some first year courses.	<ul style="list-style-type: none"><li>• Chemistry</li><li>• Mathematical Methods*</li><li>• Physics</li></ul>
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Mineral Geoscience)</li></ul>	<b>Two subjects chosen from:</b> Biology, Chemistry, Geology, Physics, Scientific Studies, General Mathematics, Mathematical Methods*, Specialist Mathematics, Agriculture and Horticulture, Agricultural and Horticultural Science or Nutrition. Only one mathematics subject can be counted.	<ul style="list-style-type: none"><li>• Chemistry</li><li>• Mathematical Methods*</li><li>• Physics</li></ul>
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Biomedical Science)</li></ul>	<b>Chemistry and one of:</b> Biology, Geology, Physics, Scientific Studies, General Mathematics, Mathematical Methods* or Specialist Mathematics, Agriculture and Horticulture, Agricultural and Horticultural Science or Nutrition.	<ul style="list-style-type: none"><li>• Mathematical Methods*</li><li>• Physics</li></ul>
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Veterinary Bioscience)**</li></ul>	<ul style="list-style-type: none"><li>• Mathematical Methods*</li><li>• Chemistry</li></ul>	<ul style="list-style-type: none"><li>• Physics</li></ul>
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Biotechnology)</li></ul>	<ul style="list-style-type: none"><li>• Mathematical Methods*</li><li>• Chemistry</li></ul>	
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Space Science and Astrophysics)</li><li>• Science (High Performance Computational Physics)(Honours)</li></ul>	<ul style="list-style-type: none"><li>• Mathematical Methods*</li><li>• Specialist Mathematics</li><li>• Physics</li></ul>	None
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Applied Data Analytics (all specialisations)</li></ul>	<ul style="list-style-type: none"><li>• Mathematical Methods*</li><li>• Physics or Specialist Mathematics are prerequisites for some first-year courses</li></ul>	None
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Agricultural Sciences</li><li>• Food and Nutrition Science</li><li>• Science (Animal Science)</li><li>• Science (Marine Biology)</li><li>• Viticulture and Oenology</li></ul>	None	<ul style="list-style-type: none"><li>• Chemistry</li><li>• Mathematical Methods*</li></ul>
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Science (Wildlife Conservation Biology)</li><li>• Science (Animal Behaviour)</li></ul>	None	None
<b>Bachelor of:</b> <ul style="list-style-type: none"><li>• Veterinary Technology</li></ul>	None	<ul style="list-style-type: none"><li>• Mathematical Methods*</li></ul>

\* If Stage 2 studies were undertaken prior to 2017, the equivalent subject was well known as Mathematical Studies.  
\*\* Please note: The Bachelor of Science (Veterinary Bioscience) has additional entry criteria. For more information, visit [www.adelaide.edu.au/degree-finder](http://www.adelaide.edu.au/degree-finder)

 For more information about specific degree requirements visit: [www.adelaide.edu.au/degree-finder](http://www.adelaide.edu.au/degree-finder)

# AGRICULTURE, FOOD AND WINE

## Plant new seeds

Humanity's intelligence lifted us to the top of the food chain long ago; now we're creating entirely new ones. With increasing pressure on resources, the world is hungry for more productive and sustainable food and farming practices. Cross-pollination, genetic engineering, neurogastronomy—it's all on the table.

## Innovators highly sought-after

Demand for graduates in this growing field is high, both locally and internationally.

Whether it's pioneering new food production methods in urban areas, helping to satisfy the growing appetite for our world-famous wine, or becoming an innovator in the commercial world of food, there are many opportunities for you to explore.

Degrees in agriculture, food and wine sciences combine theory with a healthy dose of practical, hands-on experience—great if you're looking for a strong connection with industry throughout your study.

## Waite and Roseworthy campuses

The University of Adelaide's Waite campus is home to: South Australia's only agricultural sciences and viticulture and oenology (wine science) degrees, a number of research partners, and the internationally renowned Waite Research Institute—the largest agricultural research institute in the southern hemisphere.

Staff and students work closely with these organisations, providing a unique opportunity for collaboration on national and international research projects.

A working farm at our Roseworthy campus offers further opportunities for students to build practical skills while they study.



**Want to learn more about working in Agriculture, Food and Wine?**

Listen to our 'In Their Element' podcast

### Episode 3: Food (science), glorious food (science)

Food and Nutrition graduate Millie Shinkfield talks about the versatility of the humble potato (including its use in ice cream!), what inspired her to focus on food waste for her honours project and the pathway that has led her to be in her element.

### Episode 4: Bottled botanicals

Viticulture and Oenology graduate Brendan Carter and Agricultural Sciences graduate Laura Carter discuss the science and art of winemaking, how they channel the Australian identity into their products and what it is like to run a business with your partner.

[www.sciences.adelaide.edu.au/in-their-element](http://www.sciences.adelaide.edu.au/in-their-element)

## WHY THE UNIVERSITY OF ADELAIDE?

**01** NO.1 IN SA FOR FOOD SCIENCE AND TECHNOLOGY\*

**37th** IN THE WORLD FOR AGRICULTURAL SCIENCES\*

**05** MORE THAN 5 JOBS FOR EACH AGRICULTURAL GRADUATE IN AUSTRALIA^

\* Academic Ranking of World Universities by Subject 2020

^ [farminstitute.org.au/newsletter/](http://farminstitute.org.au/newsletter/) 2016/May/feature

## HANNAH MCARDLE

Bachelor of Agricultural Sciences  
Territory Sales Manager,  
Syngenta Australia

“I have a passion for feeding the world—such an important matter that can often be forgotten. I also love working outdoors.”





BACHELOR OF AGRICULTURAL SCIENCES

SATAC CODE 324561	DURATION 3 years full-time (or part-time equivalent)
CAMPUS Roseworthy and Waite	GUARANTEED ENTRY ATAR: 75 / IB: 26
ASSUMED KNOWLEDGE SACE Stage 2: Chemistry and Mathematical Methods	
i adelaide.edu.au/degree-finder Search agriculture	

Be part of the boom

Agriculture is about understanding the land, animals, crops and community. For those seeking a career in the industry, our Bachelor of Agricultural Sciences is the degree of choice. It is ranked 37th in the world\* and is the only Agricultural Science degree in South Australia.

What will you do?

- Our hands-on approach to teaching will set you up to join this booming industry. You will:
- learn how to respond to global food shortages and a changing climate with sustainable practices, environmental stewardship, modern agribusiness and new technology
  - master the latest methods, from adapting genes and cells for new crops to the business of livestock, and explore emerging trends, like vertical farming
  - build practical skills through at least 450 hours of internships and real-world learning at our working farm at Roseworthy
  - work with industry-transforming technology, like drones, GPS and crop sensors
  - go on field trips across Australia (subject to travel restrictions), exploring everything from dryland farming to glasshouse systems
  - develop skills in agribusiness that will allow you to work in the business of farming
  - access the latest research, innovation and technology through government and industry partners.

Where could it take you?

Within just a few months of finishing, almost 95% of our graduates find full-time employment\*\*. In fact, on average there are five jobs available for every graduate^. You'll be set to improve primary production outputs in both rural and city locations. You could work as a consultant, conduct sustainability research, advise on government policy or innovate in urban and vertical farming. You might get a job in ag media, connecting farmers to their customers. Perhaps you'll come up with ways to increase farming efficiency using modern drone technology.

Industry placement

Unlike many other universities, we offer industry work experience: a total of 12 weeks, or 450 hours. This is done during university vacations. In your first and third year, you'll go on numerous field trips and excursions. You'll also have the opportunity for field trips to south-east South Australia and Queensland; and even international trips such as China and India (subject to travel restrictions).

\* *Academic Ranking of World Universities by Subject, 2020*

\*\* *Bachelor of Agricultural Sciences (QILT Outcome Results by Program, 2019)*

^ *farminstitute.org.au/newsletter/2016/May/feature*

BACHELOR OF FOOD AND NUTRITION SCIENCE

SATAC CODE 314761	GUARANTEED ENTRY ATAR: 75 / IB: 26
CAMPUS North Terrace, Waite and Regency Park	DURATION 3 years full-time (or part-time equivalent)
ASSUMED KNOWLEDGE SACE Stage 2: Chemistry and Mathematical Methods	
i adelaide.edu.au/degree-finder Search nutrition • food science	

Feed our future

Food is fundamental to our wellbeing as a society. New approaches to production and processing of food, as well as to our diet, are key for health and sustainability. The Australian food and beverage industry exports \$40 billion a year and is growing rapidly. There is a high demand for food and nutrition scientists able to tackle today's challenges and meet tomorrow's global needs.

**What will you do?**

Our Bachelor of Food and Nutrition Science prepares you to educate and innovate with food. You will:

- tackle global issues like food security and population health to help feed the world into the future
- learn about food systems and production from 'farm gate to fork'
- gain hands-on experience through 120 hours of placement in a food, nutrition or health organisation
- learn how to design, formulate, produce, package and market foods under industry conditions
- develop the skills to use and alter food to combat diet-related health issues
- experiment with chemical composition and flavour combinations in the lab
- explore ways of developing sustainable, nutritious, safe and healthy food supplies.

Where could it take you?

You could work in public health advertising, developing food and nutrition policy, regulations and resources. You might pursue microbiology and increase the nutrient density of plant-based protein products. Perhaps you'll take on a role in food quality assurance, waste management or education. You'll also be eligible to apply for registration as an associate nutritionist, or you could use the program as a pathway into dietetics.

**Professional accreditation**

Upon graduation you'll be eligible for registration as an Associate Nutritionist with the Nutrition Society of Australia. After three years of relevant experience, you can then apply to be a Registered Nutritionist. You can also apply for graduate membership of the Australian Institute of Food Science Technology.

BACHELOR OF FOOD AND NUTRITION SCIENCE (HONOURS)

SATAC CODE 354481	DURATION 4 years full-time (or part-time equivalent)
CAMPUS North Terrace, Waite and Regency Park	GUARANTEED ENTRY ATAR: 75 / IB: 26
ASSUMED KNOWLEDGE SACE Stage 2: Chemistry and Mathematical Methods	
i adelaide.edu.au/degree-finder Search search nutrition • food science	

Feed our future—from out in front

Our direct-entry Bachelor of Food and Nutrition Science (Honours) provides high achieving students with automatic entry into an honours year, provided a 4.5 grade point average (GPA) is maintained. The sustainable production of quality food and nutrition—fundamental to human health and wellbeing—is a thriving, multi-billion-dollar global industry. This degree will equip you to enter this exciting and rewarding field with advanced capability and an employability edge.

**What will you do?**

Like the Bachelor of Food and Nutrition Science, the direct-entry Bachelor of Food and Nutrition Science (Honours) prepares you to educate and innovate in food. During the first three years, you will:

- tackle global issues like food security and population health to help feed the world into the future
- understand food systems and production from 'farm-gate to fork'
- gain hands-on experience through 120 hours of placement in a food, nutrition or health organisation
- learn how to design, formulate, produce, package and market foods
- develop the skills to use and alter food to combat diet-related health issues
- experiment with chemical composition and flavour combinations in the lab
- explore ways of developing sustainable, nutritious, safe and healthy food supplies.

Then, in your honours year, you'll deepen your knowledge through a major research project, acquiring significant research skills along the way.

**Where could it take you?**

You'll graduate with the food and nutrition world at your feet. The bachelor degree's same vast range of career paths will of course be open to you, including a pathway to dietetics. But with your additional honours qualification—and the enhanced capability it signifies—you'll immediately stand out to potential employers.

BACHELOR OF VITICULTURE AND OENOLOGY

SATAC CODE 324611	DURATION 4 years full-time (or part-time equivalent)
CAMPUS Waite	GUARANTEED ENTRY ATAR: 75 / IB: 26
ASSUMED KNOWLEDGE SACE Stage 2: Chemistry and Mathematical Methods	
i adelaide.edu.au/degree-finder Search viticulture • oenology	

Follow your palate

Great wine is central to South Australia's identity. In fact, Adelaide is one of the great wine capitals of the world with over 200 cellar doors within an hour of the CBD. Seventy percent of Australian wine research happens at the University of Adelaide's Waite campus. Our winemakers are innovators and cultural leaders within a sector helping to drive the nation's economy.

**What will you do?**

Our Bachelor of Viticulture and Oenology teaches best-practice techniques for growing wine grapes and making wine. You will:

- get hands-on in our on-campus vineyard and learn to make wine at Australia's largest teaching winery

- build practical skills through an industry placement in viticulture and/or oenology
- study at the largest agricultural teaching and research precinct in the southern hemisphere
- learn from more than 150 researchers and partners in wine and grape science
- access cutting-edge research at the Australian Research Council Training Centre for Innovative Wine Production.

There are also opportunities to study and gain experience overseas.

**Where could it take you?**

Within just a few months of finishing, over 90% of our graduates find full-time employment\*. You'll graduate as a fully trained winemaker or viticulturist. You could manage your own winery or vineyard. You might work with the latest technologies to develop innovations and efficiencies in related industries. Perhaps you'll focus on sustainable and natural practices, building an organic, biodynamic or solar-powered future for the wine industry.

**Industry placement**

In fourth year, you are required to complete an industry experience placement in viticulture and/or oenology. This is a practical placement, based on work experience at a commercial vineyard or winery during vintage.

\* *Bachelor of Viticulture and Oenology (QILT Outcome Results by Program, 2019)*

DANIELA GAGGL

Bachelor of Viticulture and Oenology Technical Officer, Yalumba Nursery

“The viticulture and oenology degree provided theoretical knowledge and hands-on experience through a wide range of amazing courses. This enabled me to find my first job within the wine industry as soon as I graduated.”





# ANIMAL AND VETERINARY SCIENCES

## Lead the pack

On this life-rich planet, humanity's challenges are rarely ours alone. We're intimately connected to, and responsible for, millions of different creatures. Applying science to ensure our relationships with the animal world are healthy and productive is a vital and rewarding task—and one that's changing fast.

As a specialist in this area you could be called upon to: tackle issues like sustainable livestock production and biosecurity; address problems of animal welfare and management; and maximise our beloved pets' health and lifespans.

## Hands-on learning from experts in the field

You'll learn from internationally renowned academics and gain extensive practical skills—both in the field and at our purpose-built veterinary teaching and research clinic. Depending on your chosen degree, you'll have the chance to cover a remarkable range of subjects, from livestock's molecular genetics to veterinary practice management.

## Career flexibility

Your career options will be many. In-depth knowledge in animal and veterinary sciences is central to industries such as food production, conservation, and agriculture—one of Australia's fastest growing sectors.

## Roseworthy campus

Your studies will be based at our Roseworthy campus, an internationally recognised centre for excellence in dryland agriculture, natural resource management and animal production.

Set on over 1500 hectares, it's home to South Australia's only veterinary school and a \$37 million vet clinic, where you can gain clinical experience while studying and utilise emerging technology, like livestock monitoring sensors.



Want to learn more about working in Animal and Veterinary Sciences?

Listen to our 'In Their Element' podcast.

## Episode 1: Walk on the Guide Side

Animal Science graduate Pip Edwards explains the superpowers of a dog's nose, why she chose to work with animals instead of being an engineer, and the challenges of training people, as well as dogs!

[www.sciences.adelaide.edu.au/in-their-element](http://www.sciences.adelaide.edu.au/in-their-element)

## WHY THE UNIVERSITY OF ADELAIDE?

**01** NO.1 IN AUSTRALIA FOR STUDENT SUPPORT IN VETERINARY SCIENCE\*

**01** NO.1 IN AUSTRALIA FOR LEARNING ENGAGEMENT AND RESOURCES IN VETERINARY SCIENCE\*

**TOP 50 IN WORLD FOR VETERINARY SCIENCE\*\***

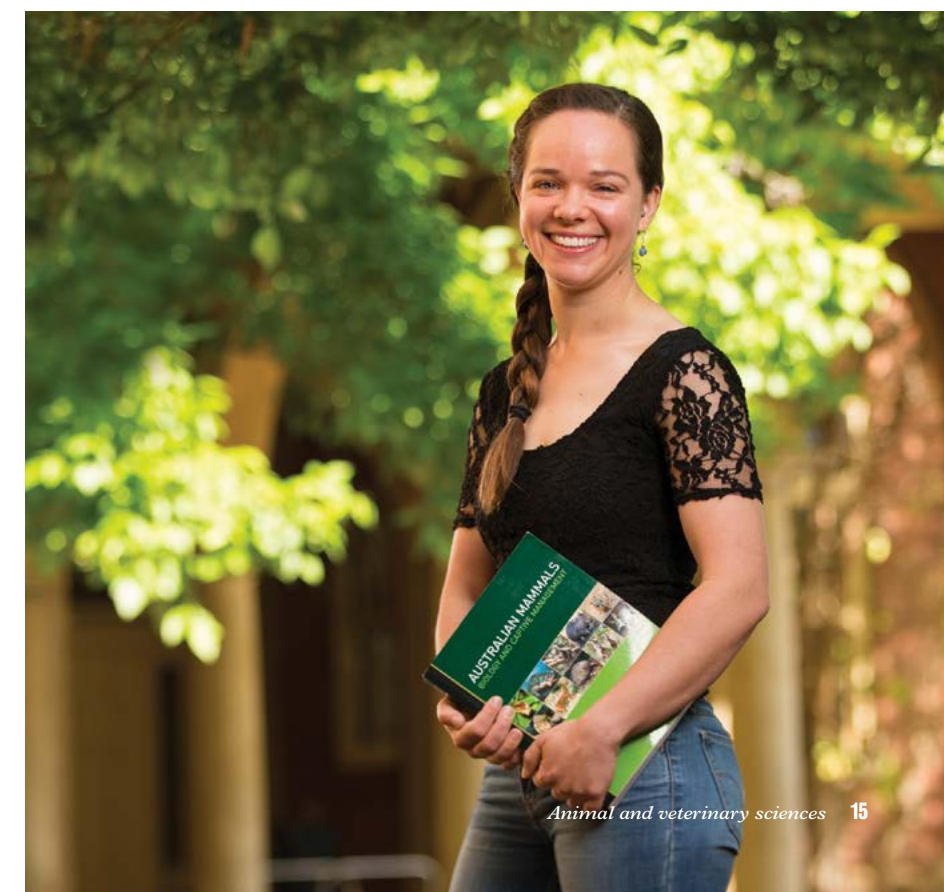
\* Good Universities Guide 2020

\*\* QS World University Rankings by Subject, 2020

## MICHELLE BIRKETT

Bachelor of Science (Animal Science)  
Zookeeper, Adelaide Zoo

“I loved the practical work we did alongside experts in the field and opportunities to help with research. I use knowledge I gained from my degree regularly in my career as a zookeeper.”





## BACHELOR OF SCIENCE (ANIMAL BEHAVIOUR)

<b>SATAC CODE</b> 334171	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace and Roseworthy	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **animal behaviour**

### Communicate across species

Love interacting with animals? Fascinated by pets and their personalities?

Animal behaviour is psychology for the animal kingdom. It's about understanding the science behind why animals act in certain ways, how we should work with them, and how we can look after their futures. It even informs our understanding of human behaviour.

### What will you do?

Explore why cats meow, find out if parrots are smart, and play with the odd puppy or two as you build the skills to join this growing industry. You will:

- study the behaviour of animals big and small, including cats, dogs, birds, horses, livestock, wildlife and insects
- build practical skills through internship opportunities
- join a close-knit, animal-loving community at our Roseworthy campus
- learn about animal development and the biological drivers of behaviour
- explore your personal animal interests through research projects and case studies
- draw on the University's internationally recognised expertise in animal science and veterinary bioscience.

There is also a strong practical element, with opportunities for industry experience, field work and study tours.

### Where could it take you?

You could consult with exotic pets, prepare greyhounds for adoption or work in animal management for local government. You might ready dogs for roles guiding the visually impaired, detecting in customs, or even comforting children with autism and anxiety. Perhaps you'll host your very own animal science show on TV.

## BACHELOR OF SCIENCE (ANIMAL SCIENCE)

<b>SATAC CODE</b> 324141	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace and Roseworthy	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26

**ASSUMED KNOWLEDGE**  
SACE Stage 2 Chemistry and Mathematical Methods

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **animal science**

### Advance outcomes for animals and industry

We rely on animals for so much—labour, entertainment, companionship. Animal science is essential for keeping the animals under our charge housed, fed, healthy and safe.

Animal scientists research new technologies and approaches to managing animal production and welfare, develop and run breeding programs, regulate animal feed and products, and work to decrease the environmental impact of agriculture.

### What will you do?

Our Bachelor of Science (Animal Science) prepares you for success in the lab and the field. You will:

- learn how to positively influence the productivity and welfare of livestock, as well as the health of pets, zoo animals and wildlife
- build practical skills with internship opportunities
- work with a variety of species, including livestock, horses, wildlife, companion animals and laboratory animals
- join a close-knit, animal-focused community at our Roseworthy campus
- study the fundamentals of animal physiology, as you explore areas like wildlife management, nutrition and on-farm management
- draw on the University's internationally recognised expertise in animal and veterinary sciences.

There are also optional work placement opportunities in relevant industries.

### Where could it take you?

You could provide farmers with ways to improve the health and welfare of livestock. Perhaps you'll get a job as a nutritionist developing diets for companion or production animals, or work in a wildlife park or zoo. You might research laboratory animal housing, or ways to detect or control diseases that affect our wildlife.

## BACHELOR OF SCIENCE (VETERINARY BIOSCIENCE)

<b>SATAC CODE</b> 324491	<b>DURATION</b> 3 years full-time
<b>CAMPUS</b> North Terrace and Roseworthy	

**PREREQUISITES**  
SACE Stage 2 Chemistry and Mathematical Methods  
IB: Mathematics: Applications and Interpretations (HL) or Mathematics: Analysis and Approaches (SL) and Chemistry (SL grade 4/HL grade 3)

**ASSUMED KNOWLEDGE**  
SACE Stage 2 Physics

**ADDITIONAL ENTRY REQUIREMENTS**  
To meet the minimum academic threshold for entry, applicants must achieve a Selection Rank of 90 or above, or an International Baccalaureate (IB) score of 33 or above (or the interstate/overseas equivalent). New applications/preferences for Veterinary Bioscience will not be considered after the closing date of 30 September 2021. Late applications will not be considered. Please note that strict quotas apply to the Bachelor of Science (Veterinary Bioscience) degree.  
Applicants must complete a written questionnaire and will also be required to acknowledge their understanding of the Inherent Requirements and Vaccination Guidelines. Further information about entry requirements and a link to the admissions guide can be found on Degree Finder.

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **veterinary**

### Keep animals happy and healthy

Veterinarians are dedicated to the wellbeing of animals. They are scientists, surgeons, carers and lifelong learners.

Our Bachelor of Science (Veterinary Bioscience) is ranked 49th in the world for veterinary sciences and has a Five Star Excellence in Research Australia ranking.\*

### What will you do?

You'll enjoy the smallest class size of any veterinary program in Australia. This means more personalised attention from our highly experienced teachers and researchers as you:

- explore the anatomy, physiology and behaviour of normal animals and identify the pathogenic organisms that attack them
- learn about animal handling and husbandry
- experience real industry settings, including farms and intensive production facilities
- undertake a significant amount of hands-on animal work, starting in semester 1
- access our \$37 million purpose-built veterinary teaching and research facilities.

### Where could it take you?

This is the first part of the veterinary science program. Graduates gain direct entry into the Doctor of Veterinary Medicine program. Completing both degrees makes you eligible to register as a veterinarian, where you might own a practice or travel to farms around the country treating animals. Veterinary

bioscience could also lead to roles in research in equine, zoo animal or wildlife medicine. You might even work in biosecurity, managing programs to prevent disease and pollution.

### Professional accreditation

Our veterinary science program is comprised of two degrees: the Bachelor of Science (Veterinary Bioscience) and the Doctor of Veterinary Medicine (Masters by Coursework (Extended)). To practise as a veterinarian, you must complete both degrees, which is six years in total.

The veterinary science program at the University of Adelaide has been granted accreditation by the Australasian Veterinary Boards Council (AVBC), the Veterinary Surgeons' Board of Hong Kong and the Royal College of Veterinary Surgeons (UK).

This means when you graduate from your masters, you'll be eligible for registration as a veterinarian in Australia, New Zealand, South Africa, Singapore, the United Kingdom and Hong Kong.

\* *QS World University Rankings by Subject, 2020 and 2018 Excellence in Research for Australia*

## BACHELOR OF VETERINARY TECHNOLOGY

<b>SATAC CODE</b> 354091	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> Roseworthy	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26

**ASSUMED KNOWLEDGE**  
SACE Stage 2 Mathematical Methods

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **veterinary • technology**

### Lead transformative animal care

Also known as allied veterinary professionals or veterinary paraprofessionals, veterinary technologists play a vital role in modern animal welfare. As well as providing high-level, hands-on veterinary care, including being a part of the anaesthesia, surgery and diagnostic imaging team, they oversee the application of cutting-edge new veterinary technology.

Data-driven apps, wearable devices, telemedicine—a steady stream of advanced new tools is reimagining what's possible in the clinical environment. As a veterinary technologist, you can ensure it delivers maximum benefit to animals' health and wellbeing.

### What will you do?

Our Bachelor of Veterinary Technology is part of the University's world-top-50 suite of veterinary science and veterinary-related degrees\*. Studied over three years full-time, it will give you:

- high-level practical skills in caring for all kinds of animals—from cats, dogs and horses, to farm animals, wildlife and exotic pets
- the ability to independently operate state-of-the-art veterinary technologies
- training and experience in the use of anaesthetic and analgesic drugs
- deep knowledge of animal diseases, including those threatening humans
- extensive hands-on clinical experience
- regular access to our world-class, \$37 million Veterinary Health Centre.

In third-year you'll also have the opportunity to specialise in: small animals; anaesthesia; imaging; equine; farming; or practice management. And you'll collaborate with Veterinary Bioscience and Doctor of Veterinary Medicine students throughout the degree, reflecting real-world workplace interactions.

### Where could it take you?

You'll graduate ready to step straight into high-level animal-care roles in a wide range of industry settings. You could oversee imaging or anaesthesia services for a veterinary hospital or clinic. You might care for big cats in an open-range zoo. Perhaps you'll train biosecurity emergency-response personnel. You could even support important animal research, or—with further study—lead it yourself.

\* *QS World University Rankings by Subject, 2020*





# BIOMEDICAL SCIENCE AND BIOTECHNOLOGY

## The hidden heroes of health

Biomedical science is at the heart of healthcare and medical discoveries. From looking at the brain to understand stress and anxiety, to developing new treatments for diseases and illnesses, it can transform the health of whole populations and help each of us to lead healthy and full lives.

With advanced technologies and data analytics opening doors to things that would have seemed miraculous only years ago, biotechnology is poised to transform life as we know it. Stem-cell therapy, genetic modification, environmentally friendly chemicals, clones—feeding, fuelling and healing the world has never been more exciting.

The University of Adelaide is a world leader in these fast-growing areas. As a student with us, you'll have access to some of the most advanced technology in the southern hemisphere, and learn from acclaimed innovators in the industry.

## Advancing health through research

Our world is built on biology—every living organism wired with genetic hardware. In the 1970s, we began deciphering its code. Today, we're altering it.

Drawn to us from all over the world, our researchers—the same people who'll teach you as a student—are pursuing potential

cures for major diseases and exploring biological processes at a molecular level.

Our research centres are playing a critical role in the eradication of viruses, including COVID-19, and understanding the molecular mechanisms of chronic diseases, such as Alzheimer's disease.

These pioneering researchers are also developing, and teaching with, state-of-the-art equipment, such as CRISPR gene editing technology. The University of Adelaide houses the first genome editing facility in Australia.



**Want to learn more about working in Biomedical Science and Biotechnology?**

Listen to our 'In Their Element' podcast.

## Episode 6: A good time to cell

Biotechnology graduate Reuben Jacob discusses how biotechnology harnesses nature's toolbox for the good of mankind, his plight to eradicate ovarian cancer after losing his grandmother to the disease, and the thrill of constant discovery.

[www.sciences.adelaide.edu.au/in-their-element](http://www.sciences.adelaide.edu.au/in-their-element)

## WHY THE UNIVERSITY OF ADELAIDE?



**90% INCREASE IN BIOTECHNOLOGY JOBS OVER PAST 10 YEARS\***



**TOP 150 IN WORLD FOR BIOLOGICAL SCIENCES^**



**HOME TO AUSTRALIA'S FIRST GENOME EDITING FACILITY**

\* biotechinstitute.org 2017

^ QS World University Rankings by Subject, 2020



## LUKE WEINEL

Studied Molecular Biology  
Eye Bank Coordinator, SA Health

**“ My degree taught me the interpersonal skills and academic knowledge to take my science career in any direction and field I wanted. ”**



BACHELOR OF SCIENCE  
(BIOMEDICAL SCIENCE)

SATAC CODE 314091	DURATION 3 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 75 / IB: 26

**PREREQUISITES**  
SACE Stage 2: Chemistry plus one of Physics, Mathematical Methods, Specialist Mathematics, Biology, Geology, Scientific Studies, Agriculture and Horticulture, Agricultural and Horticultural Science or Nutrition. IB: Chemistry (SL grade 4/HL grade 3) and one other science subject (SL grade 4/HL grade 3) or Mathematics: Applications and Interpretations (HL) or Mathematics: Analysis and Approaches (SL).

**ASSUMED KNOWLEDGE**  
SACE Stage 2 Mathematical Methods, Physics

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **biomedical**

Drive the future of health and medicine at the molecular level

Do you have an interest in medical biology and human health? Are you keen to discover more about human disease, from its cause and diagnosis through to novel treatments and cures? Biomedical scientists are vitally important. They advance world-changing discoveries to improve the health and quality of people’s lives. The University of Adelaide is ranked in the top 150 in the world for biological sciences and best in South Australia\*.

What will you do?

- Our Bachelor of Science (Biomedical Science) gives you the knowledge and skills to access an emerging global sector. You will:
- learn the skills to drive the future of healthcare, from vaccine discovery to disease prevention
  - gain real-world practical insights from industry lecturers and placements
  - study how the body works and what happens when it fails
  - explore how to stop deadly outbreaks of disease and create life-saving vaccinations
  - build a vast knowledge base from simple molecules to whole organisms
  - learn directly from active world-class biomedical researchers and educators.

Areas of specialisation include:

- Biochemistry
- Genetics
- Microbiology and Immunology.

Where could it take you?

You could be performing cutting-edge cancer research, or modifying genes for vaccines. You might design drugs for the pharmaceutical industry. Perhaps you’ll work directly with patients after completing a degree in postgraduate medicine or allied health.

\* *QS World University Rankings by Subject Biological Sciences, 2020*

BACHELOR OF SCIENCE  
(BIOTECHNOLOGY)

SATAC CODE 314691	DURATION 3 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 75 / IB: 26

**PREREQUISITES**  
SACE Stage 2: Mathematical Methods, Chemistry IB: Mathematics: Applications and Interpretations (HL) or Mathematics: Analysis and Approaches (SL), Chemistry (SL grade 4/HL grade 3).

**ASSUMED KNOWLEDGE**  
SACE Stage 2 Physics

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **biotechnology**

Use new technologies to improve health outcomes

Biotechnology focuses on biology and technology, leading to the development of new products for feeding, fuelling and healing the world. This might include vaccine, antibiotic or hormone production and genetic modification. It’s a fast-evolving industry with huge potential for improving global health and wellbeing. When we modify living things, all sorts of marvels become possible.

What will you do?

- Our Bachelor of Science (Biotechnology) combines traditional science with aspects of engineering and computer science. You will:
- give your experimentation meaning as you learn how to take your discoveries from the lab to the market and broader community
  - delve into areas like drug development, gene therapy or the identification of biomarkers for cancers
  - learn how to produce food, drugs and other products
  - study alongside research-active experts
  - explore molecular, genetic, animal and plant biology
  - discover microbial biotechnology and bioprocess engineering
  - consider social and ethical issues, patents and waste management.

Where could it take you?

You could concoct world-changing pharmaceutical drugs in the lab. You might work to clone animals. Perhaps you’ll aid in the development and implementation of modern techniques for disease prediction and treatment.

BACHELOR OF SCIENCE  
(BIOTECHNOLOGY)  
(HONOURS)

SATAC CODE 354491	CAMPUS North Terrace
DURATION 4 years full-time (or part-time equivalent)	GUARANTEED ENTRY ATAR: 75 / IB: 26

**PREREQUISITES**  
SACE Stage 2 : Mathematical Methods, Chemistry. IB: Mathematics: Applications and Interpretations (HL) or Mathematics: Analysis and Approaches (SL), Chemistry (SL grade 4/HL grade 3).

**ASSUMED KNOWLEDGE** SACE Stage 2: Physics

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **biotechnology**

Harness even more of nature's potential

Our direct-entry Bachelor of Science (Biotechnology) (Honours) provides high achieving students with automatic entry into an honours year, provided a 4.5 grade point average (GPA) is maintained. Biotechnology—integrating biology and technology to create innovative solutions—has enormous potential to feed, fuel and heal. This degree will prepare you to enter this exciting and vital industry with advanced capability and an employability edge.

What will you do?

- Like the Bachelor of Science (Biotechnology), the direct-entry Bachelor of Science (Biotechnology) (Honours) combines biology with aspects of engineering and computer science. During the first three years, you will:
- delve into molecular, genetic, animal and plant biology
  - experiment with protein separation, fermentation, genomics and proteomics
  - use revolutionary gene editing technology at Australia’s first genome editing facility
  - explore microbial biotechnology and bioprocess engineering
  - learn how to produce food, drugs and other products
  - consider global social, economic, environmental and ethical issues, patents and waste management.

In addition to a Molecular Biology major, you’ll be able to choose a second specialisation in: Bioinformatics; Chemistry; Genetics; or Microbiology and Biomedical Science.

You can also gain valuable work experience through an industry internship. And your research skills will be honed through a major research project and/or industry-related project in your honours year.

Where could it take you?

You’ll graduate with the biotech world at your feet. The bachelor degree’s same vast range of career paths will of course be open to you. But with your additional honours qualification—and the enhanced capability it signifies—you’ll immediately stand out to potential employers.





# EARTH AND ENVIRONMENTAL SCIENCES

## Have nature's back

From giant cuttlefish in the sea to arid deserts, subterranean caves and rainforests teeming with life—our planet is a place of awe and wonder. It begs for exploration, deep understanding, and increasingly—with threats looming—resolute action.

Some of the most significant global issues we face today require immediate attention to solve. This includes challenges such as: bushfires; species protection; ocean pollution; and the need to better connect people to nature so they appreciate the importance of preserving our environment.

Here at the University of Adelaide we can prepare you to become one of these vital environmental advocates. In fact, the University played a key role in the response to recent bushfires, and continues to channel research power into areas like conservation and climate change adaptation to reduce knowledge gaps and risk.

Splitting your time between the lab and the field, you'll learn to use advanced technology to collect data, tackle conservation issues, track species and monitor natural disasters with incredible precision. You'll emerge ready to help build a sustainable future for our planet.

## Explore our planet

Earth is undergoing change at a rapid rate. Scientific understanding of mineral and energy resources, geological hazards and sustainability has never been more critical. Earth Sciences at the University of Adelaide sits at the heart of these challenges, and their

solutions. You could join our quest to find sustainable solutions in the mineral, energy and resource sectors, or examine the history of our planet to provide insight into our future. Or, you might choose to study new methods of forecasting earthquakes.

## Research

The University of Adelaide leads internationally significant research through the Environment Institute and the Institute for Mineral and Energy Resources, both situated on campus. Our research into areas such as palaeoclimatology, conservation, marine biology and water management is helping to find new approaches to global problems.



## Want to learn more about working in Environmental Science?

Listen to our 'In Their Element' podcast

## Episode 5: Call of the wild

Ecology major Jacob Maher talks about sustainability in our urban environment, the different ways technology is changing the field of ecology and charismatic animals!

[www.sciences.adelaide.edu.au/in-their-element](http://www.sciences.adelaide.edu.au/in-their-element)

## WHY THE UNIVERSITY OF ADELAIDE?

**01** NO.1 IN SA FOR EARTH SCIENCES RESEARCH\*\*

 **TOP 100 WORLD RANKING FOR EARTH SCIENCES\***

**01** NO.1 IN SA FOR GRADUATE CAREERS IN ENVIRONMENTAL STUDIES^

^ Graduate Outcomes Survey, 2019

\* QS World University Rankings by Subject, 2020

\*\* Excellence in Research for Australia, 2018

## SARAH HAMLYN

Bachelor of Science (Marine Biology)

Staff Biologist, Monte Marine Laboratory at the International Centre for Coral Reef Research and Restoration, Florida

“Extended field trips into both marine and freshwater environments allowed me to obtain invaluable hands-on experience gathering and analysing real-life data and understanding how to conduct rigorous experiments in the field.”





BACHELOR OF SCIENCE
(MARINE BIOLOGY)

SATAC CODE 324431	DURATION 3 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 75 / IB: 26
ASSUMED KNOWLEDGE SACE Stage 2: Chemistry and Mathematical Methods	
i adelaide.edu.au/degree-finder Search marine biology	

Go below the surface

Marine biology is the study of our planet’s largest and most diverse ecosystem—the sea. Marine biologists observe, preserve and discover ocean life, from tiny shelled creatures and thriving underwater forests to flashing squids and roving sharks.

What will you do?

- Our Bachelor of Science (Marine Biology) has a focus on contemporary marine biology practices on both a local and global scale, with a five-star student satisfaction ranking for teaching quality and overall experience\*. You will:
- get hands-on in marine and freshwater environments
- master your expertise in the lab, then apply these techniques in the field
- learn the skills to be able to work on temperate seas—from sub-polar to sub-tropical, where there is a high demand for graduates
- explore pressing and critical issues like conservation, species protection and the effects of plastics on the ocean
- access cutting-edge technology and equipment used in pioneering research around the world
- learn from nationally and internationally acclaimed researchers
- dive into coastal management, evolutionary science and marine ecology.

Where could it take you?

You could explore future life in a high-CO2 world, dive on underwater volcanoes or lead oceanic ecotours. You might study the effects of climate change on our reefs or research the impact of microplastics in fish. Perhaps you’ll make documentaries to educate the wider public or discover totally new marine species.

\* Student Experience Survey Teaching Quality Satisfaction Level, 2018

BACHELOR OF SCIENCE
(MINERAL GEOSCIENCE)

SATAC CODE 324551	DURATION 3 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 75 / IB: 26
PREREQUISITES SACE Stage 2: any two science subjects chosen from Biology, Chemistry, Geology, Mathematical Methods, Physics, Agriculture and Horticulture, Agricultural and Horticultural Science, Nutrition, Scientific Studies or Specialist Mathematics. (NB: only one mathematics subject may be counted.) IB: two science subjects (minimum grade 4 for SL, 3 for HL), or one science subject plus Mathematics: Applications and Interpretations (HL) or Mathematics: Analysis and Approaches (SL)	
ASSUMED KNOWLEDGE SACE Stage 2 Chemistry, Mathematical Methods, Physics	
i adelaide.edu.au/degree-finder Search mining + geoscience, geology	

Rock-solid job opportunities

Mineral geoscience is all about Earth’s mineral resources—their nature, origin, distribution, discovery and uses. Geoscientists explore for metallic and non-metallic deposits and find environmentally safe ways to dispose of waste materials from mining.

What will you do?

- Our Bachelor of Science (Mineral Geoscience) prepares you for an interesting, well-paid and diverse career in the minerals and energy sector. You will:
- get hands-on with plenty of field work and exposure to industry in this high-demand field
- learn about mining, engineering and mineral resources
- explore Earth’s mineral resources—their nature, origin, distribution, discovery and uses
- see rocks in their natural habitat, study the oceans and learn how to read history from the Earth
- take integrated and extended geology, tectonics and geophysics courses.

Where could it take you?

Mineral geoscience graduates are in high demand. You might work in exploration, making the calls on where next to drill for diamonds. You could journey below the surface as an underground mine geologist. Perhaps you’ll work on solutions for repairing the environmental impacts of mining.

BACHELOR OF SCIENCE
(WILDLIFE CONSERVATION BIOLOGY)

SATAC CODE 324911	DURATION 3 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 75 / IB: 26
i adelaide.edu.au/degree-finder Search wildlife	

Make a real impact

Wildlife is vanishing throughout the world. Many species will disappear during your working life. Do you want to buck this trend and reverse imminent species loss? Our Bachelor of Science (Wildlife Conservation Biology) gives you the knowledge and skills to safeguard our ecosystems and protect the future of wildlife in crisis.

What will you do?

- This degree is hands-on and prepares you to become a conservation advocate in both theory and practice. You will:
- split your time between the lab and the field as you learn to champion biodiversity conservation
- use new technology, like drones and satellites to collect data and monitor habitats
- conduct field research for real-life monitoring programs
- build valuable industry connections with organisations—from Arid Recovery and BioR in South Australia to Conservation International
- learn to identify plants and animals in natural settings
- consider the social, political and economic constraints of the field
- develop the skills to plan, execute and monitor habitat restoration programs for declining species.

Where could it take you?

Our conservation graduates go on to all sorts of exciting and rewarding careers. You might reconstruct local habitats or lead breeding programs in sanctuaries. You could monitor the movements of animals with satellite tracking and other remote techniques. Perhaps you’ll work in academia, researching your passion and inspiring the next generation of conservationists.





# SCIENCES

## Focus your passion

Scientists vary as much as the discoveries they've brought to the world.

While some work in labs, others spend their days in more unexpected places. A space scientist might work in the icy fields of the South Pole hunting for subatomic particles. A data scientist may use their statistical expertise to wade through big data and find solutions across any number of industries. A physicist could work deep in the online world of cybersecurity.

The University of Adelaide gives you the breadth and depth of knowledge to set you on the path to making a difference in your area of interest. Where you want to work and the scientific contributions you make is up to you.

Ecology, business, space, palaeontology... which future will you choose?

## Contribute to world-class research

Wherever you focus your scientific curiosity here, you'll be exposed to world-class research and learn from experts who are actively involved in internationally recognised projects. You'll even have the chance to work with them.

Ours is one of only three universities in the world to be involved with finding the Higgs boson and high-energy neutrinos from an active galaxy, as well as the Nobel Prizewinning discovery of gravitational waves. And our students were part of all three projects.

So, as you can see, there'll be plenty of opportunities for you to contribute to new research and discoveries.



**Want to learn more about working in Space Science and Astrophysics?**

*Listen to our 'In Their Element' podcast.*

### Episode 2: The sky's the limit

Space Science and Astrophysics graduate, Phoebe DeWilt, talks about her love of science; why she is happy to have let go of her childhood dream to travel to space; and the study pathway that has led her to be in her element.

[www.sciences.adelaide.edu.au/in-their-element](http://www.sciences.adelaide.edu.au/in-their-element)

## WHY THE UNIVERSITY OF ADELAIDE?

**Top 100 world ranking for Science\***

**05\*** for student support\*\*

**05** Top 5 highest paid jobs in Adelaide are in STEM industries^

\* QS World Rankings by Subject, 2020

\*\* Good Universities Guide 2021

^ SEEK Salary Report July, 2017

## DR JONATHAN HALL

Co-founder and Director, Life Whisperer  
ThinLab  
Bachelor of Science

“The University was a place where I could find like-minded people who loved the things I wanted to learn about. Because of that, I have the skills, mindset and patience to tackle many problems in science or industry, and create my own jobs and business opportunities.”





BACHELOR OF APPLIED  
DATA ANALYTICS

<b>SATAC CODE</b> Various - refer to Degree Finder	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace and Waite	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26

**PREREQUISITES**  
SACE Stage 2: Mathematical Methods  
IB: Mathematics: Applications and Interpretations (HL) or Mathematics: Analysis and Approaches (SL)  
\* Please note: SACE Stage 2 Physics and/or Specialist Mathematics are prerequisites for some first-year courses

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **data** • **analytics**

Drive evidence-based decision-making

For decision-makers, data is gold. But only if it can be interpreted accurately. All around the world, in every industry, employers are seeking professionals with not only statistical expertise, but the ability to ‘see’ new solutions in oceans of numbers.

Our Bachelor of Applied Data Analytics will help you step into this critical role in one of seven specialist areas: agriculture, bioinformatics, economics, environment, geosciences, physics, or public health.

What will you do?

The degree is unique in Australia in combining big-data analytics training with decision science. You will:

- learn to use big-data analytics within your chosen discipline, giving you the skills employers are looking for
- gain valuable industry experience through internship opportunities
- develop skills in statistical inference, including using machine learning
- design new models to address complex problems
- apply data analysis to develop organisational strategies for success in your chosen discipline
- undertake a significant research project in your final year.

Where could it take you?

You’ll be well equipped to help organisations in your chosen area of specialisation identify opportunities for improvement and growth. You could work in government, consultancies or large corporations, at home or abroad. Or perhaps you’ll apply your knowledge to drive decision-making in a venture of your own.

BACHELOR OF SCIENCE

<b>SATAC CODE</b> 314581	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26

**NOTE** SACE Stage 2 Mathematical Methods, Chemistry, Physics or Specialist Mathematics are prerequisites for some first-year courses

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **science**

Discover our world

Love science but not sure which path to take?

The Bachelor of Science lets you design your own degree based on your strengths and emerging interests. From chemistry to palaeontology, genetics to geophysics... we support your scientific curiosity.

Our degree is ranked best for Science in South Australia, and among the top 100 in the world\*.

What will you do?

Whether you want to use your critical thinking to help drive global change or join the cutting-edge of research, our Bachelor of Science will give you the skills you need. You will:

- become an adaptable scientist as you learn the skills to evolve with one of the fastest-growing sectors
- learn from world-class researchers who are experts in their field
- develop connections in the science world through internships
- engage with new ideas through discovery and experiential learning
- develop in-depth discipline knowledge through a major
- build highly sought-after skills in communication, critical thinking and creative problem solving
- access research facilities of international significance.

You can pursue any of the following major areas of study:

- Biochemistry
- Bioinformatics
- Chemistry
- Ecology
- Evolutionary Biology
- Genetics
- Geology
- Geophysics
- Microbiology and Immunology
- Palaeontology
- Physics

- Plant Biology
- Soil Science
- Theoretical Physics.

Where could it take you?


You could surround yourself with plants as a botanist, work in stem cell research, take up teaching or apply your skills in the business world. You might help the public engage with science through games and apps. Perhaps you’ll launch your abilities as a space entrepreneur, one of the many emerging science roles we’re only just beginning to imagine.

\* *QS World University Rankings by Subject, 2020*





BACHELOR OF SCIENCE (HONOURS)

<b>SATAC CODE</b> 354101	<b>DURATION</b> 4 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26
<b>NOTE</b> SACE Stage 2 Mathematical Methods, Chemistry, Physics or Specialist Mathematics are prerequisites for some first-year courses	
 <a href="https://adelaide.edu.au/degree-finder">adelaide.edu.au/degree-finder</a> Search <b>science</b>	

Discover more of our world

If you haven’t yet chosen an area of science to specialise in, but are sure that—once you have—you’ll want to follow that path as far as it can take you, this degree’s for you. Building on the Bachelor of Science, our direct-entry Bachelor of Science (Honours) lets you thoroughly explore your scientific curiosity before specialising—and going on to gain next-level capability and an employability edge. The degree is taught by a faculty ranked number one for Science\* in South Australia.

What will you do?

Your first year is all about discovery. You’ll investigate a number of scientific fields, before choosing a major to focus on in years two and three (see Bachelor of Science for choices).

During this time, you’ll enjoy the same fantastic opportunities offered to all Bachelor of Science students. That includes developing real-world connections through internships, and potentially gaining global experience with international study. In your honours year, you’ll then advance along either a disciplinary research or professional skills pathway. The disciplinary research path is the most research-intensive.

Working with a specific researcher or research group, you’ll undertake a major research project, together with advanced coursework, in one of the following study areas:

- agriculture
- animal science
- chemistry
- ecology/environmental science
- environmental geoscience
- evolution and palaeobiology
- food and nutrition
- geology
- geophysics
- horticulture
- molecular and biomedical science
- physics
- plant science

- soil science
- viticulture
- wine science.

The less research-intensive professional skills pathway will expand your scientific knowledge and skills more broadly. You’ll undertake a major industry or community-related project, along with advanced general coursework, in your choice of:


- science communication
- science education
- science innovation
- science policy
- project management.

Where could it take you?

Depending on your study choices, you could emerge well prepared for a high-level career in a specific scientific discipline. You might provide society with critical big-picture insights as a science generalist. Or perhaps you’ll aim higher still and go on to PhD-level research. Wherever you want to go, you’ll be well placed.

\* *QS World University Rankings by Subject, 2020*

BACHELOR OF SCIENCE (ADVANCED) (HONOURS)

<b>SATAC CODE</b> 354111	<b>DURATION</b> 4 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 95 / IB: 37
<b>NOTE</b> SACE Stage 2 Mathematical Methods, Chemistry, Physics or Specialist Mathematics are prerequisites for some first-year courses	
 <a href="https://adelaide.edu.au/degree-finder">adelaide.edu.au/degree-finder</a> Search <b>science + advanced</b>	

Be a visionary science leader

Like the Bachelor of Science (Honours), our direct-entry Bachelor of Science (Advanced) (Honours) is ideal if you haven’t yet chosen an area of science to specialise in, but—once you have—want to follow that path well beyond step one.

The program again builds on South Australia’s highest-ranked undergraduate Science degree\*, and lets you explore your scientific curiosity before specialising. But at every stage you’ll be challenged by even greater academic demands. Ultimately, you’ll emerge as a clear future leader in your field.

What will you do?

Your first year is all about discovery. You’ll investigate a number of scientific fields, before choosing a major to focus on in years two and three (see Bachelor of Science (Advanced) for choices).

During this time you’ll enjoy the same fantastic opportunities offered to all Bachelor of Science (Advanced) students. That includes developing advanced research skills, making real-world connections through internships, and potentially gaining global experience with international study. In your honours year, you’ll then advance along either a disciplinary research or professional skills pathway. The disciplinary research path is the most research-intensive.

Working with a specific researcher or research group, you’ll undertake a major research project, together with advanced coursework, in one of the following study areas:

- agriculture
- animal science
- chemistry
- ecology/environmental science
- environmental geoscience
- evolution and palaeobiology
- food and nutrition
- geology
- geophysics
- horticulture
- molecular and biomedical science
- physics
- plant science
- soil science
- viticulture
- wine science.

The less research-intensive professional skills pathway will expand your scientific knowledge and skills more broadly. You’ll undertake a major industry or community-related project, along with advanced general coursework, in your choice of:


- science communication
- science education
- science innovation
- science policy
- project management.

Where could it take you?

Depending on your study choices, you could emerge well prepared for senior and leadership roles in a specific scientific discipline or as a science generalist, in the public or private sector. Or perhaps you’ll aim higher still and go on to PhD-level research. Wherever you want to go, you’ll be perfectly placed.

\* *QS World University Rankings by Subject, 2020*

BACHELOR OF SCIENCE (ADVANCED)

<b>SATAC CODE</b> 324651	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 95 / IB: 37
<b>NOTE</b> SACE Stage 2 Mathematical Methods, Chemistry, Physics or Specialist Mathematics are prerequisites for some first-year courses	
 <a href="https://adelaide.edu.au/degree-finder">adelaide.edu.au/degree-finder</a> Search <b>science + advanced</b>	

Be a visionary

Love scientific enquiry and research? Aspire to be outstanding in your field? The Bachelor of Science (Advanced) is a distinctive vocational degree for high-achieving students who want to excel in their chosen career.

What will you do?

Our advanced degree challenges you to take your scientific training and research skills to the next level. You will:

- learn to drive scientific breakthroughs as you join a research-rich institution at the cutting edge of discovery
- dive straight into life as a researcher with early access to real-world research opportunities usually reserved for honours or postgraduate students
- link with academic mentors and staff in pioneering research areas, allowing you to establish networks before you graduate
- build a breadth of experience through lab placements and a semester-long research project
- work on further projects that can be developed for an honours year and postgraduate study (masters or PhD).

You’ll design your own degree from a broad range of scientific majors:

- Biochemistry
- Bioinformatics
- Chemistry
- Ecology
- Evolutionary Biology
- Genetics
- Geology
- Geophysics
- Microbiology and Immunology
- Palaeontology
- Physics
- Plant Biology
- Soil Science
- Theoretical Physics.

Where could it take you?

You’ll graduate with enhanced research and project management skills for further study or leadership roles in your chosen specialisation. You could solve global ecology challenges or win the Nobel Prize as a quantum physicist. You might spearhead an entirely new career in space entrepreneurship, genomic editing, or stem cell engineering. Perhaps you’ll communicate science as an educator, politician, or legislator. Whatever you choose, you’ll be prepared to lead the world.



BACHELOR OF SCIENCE  
(SPACE SCIENCE AND  
ASTROPHYSICS)

SATAC CODE 324101	DURATION 3 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 75 / IB: 26

**PREREQUISITES**  
SACE Stage 2: Physics, Mathematical Methods  
and Specialist Mathematics  
IB: Mathematics: Analysis and Approaches (HL)  
and Physics (SL grade 4/HL grade 3)

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **space** • **astrophysics**

The final frontier

Want to delve into the depths of our solar system? Explore the universe's most distant galaxies?

This is the number one degree in South Australia for Astronomical and Space Sciences research and access to researchers, including Nobel Prize winners and the recipient of the 2020 Prime Minister's Award for Science.

What will you do?

Our Bachelor of Science (Space Science and Astrophysics) places a strong emphasis on maths and physics. You will:

- work with, and learn from, international researchers whose ground-breaking and award-winning discoveries are changing the way we understand our universe
- develop problem-solving skills critical to modern careers in physics, high-tech and space industries, and big data science
- have the opportunity to take part in project work with established scientists
- discover the fundamental processes which define our universe and planet
- unravel the mysteries of space through core training in astronomy and space science
- supplement learning with other science, geoscience, and maths programs.

Will you engage with the Australian  
Space Agency?

With the new agency located right next door to our campus, there could be opportunities to interact with industry, start-ups and space technology enterprises.


Where could it take you?

You might research star formation with a national space agency or be a planetarium director. You could forecast geomagnetic storms at the Bureau of Meteorology. Perhaps you'll work in an observatory, publish a book or host the next award-winning space documentary.

BACHELOR OF SCIENCE  
(HIGH PERFORMANCE  
COMPUTATIONAL PHYSICS)  
(HONOURS)

SATAC CODE 324171	DURATION 4 years full-time (or part-time equivalent)
CAMPUS North Terrace	GUARANTEED ENTRY ATAR: 90 / IB: 33

**PREREQUISITES**  
SACE Stage 2: Physics, Mathematical Methods  
and Specialist Mathematics  
IB: Mathematics: Analysis and Approaches (HL)  
and Physics (SL grade 4/HL grade 3)

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **high** • **physics**

Enter the world of supercomputers

Love calculations, formulas and data-enabled science? Want to solve cutting-edge problems at the forefront of physics?

Computational physics is a rapidly growing and highly interdisciplinary research area. High-performance computations are an essential part of modern research in particle physics, condensed-matter physics, astrophysics, fluid mechanics, quantum field theory, quantum chromodynamics, and plasma physics.

What will you do?

In our Bachelor of Science (High Performance Computational Physics) (Honours) you will:

- find answers to cutting-edge problems using high-performance computing
- learn to program parallel supercomputers using state-of-the-art computer languages
- access the University's 300-teraflop supercomputer, Phoenix
- immerse yourself in small-group discovery experiences with like-minded peers
- take core courses in physics, mathematics and computer science
- apply sophisticated computing skills to modern physics problems.

In your final-year honours program, you'll dive deep into theoretical or computational physics and physics applications. This includes specialist research projects and courses.

Where could it take you?

Your advanced computational and mathematical skills will enable you to pursue a wide range of careers, everywhere from the computer industry—including cybersecurity and defence—to physics research and investment banking.





# DOUBLE DEGREES

## BACHELOR OF ARTS WITH BACHELOR OF SCIENCE

<b>SATAC CODE</b> 324021	<b>DURATION</b> 4 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 75 / IB: 26

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **arts** + **science**

This double degree provides incredible scope for students to follow their emerging interests and scientific curiosity, with 39 science and arts majors available. Students become skilled in the scientific method of experimentation and research, and build a strong foundation of scientific knowledge within their chosen area.

The BA links with the human element and impact of the science learning. Students grow to become innovative and creative thinkers, with powerful communication skills, ready for an exciting and diverse range of careers.

## BACHELOR OF LAWS AND BACHELOR OF SCIENCE

<b>SATAC CODE</b> 324111	<b>CAMPUS</b> North Terrace
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**DURATION** 5 years full-time (or part-time equivalent)

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **laws** + **science**

## BACHELOR OF ENGINEERING (HONOURS) WITH BACHELOR OF SCIENCE

<b>SATAC CODE</b> Various – search Degree Finder	<b>DURATION</b> 5 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 80 / IB: 29

**PREREQUISITES** Refer to degree finder

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search

This suite of double degrees combines various disciplines of engineering and science, allowing students to study two degrees simultaneously. By combining

these complementary areas of study, graduates can have a more diverse experience at university, broaden their career prospects, and gain a competitive edge in the job market.

The Bachelor of Engineering (Honours) combinations that may be paired with the Bachelor of Science include:

- Chemical\*
- Civil
- Electrical and Electronic\*\*
- Environmental
- Mechanical
- Mining
- Petroleum#.

\* Available for both Bachelor of Science or Bachelor of Science (Biotechnology)

\*\* Only available with a Physics major; this is a combined degree not a double degree

# Only available with a double major in Geology and Geophysics, and Applied Geology. The double degree can only be undertaken with the Bachelor of Engineering (Honours) (Petroleum) without Engineering majors

## BACHELOR OF TEACHING (SECONDARY) WITH BACHELOR OF SCIENCE

<b>SATAC CODE</b> 334651	<b>DURATION</b> 4 years full-time (or part-time equivalent)	<b>CAMPUS</b> North Terrace
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 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **teaching** + **science**

## BACHELOR OF TEACHING (MIDDLE) WITH BACHELOR OF SCIENCE

<b>SATAC CODE</b> 334601	<b>DURATION</b> 4 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 80 / IB: 29

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **teaching** + **science**

# RELATED DEGREES

## BACHELOR OF MATHEMATICAL SCIENCES

<b>SATAC CODE</b> 324421	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 80 IB: 29

**PREREQUISITES**  
SACE Stage 2 Mathematical Studies and Specialist Mathematics

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **mathematics**

## BACHELOR OF COMPUTER SCIENCE

<b>SATAC CODE</b> 314111	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 80 IB: 29

**PREREQUISITE** SACE Stage 2 Mathematical Studies

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **computer**

## BACHELOR OF HEALTH AND MEDICAL SCIENCES

<b>SATAC CODE</b> 324951	<b>DURATION</b> 3 years full-time (or part-time equivalent)
<b>CAMPUS</b> North Terrace	<b>GUARANTEED ENTRY</b> ATAR: 80 / IB: 29

 [adelaide.edu.au/degree-finder](https://adelaide.edu.au/degree-finder)  
Search **health**



# YEAR 12 TUITION COURSES

Our programs are designed to provide you with the confidence, skills and knowledge to achieve your best academic results—opening up more opportunities for your future.

### Subject courses

- Biology
- Chemistry
- Mathematical Methods
- Physics
- Specialist Mathematics

### Study Assist courses

- Exam Preparation and Techniques
- Excelling in Year 12
- Study Skills

### Further enquiries

Future Students Office  
Phone: +61 8 8313 7335  
Free call: 1800 061 459

[www.ua.edu.au/schools/tuition-courses](https://www.ua.edu.au/schools/tuition-courses)



# UNDERGRADUATE DEGREE INDEX

Undergraduate degrees available at the University of Adelaide. Students with strong interests in more than one area of study may wish to consider a double or combined degree.  
For a comprehensive list of available degrees, visit: [www.adelaide.edu.au/degree-finder](http://www.adelaide.edu.au/degree-finder)

### Business, Economics and Law

- Bachelor of Business
- Bachelor of Commerce
- Bachelor of Economics
- Bachelor of Economics (Advanced)
- Bachelor of Finance
- Bachelor of Innovation and Entrepreneurship
- Bachelor of Laws
- Bachelor of Project Management
- Diploma in Business

### Arts

- Bachelor of Arts
- Bachelor of Arts (Advanced)
- Bachelor of Creative Arts
- Bachelor of Criminology
- Bachelor of Environmental Policy and Management
- Bachelor of International Development
- Bachelor of International Relations
- Bachelor of Languages
- Bachelor of Media
- Bachelor of Music
- Bachelor of Music (Advanced)
- Bachelor of Music Theatre
- Bachelor of Philosophy, Politics and Economics
- Bachelor of Sociology
- Bachelor of Teaching (Middle) with Bachelor of Arts
- Bachelor of Teaching (Middle) with Bachelor of Mathematical and Computer Sciences
- Bachelor of Teaching (Middle) with Bachelor of Music
- Bachelor of Teaching (Middle) with Bachelor of Science
- Bachelor of Teaching (Secondary) with Bachelor of Arts
- Bachelor of Teaching (Secondary) with Bachelor of Mathematical and Computer Sciences

- Bachelor of Teaching (Secondary) with Bachelor of Music
- Bachelor of Teaching (Secondary) with Bachelor of Science
- Diploma in Arts
- Diploma in Languages

### Engineering, Computer and Mathematical Sciences

- Bachelor of Architectural Design
- Bachelor of Computer Science
- Bachelor of Computer Science (Advanced)
- Bachelor of Engineering (Honours) (Architectural and Structural)
- Bachelor of Engineering (Honours) (Chemical)
- Bachelor of Engineering (Honours) (Civil)
- Bachelor of Engineering (Honours) (Electrical and Electronic)
- Bachelor of Engineering (Honours) (Environmental)
- Bachelor of Engineering (Honours) (Mechanical)
- Bachelor of Engineering (Honours) (Mining)
- Bachelor of Engineering (Honours) (Petroleum)
- Bachelor of Engineering (Honours) (Petroleum) with majors
- Bachelor of Engineering (Honours) (Software)
- Bachelor of Engineering (Honours) – Flexible Entry
- Bachelor of Engineering (Honours) – Engineering Pathway
- Bachelor of Information Technology
- Bachelor of Mathematical Sciences
- Bachelor of Mathematical Sciences (Advanced)
- Bachelor of Mathematical and Computer Sciences
- Bachelor of Technology (Defence Industries)
- Diploma in Technology (Defence Industries)
- Associate Degree in Technology (Defence Industries)

### Health

- Bachelor of Dental Surgery
- Bachelor of Health and Medical Sciences
- Bachelor of Health and Medical Sciences (Advanced)
- Bachelor of Medical Studies / Doctor of Medicine
- Bachelor of Nursing
- Bachelor of Occupational Therapy (Honours)
- Bachelor of Oral Health
- Bachelor of Physiotherapy (Honours)
- Bachelor of Psychological Science
- Bachelor of Psychology (Advanced) (Honours)
- Bachelor of Speech Pathology (Honours)

### Sciences

- Bachelor of Agricultural Sciences
- Bachelor of Applied Data Analytics
- Bachelor of Food and Nutrition Science
- Bachelor of Food and Nutrition Science (Honours)
- Bachelor of Science
- Bachelor of Science (Honours)
- Bachelor of Science (Advanced)
- Bachelor of Science (Advanced) (Honours)
- Bachelor of Science (Animal Behaviour)
- Bachelor of Science (Animal Science)
- Bachelor of Science (Biomedical Science)
- Bachelor of Science (Biotechnology)
- Bachelor of Science (Biotechnology) (Honours)
- Bachelor of Science (High Performance Computational Physics) (Honours)
- Bachelor of Science (Marine Biology)
- Bachelor of Sciences (Mineral Geoscience)
- Bachelor of Science (Space Science and Astrophysics)
- Bachelor of Science (Veterinary Bioscience)
- Bachelor of Science (Wildlife Conservation Biology)
- Bachelor of Veterinary Technology
- Bachelor of Viticulture and Oenology

# APPLYING TO THE UNIVERSITY OF ADELAIDE

### How to apply

Applications to University of Adelaide undergraduate programs are made online via SATAC: [www.satac.edu.au](http://www.satac.edu.au)  
The application closing date for 2022 entry is 30 September 2021. Bachelor of Bachelor of Medical Studies/Doctor of Medicine, Bachelor of Oral Health and Bachelor of Dental Surgery applicants should refer to the UCAT ANZ website for information on the University Clinical Aptitude Test (UCAT ANZ) including application and test dates: [www.ucat.edu.au/ucat-anz](http://www.ucat.edu.au/ucat-anz)  
International students should refer to: [www.international.adelaide.edu.au/apply](http://www.international.adelaide.edu.au/apply)

### Entry pathways

There are many pathways applicants can take to apply to the University of Adelaide, including Year 12, International Baccalaureate (IB), Subject-based entry, Year 11 Results Alternative Entry, STAT, TAFE, preparatory programs, foundation study and more. To find out more about the available pathways, visit [www.adelaide.edu.au/study/undergraduate](http://www.adelaide.edu.au/study/undergraduate) and select ‘Entry Pathways’ from the menu.

### HECS Higher Education Loan

The Australian Parliament has recently passed amendments to the Higher Education Support Act 2003, which will affect students studying in a Commonwealth supported place from 1 January, 2021. The changes include:

- Adjusting the maximum Student Contribution amounts for different areas of study, for students commencing a new program in 2021
- Grandfathering Student Contribution amounts for continuing students
- Re-introducing the 10% HECS-HELP discount, for HECS-HELP eligible students who make an up-front payment of \$500 or more towards their Student Contribution amount
- All Commonwealth supported students, and students accessing any of the HELP loans, must provide their valid Unique Student Identifier (USI).

### Fees and costs [www.adelaide.edu.au/student/finance/domestic/contribution/](http://www.adelaide.edu.au/student/finance/domestic/contribution/)

Student contributions band in 2021 (fees may increase in 2021)		
Areas of study	Student contribution amount per 1 EFTSL (24 units)	Student contribution per 0,125 EFTSL (3 units)
<b>Band 1:</b> Agriculture, English, Languages, Mathematics, Nursing, Postgraduate Clinical Psychology, Teaching	\$3,950	\$493
<b>Band 2:</b> Allied Health, Architecture, Engineering, Environmental Studies, IT, Performing Arts, Professional Pathway Psychology*, Science	\$7,950	\$993
<b>Band 3:</b> Dentistry, Medicine, Veterinary Science	\$11,300	\$1,412
<b>Band 4:</b> Accounting, Administration, Behavioural Science (not Professional Pathway Psychology*), Economics, Humanities, Law, Media, Social Studies	\$14,500	\$1,812

For more information, please visit: [www.dese.gov.au/job-ready/job-ready-graduates-frequently-asked-questions](http://www.dese.gov.au/job-ready/job-ready-graduates-frequently-asked-questions)

### Scholarships

The University of Adelaide has a range of scholarships available to students from a variety of backgrounds and academic levels. Comprehensive information about scholarships, and how to apply, can be obtained by contacting us (refer below for details) or visiting the scholarships website: [www.adelaide.edu.au/scholarships](http://www.adelaide.edu.au/scholarships)

### Student services and amenities fee

Students are charged an annual student services and amenities fee (SSAF) to assist with the funding of student services and amenities at the University. In 2021, the SSAF amount for full-time students was \$313, and for part-time students it was \$235. Fees may increase in 2022. Eligible students may defer this fee to an SA-HELP loan. For further information about the SSAF and SA-HELP, visit: [www.adelaide.edu.au/student/finance/ssaf](http://www.adelaide.edu.au/student/finance/ssaf) and select ‘Student Services & Amenities Fee (SSAF)’.

### Additional costs

Students may be required to pay for specialist equipment, reading materials, etc. Students are advised not to purchase any equipment until they receive their faculty/school handbook, available during orientation. For more information on other program-related fees and charges, visit [www.adelaide.edu.au/student/finance](http://www.adelaide.edu.au/student/finance) and select ‘Other Fees and Charges’.

### Adjustment factors

SATAC centrally administers two South Australian Universities adjustment factors schemes. The two schemes are the SA Universities Equity Scheme and the SA Language, Literacy and Mathematics Adjustment Factors Scheme. For more details, visit [www.adelaide.edu.au](http://www.adelaide.edu.au) and search ‘adjustment factors’.

### Degree intake

Many undergraduate degrees will allow students to begin study in February or July. Please refer to

individual degrees on Degree Finder ([www.adelaide.edu.au/degree-finder](http://www.adelaide.edu.au/degree-finder)) to check whether midyear entry is available. Where Degree Finder states ‘subject to availability’ applicants should contact Ask Adelaide (refer below for details) to check whether midyear entry is available.

### Deferring your studies

Most undergraduate degrees can be deferred for up to two years. Please refer to specific degrees for exceptions.

### English language requirements for international students

All international students undertaking an Australian Year 12 program are required to achieve a Pass grade or above in one of the approved English as a Second Language or English language subjects. If an applicant attempts, but does not pass, the English language subject, then alternative options, such as an acceptable English language proficiency test result, may be arranged. Successful completion of the International Baccalaureate (IB) diploma meets the English language requirements of the University of Adelaide.

### Permanent residency

International students who have studied an Australian Year 12 program or the IB and expect to be granted Australian permanent residency before the commencement of their university study must contact the International Office. Visit [www.international.adelaide.edu.au](http://www.international.adelaide.edu.au)

### Accommodation

The University understands that finding the right accommodation is important to successful study. For accommodation options and costs please visit: [www.adelaide.edu.au/accommodation](http://www.adelaide.edu.au/accommodation)

### Admission transparency

We believe in providing clear and relevant information to help students choose the best university and degree to study. To find out more, visit: [www.adelaide.edu.au/study/undergraduate/admissions-information](http://www.adelaide.edu.au/study/undergraduate/admissions-information)

### Unique Student Identifier

A Unique Student Identifier [USI] is a reference number that creates an online record of your qualifications attained in Australia. All students undertaking a higher education qualification, need a USI in order to receive a qualification upon successful completion from 2023, and to receive commonwealth financial assistance from 2021. For more details, visit [www.usi.gov.au/students/get-a-usi](http://www.usi.gov.au/students/get-a-usi)

### More information

Find answers to your questions using our online Knowledge Base, or our helpful staff can respond via email to your enquiries. Please see back cover for contact details.



## KAURNA ACKNOWLEDGEMENT

We acknowledge and pay our respects to the Kaurna people, the original custodians of the Adelaide Plains and the land on which the University of Adelaide's campuses at North Terrace, Waite, and Roseworthy are built. We acknowledge the deep feelings of attachment and relationship of the Kaurna people to country and we respect and value their past, present and ongoing connection to the land and cultural beliefs. The University continues to develop respectful and reciprocal relationships with all Indigenous peoples in Australia, and with other Indigenous peoples throughout the world.

## FOR FURTHER ENQUIRIES

The University of Adelaide SA 5005 Australia

**ENQUIRIES** [future.ask.adelaide.edu.au](mailto:future.ask.adelaide.edu.au)

**TELEPHONE** +61 8 8313 7335

**FREE-CALL** 1800 061 459

 [adelaide.edu.au](http://adelaide.edu.au)

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