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[sydney.edu.au/science](http://sydney.edu.au/science)  
1800 SYD UNI (1800 793 864)  
+61 2 8627 1444

## Science

### Undergraduate guide

Chemistry, Life and Environmental Sciences,  
Physics, Mathematics and Statistics, Psychology,  
Geosciences, History and Philosophy of Science,  
Veterinary Science

We acknowledge the tradition of custodianship and law of the Country on which the University of Sydney campuses stand. We pay our respects to those who have cared and continue to care for Country.



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THE UNIVERSITY OF  
**SYDNEY**

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## Undergraduate guide

Chemistry, Life and Environmental Sciences,  
Physics, Mathematics and Statistics, Psychology,  
Geosciences, History and Philosophy of Science,  
Veterinary Science

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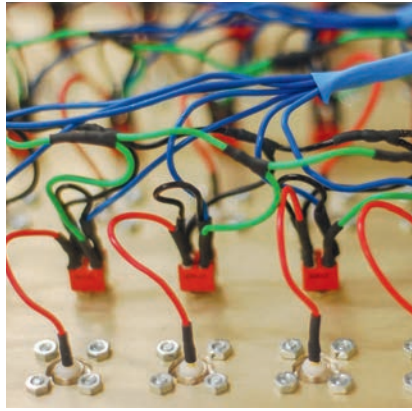
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The sciences and mathematics are fundamental to our lives. Who can imagine a world without modern transport, smartphones, medicines and nutritious food?

Science and mathematics are about more than just lab coats, test tubes and complicated equations. They embody a way of questioning, testing and analysing that enables you to draw conclusions based on evidence. They are a way of thinking about the world that will benefit you in ways far beyond any one specific discipline.



Collectively known as STEM, science, technology, engineering and mathematics are responsible for the great innovations that make our world better.

Studying these disciplines will enable you to innovate, make discoveries and tackle the biggest issues the world faces today – and into the future. You'll also develop highly valued skills in communication and teamwork, opening the door to an almost limitless range of employment opportunities.

You can study areas as diverse as entomology, molecular biology, geosciences and psychology. With major technological advances opening up many new areas, from quantum computing to nanotechnology, there has never been a more fascinating time to study science.

– [sydney.edu.au/science](https://sydney.edu.au/science)

### Expertise

The University of Sydney has always produced world-renowned experts in agriculture, science and veterinary science. Whether you dream about being at the forefront of research, learning how to analyse and think critically, or want to help make the planet a better place, a degree in science will give you highly sought-after skills for a huge range of careers. Our research-led teaching means you'll be taught by leading scientists who will share the latest findings with you.

### Engagement with industry

Opportunities to engage with industry and gain real-world experience are ever growing. We already have long-running year-in-industry programs in chemistry and physics, internship partnerships with food and agribusiness organisations and practical classes run within Westmead Hospital and our veterinary teaching hospitals.

### State-of-the-art facilities

As a student here, you can study in acclaimed research facilities, including the Sydney Nano Hub, the Charles Perkins Centre, the Brain and Mind Centre, and our food science laboratories.

### Work-ready graduates

The University of Sydney is ranked first in Australia and fourth in the world for graduate employability.<sup>1</sup>

With a broad range of flexible and dynamic career options, science graduates are in high demand across many industries.

### Rankings

Our science disciplines score highly in international university rankings, reflecting our reputation for quality education and research. We're:

- #1 in Australia and #9 in the world for veterinary science
- #13 in the world for anatomy and physiology
- #23 in the world in life sciences
- #17 in the world for geography
- #26 in the world for psychology.<sup>2</sup>

Learn more about our rankings:

– [sydney.edu.au/world-rankings](https://sydney.edu.au/world-rankings)



<sup>1</sup> QS Graduate Employability Rankings, 2018

<sup>2</sup> QS World University Rankings by Subject, 2019

# WHAT'S UNIVERSITY LIKE?

## IT'S MUCH MORE THAN STUDYING



At the University of Sydney, your student experience extends far beyond the lab and the lecture theatre. We know that the more engaged you are with extracurricular activities, and the more you enjoy your time here, the better you'll do in your studies. We offer plenty of events and activities to help you get the most out of your time.

### Making the transition

Our transition programs begin connecting you with classmates, academics and professional staff before you even start your course. We'll provide you with valuable advice before classes begin so you're well prepared from day one.

For science students, these programs kick off with the Science Students' Transition Workshop. Once semester begins, you'll find more support available at SLAM (Science Link-up and Mentoring) lunches.

During Orientation Week you can join introductory programs, welcomes and facilities tours with all our STEM faculties.

– [sydney.edu.au/science/study/student-experience.html](https://sydney.edu.au/science/study/student-experience.html)

### Clubs and societies

Student clubs and societies play an invaluable role in enriching your university experience, and there are more than 200 to choose from.

Whether you like chess, chocolate, juggling or something a little more academic, there's a club or society of like-minded people waiting to welcome you. You'll build lifelong friendships as well as professional networks that can open doors for you after university.

Whatever your course, there should also be an academic-related society for you to join.

– [sydney.edu.au/student-clubs](https://sydney.edu.au/student-clubs)



## Hands-on opportunities

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As a member of our student community, you'll have the opportunity to get involved in any number of exciting projects. You might choose to work with local communities, either as part of your course or in your own time as a volunteer.

You might like to become a student mentor, tutor or ambassador. Ambassadors let potential future students know about the possibilities in higher education and promote science and mathematics education both on and off campus.

## Career workshops and fairs

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Most students start university wondering where their degree will take them. We help you discover the exciting jobs available with a range of special career programs.

For example, our Jumpstart Your Career science events bring together academics and industry leaders to discuss jobs across different sectors – and how to get them.

We also offer other networking sessions, workshops and forums where you can meet prospective employers and seek advice on your career.

– [sydney.edu.au/careers](https://sydney.edu.au/careers)

# CAREERS AFTER STUDYING SCIENCE

Science has always been at the centre of humanity's attempts to understand the world and make it a better place. The opportunities are endless, from unravelling the mysteries of the cosmos to creating new materials or feeding the world. Science can take you anywhere.

**75%**  
of the fastest-growing occupations require scientific and mathematical skills and knowledge.<sup>1</sup>

If you're considering studying science or mathematics, you may be wondering what career you can pursue. Rest assured – you will have an extensive range of options, and the numbers are on your side.

According to a recent survey, 75 percent of the fastest-growing occupations require scientific and mathematical skills and knowledge.<sup>1</sup>

This means your prospects for future employment are bright.

## Agriculture, food and agribusiness

Want to help solve some of the world's most pressing problems and be highly sought after by employers? Then your ideal career may be in the thriving food and agriculture sectors.

If you choose this field you could help to feed the world sustainably in the face of a changing climate. You could become a pioneer in an emerging sector such as carbon or water trading, or in managing Australia's natural resources. Or you could be employed with a commodities group, bank, local or international agribusiness, or government department.

You could work as an adviser, economist, scientist, teacher or trader, in policy development, or as a marketer or communicator for the food industry.

You could design production processes that improve the quality and shelf life of our food, or develop robots with intelligent software to weed and harvest crops autonomously.

Whatever direction you choose, you can expect a career rich in options, challenges and rewards.



<sup>1</sup> Tomorrow's Digitally Enabled Workforce: Megatrends and scenarios for jobs and employment in Australia over the coming twenty years. CSIRO, Brisbane, 2016





“In my undergraduate and postgraduate degrees, I studied the formation and evolution of galaxies. The skills I gained in my physics studies are highly transferable and I now use them at Google to study the expansion and evolution of its network to ensure a more digitally connected society. I completed my PhD and got a full-time job offer from Google on the same day.”

**Dr Brendan McMonigal**  
Software Engineer at Google  
Bachelor of Science (Advanced) with Honours,  
Bachelor of Arts, PhD in Physics

## Business, management and consultancy

Many corporate high achievers got their start in science or mathematics – qualifications known to offer a leading edge. Graduates with science or mathematics training are highly sought after in banking, financial services and insurance, particularly in areas involving model-based and applied mathematics. They are also in demand for their problem-solving abilities.

You will gain many skills in your studies that will be beneficial in careers across the business, management, government, defence and legal sectors. Strong capabilities in logical reasoning and complex data analysis, for example, see many science and mathematics graduates snapped up by employers in management consulting.



“Armed with my science degree, I found an interesting job in a medical start-up doing something unique – looking for a breast cancer diagnostic test using a biological signal in hair. The turning point for me was when a colleague and I made a unique discovery in the biology of breast cancer which showed that we could provide the basis for such a test.

“That company closed down, but I thought the research was worth pursuing, so I found investors to help buy the intellectual property of our discovery and formed BCAL Diagnostics. I’m passionate about developing this transformational blood test for early detection of breast cancer.

“Science allows you to make a real difference to the world.”

**Dr Dharmica Mistry**  
Chief Scientist at BCAL Diagnostics  
Bachelor of Science with Honours





## Conservation, resources and sustainability

Science has always been a vehicle for improving our world. A science degree can also be a launching pad for a career working with the people and places most in need. If you're passionate about protecting the world's vulnerable communities, threatened species or magnificent habitats, a degree in science, environmental systems or veterinary science is ideal.

Australia's rapidly growing and critically important water industry employs many professionals with science and mathematics backgrounds to solve a range of water-related problems, including controlling river flooding, designing agricultural irrigation systems and developing advanced water-treatment processes.

Sustainability is another significantly growing field, with many major companies and organisations hiring sustainability and corporate responsibility managers to maximise the eco-efficiency of their operations.

## Education, communications and media

Do you enjoy studying science, but love explaining it even more? Many jobs in education and media require people with technical expertise who can inspire and inform stakeholders or the broader public – including adults and younger people – about the hugely important disciplines of science and mathematics.

If you're interested in teaching, you could work in schools or in other educational facilities such as museums, zoos or science centres. If you enjoy engaging audiences in more diverse and creative ways, you could look to the media, marketing and communications sector.

Careers for science communicators include science journalism for media outlets across print, online, radio or TV. Another popular role is communications officer in a science institute, which involves promoting the work done in the facility to the wider public.

## Entrepreneurship

No matter which areas of study you choose to focus on, you can combine them with your entrepreneurial drive to launch something new and exciting. Many of our students take advantage of the University's accelerator and support programs to bring their innovative business ideas to life.

Several well-known Australian startup founders studied at the University of Sydney. If you'd like to follow in their footsteps – or blaze an entirely new trail – we'll support you through programs such as the Sydney Accelerator Network and INCUBATE, to help get your ideas up and running.



“My academic training empowered me with the invaluable skills of critical thinking, problem solving and clear communication. I've enjoyed applying these skills to both fundamental research and entrepreneurial ventures.

“I've never been a big believer in making strict long-term plans. I prefer to define my goals – like accelerating the uptake of renewable energy – and then to assess new opportunities and challenges with reference to these goals. I didn't have a clear career plan when I was in high school and, to be honest, I'm still figuring it out!

“I founded SunTenants to unlock the huge potential of solar power for Australia's millions of rental properties. The business is built upon my analytic and communication skills, as much as on my understanding of energy as a multifaceted issue at the heart of the modern world.”

**Dr Bjorn Sturmberg**

Founder of SunTenants and Director of Kairos Power  
Bachelor of Science (Advanced Mathematics) with Honours, PhD in Physics



“The world has really changed since I started as a young entrepreneur. At that time there was absolutely no infrastructure for entrepreneurs. People didn't even really know what it was.

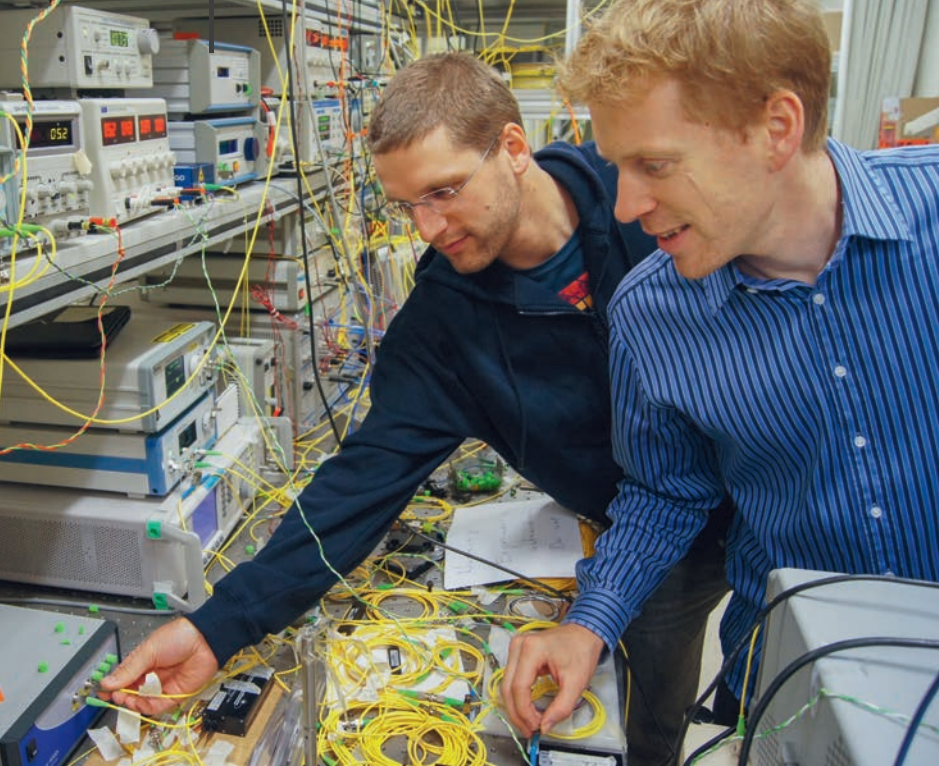
“Generally speaking, it's the new, up-and-coming businesses that are the next employers in this country. Technology is disrupting so many jobs in our economy. We need disruptive businesses to come through and create new jobs, which is why entrepreneurship is so important to Australia.”

**Dr Michelle Deaker**

Tech entrepreneur, Chief Executive and Managing Director, OneVentures  
Bachelor of Science, Master of Science

Michelle established leading venture capital firm OneVentures after a successful career in the IT industry. She is also a mentor for the University's award-winning start-up accelerator and entrepreneur program, INCUBATE.





### **Government, defence and law**

Science has never been so important to society. Real changes can be made when governments, advised by scientists, legislate for new approaches and technologies.

The disciplines of science, mathematics and statistics are crucial to important government sectors such as health, finance, information and communications technology (ICT), emergency services, energy, water and food safety, primary industries, the environment and transport.

The federal government's Defence Science and Technology Group, part of the Department of Defence, employs a range of scientifically trained staff including materials scientists, mathematicians and psychologists.

Science graduates also work with legal firms in specialised areas including forensics, patents and intellectual property.

### **Health, medicine and psychology**

A medical degree is not the only path to a rewarding career in improving individual and community health. Science underpins all medical and health-related fields, so a Bachelor of Science can serve as a stepping stone to a career in this sector.

Studying medical science can lead to work in a laboratory researching diseases, or in a hospital running clinical trials.

A Bachelor of Psychology prepares you to investigate and understand aspects of human behaviour through research, in private practice or with large organisations.

A science degree with a major in nutrition could be your first step towards a career as a nutrition researcher or as a dietitian, planning food and nutrition programs and promoting healthy eating habits.

## ICT

Information and communications technology (ICT) is ubiquitous in the 21st century.

ICT is critical to the fight against climate change, what enables video on demand, and the toolset central to discovering cures for disease and mapping the human genome.

This is a rapidly evolving field, and the range of career possibilities grows with each technological advance. There are exciting careers for science graduates in such diverse areas as business consulting and sales, software engineering, web development, multimedia, research and product development.

ICT skills transfer well between countries, so qualified and experienced ICT professionals can find career opportunities almost anywhere in the world.

## Research

There are no limits to what you can pursue as a researcher. If you can imagine something to investigate, you may well be able to build a career doing it.

As a science graduate you could work in the field of astronomy, investigating the universe and revealing its fundamental features. Australia has an outstanding reputation in this field – several renowned astronomers work here and a number of exciting projects are underway.

You could apply your knowledge of quantum physics to create more efficient and secure communications equipment or to develop new ways of detecting and treating medical conditions.

Another rapidly expanding area of research is materials science, which involves analysing materials and developing new ones that can be used in a variety of applications. With Australia ranked highly for materials science, this area promises a huge range of career opportunities.



“Engineering and science are incredibly flexible degrees. They teach you how to think critically and solve problems – skills that can be applied across a variety of disciplines to create solutions to the challenges the world faces today, and help shape the world of tomorrow. They are an excellent foundation for a diverse range of pursuits.”

### Derek Muller

Engineer, scientist, TV presenter of YouTube channel *Veritasium*  
PhD (Physics Education Research)

## Tomorrow's technologies

Photonics, optics, quantum technology, data analytics and nanotechnologies are at the forefront of tomorrow's technology sectors, and an undergraduate degree in science or mathematics can lead to a rewarding career in one of these emerging fields.

The Australian Government considers nanoscience such an important field that it helped fund the University of Sydney Nano Institute. With training in chemistry, physics or materials science you could work as a nanotechnologist in this exciting field.

With an education in life sciences you could choose from rich career options in the biotechnology sector, where more than 1500 diagnostic, medical and therapeutic companies currently employ more than 40,000 people in Australia.

## Veterinary and animal science

With the highest rate of pet ownership in the world and some of the most advanced applications of technology to livestock breeding, Australia has a thriving veterinary and animal science industry. Working as a vet in private practice is a great career, but it's not the only option. There are many other equally rewarding careers for animal science graduates who love working with animals.

As well as in private clinics, vets can work in animal production, wildlife ecology or research, specialising in almost any animal imaginable. A degree in animal sciences could see you working in pharmaceuticals, government services, zoos, artificial breeding, natural resource management, management of invasive species, medical research, animal nutrition or teaching, to name just a few options.

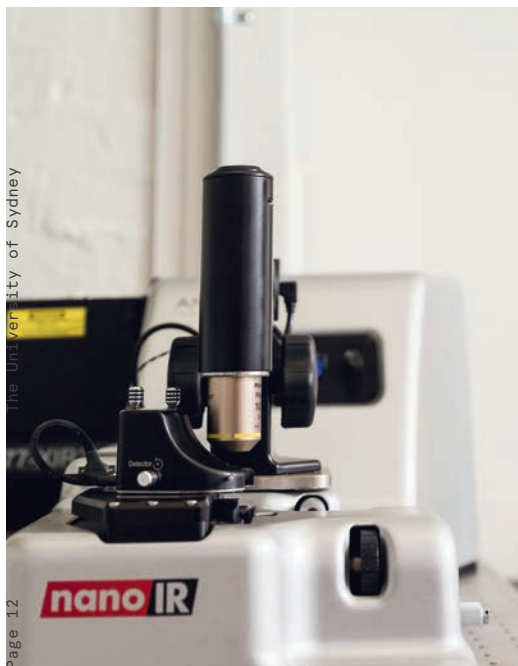


“It’s hard to describe the feeling you get when you help an animal. I guess the term ‘veterinary science’ is quite fitting. On the one hand there is the ‘science’ part, which requires intelligence, logical thinking and problem solving; then there is the ‘veterinary’ part, which requires a connection with animals, empathy, compassion and understanding.

“When you combine these, the feeling is one of incredible achievement and self-worth – you have accomplished something very few people can do, and made a positive difference to the lives of animals and other humans. That’s what I call job satisfaction!”

**John Debenham**  
Bachelor of Veterinary Science

After graduating, John moved to the Democratic Republic of the Congo to work at the Tchimpounga Chimpanzee Rehabilitation Centre.



“What opens  
our minds and  
shows the limits  
of our ideas is an  
encounter with  
other people,  
other cultures,  
other ideas.”

Carlo Rovelli  
Theoretical physicist

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# THE SYDNEY UNDERGRADUATE EXPERIENCE

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We've reimaged the Sydney Undergraduate Experience – the way we teach and the way you'll learn – to prepare you for a future full of possibilities.

We recognise the future of work will be very different, so it's our ambition that every University of Sydney student will complete their degree with the confidence and ability to think critically, collaborate productively and influence the world.

By studying one of our undergraduate courses, you will have the opportunity to:

- gain expertise in your primary field of study, learning from leaders in their field
- sharpen your broader skills (eg, communication, inventiveness and digital literacy) and acquire complementary expertise in a second field
- develop the capability to work across cultural boundaries, in Australia and around the world
- deepen your expertise and develop skills in interdisciplinary collaboration through real-world industry, entrepreneurship, community and research projects.

As a graduate, you will have the capabilities to tackle whatever challenges and opportunities lie in the future.

[sydney.edu.au/ug-experience](https://sydney.edu.au/ug-experience)





## Plan your degree

Apply your knowledge to real-world projects and tackle complex global challenges

Combine your interests from more than 100 study areas in the shared pool of majors and minors

Broaden your skillset through short, on-demand modules in the Open Learning Environment

Choose from our range of professional, specialist, liberal studies, and combined and double degrees

Gain international experience and prepare yourself for a global career

Supercharge your degree with the combined Bachelor of Advanced Studies

Become a Dalzell Scholar and join the next generation of global leaders

Options are indicative only and vary between degrees. To find out more, refer to [sydney.edu.au/ug-experience](http://sydney.edu.au/ug-experience)

# THE BACHELOR OF ADVANCED STUDIES

The combined Bachelor of Advanced Studies gives you the flexibility to design your own degree. Challenge yourself through advanced coursework and a major project, and make the most of the study, exchange, internship and student life opportunities available at Sydney.

The combined Bachelor of Advanced Studies can be taken in combination with a three-year liberal studies or specialist bachelor's degree, including the Bachelor of Science.

Over four years, you will:

- design your own degree by combining majors from a range of disciplines
- complete a second major from either your primary study area or the shared pool of majors and minors
- complete advanced coursework to build on your expertise and leadership skills, or complete an honours project
- work on real-world industry, community and research challenges across disciplines.

Learn more:

- [sydney.edu.au/bachelor-advanced-studies](https://sydney.edu.au/bachelor-advanced-studies)

Bachelor's degree	Degree	Combined Bachelor of Advanced Studies
3 years	Duration	4 years
Components		
● Double major optional	Major	● Double major mandatory
●	Minor (or second major)	
●	Open Learning Environment	●
●	Electives	●
●	Exchange (available)	●
●	Third-year project (per major)	●
	Advanced coursework	●
	Substantial fourth-year project	●
	Honours (available)	●

For studies in Arts, Commerce, Design Computing, Economics, Science and Visual Arts

# MEET OUR STUDENTS

**Winnie Theresa**  
Medical science student  
from Jakarta



“Don’t forget to have fun!  
The academic side is important,  
but you should also make sure you  
get involved in life outside the  
classroom. Making the most of your  
free time makes the study easier.”

“I am making the most of all  
the opportunities being here  
is giving me.”

**Rhys Raymond-Jones**  
Food and agribusiness student



“My internship was one of the  
highlights of my degree. Seeing  
how my studies in microbiology,  
chemistry, inputs and outputs,  
economies of scale and value  
adding can be applied in an actual  
operational business has been an  
eye-opening experience that will  
influence the way I approach my  
studies and consider real-world  
applications and outcomes.”

Rhys completed a three-month internship at  
Rocks Brewing Company where he learned about  
every stage of the business and was given the  
opportunity to brew a beer of his own creation,  
which was subsequently sold on tap in pubs  
across Sydney.

# FOLLOW YOUR INTERESTS. ALL OF THEM.

Combine your interests from more than 100 study areas through our shared pool of majors and minors.

The shared pool allows you to develop expertise in a second field of study and build cross-disciplinary knowledge from a wide range of study areas outside your primary degree.

The shared pool is available in these degrees:

- B Psychology
- B Science (Health)
- B Science (Medical Science)
- B Science/B Advanced Studies
- B Science/B Advanced Studies (Advanced)
- B Science/B Advanced Studies (Agriculture)
- B Science/B Advanced Studies (Animal and Veterinary Bioscience)
- B Science/B Advanced Studies (Taronga Wildlife Conservation)<sup>1</sup>
- B Science/M Mathematical Sciences<sup>2</sup>
- B Science/M Nutrition and Dietetics<sup>2</sup>.

See page 48 for a table of all the science degrees we offer, and their accompanying programs, streams, majors and minors.

For more detail on these options, see pages 50-65 or refer to our website.

- [sydney.edu.au/science/ug-courses](https://sydney.edu.au/science/ug-courses)

B = Bachelor of  
M = Master of  
D = Doctor of

<sup>1</sup> Degree subject to final approval

<sup>2</sup> The structure of this course may be affected by changes to government policy. For the latest information, refer to [sydney.edu.au/student-fees](https://sydney.edu.au/student-fees)




**Table S: Shared pool of interdisciplinary studies majors**

Combine your primary major with a major or minor in one of the areas below

 **Architecture, design and planning**

- Design

 **Arts and social sciences**

- Agricultural and Resource Economics
- American Studies
- Ancient Greek
- Ancient History
- Anthropology
- Arabic Language and Cultures
- Archaeology
- Art History
- Asian Studies
- Australian Literature<sup>1</sup>
- Biblical Studies and Classical Hebrew
- Celtic Studies<sup>1</sup>
- Chinese Studies
- Criminology<sup>1</sup>
- Cultural Studies
- Digital Cultures
- Diversity Studies<sup>1</sup>
- Economic Policy<sup>3</sup>
- Economics
- Econometrics
- English
- European Studies
- Film Studies
- Financial Economics
- French and Francophone Studies
- Gender Studies
- Germanic Studies
- Hebrew (Modern)
- History
- Indigenous Studies


- Indonesian Studies
- International and Comparative Literary Studies
- International Relations
- Italian Studies
- Japanese Studies
- Jewish Civilisation, Thought and Culture
- Korean Studies
- Latin
- Linguistics
- Modern Greek Studies
- Philosophy
- Political Economy
- Politics
- Sanskrit<sup>1</sup>
- Social Policy<sup>1</sup>
- Socio-legal Studies
- Sociology
- Spanish and Latin American Studies
- Studies in Religion
- Theatre and Performance Studies
- Visual Arts
- Writing Studies<sup>1</sup>

 **Business**

- Accounting
- Banking<sup>2</sup>
- Business Analytics
- Business Information Systems
- Business Law
- Finance<sup>2</sup>
- Industrial Relations and Human Resource Management
- International Business
- Management
- Marketing

 **Education and social work**

- Education

 **Engineering and information technology**


- Computer Science
- Information Systems
- Project Management
- Software Development

 **Medicine and health**

- Anatomy and Histology
- Applied Medical Science
- Health
- Hearing and Speech
- Immunology<sup>1</sup>
- Immunology and Pathology<sup>2</sup>
- Infectious Diseases
- Neuroscience
- Pathology<sup>1</sup>
- Pharmacology
- Physiology

 **Music**

- Music

 **Science, agriculture, environment and veterinary science**

- Animal Health, Disease and Welfare
- Animal Production
- Biochemistry and Molecular Biology
- Biology
- Cell and Developmental Biology
- Chemistry
- Data Science
- Ecology and Evolutionary Biology<sup>2</sup>
- Environmental Studies
- Financial Mathematics and Statistics
- Food Science
- Genetics and Genomics
- Geography
- Geology and Geophysics
- History and Philosophy of Science
- Marine Sciences
- Mathematics
- Medicinal Chemistry
- Microbiology
- Nutrition Science
- Physics
- Plant Production
- Plant Science<sup>1</sup>
- Psychological Science<sup>4</sup>
- Quantitative Life Sciences
- Soil Sciences and Hydrology
- Statistics
- Virology<sup>1</sup>
- Wildlife Conservation<sup>1</sup>

1 Available as a minor only  
 2 Available as a major only  
 3 Not available for Bachelor of Economics students  
 4 Not accredited by APRA for registration as a psychologist.

For more information about Table S, please visit: [sydney.edu.au/courses/table-s](http://sydney.edu.au/courses/table-s)

# BECOME A DALYELL SCHOLAR

For high-achieving students with an ATAR (or equivalent) of 98+, Dalyell Scholars have access to a range of enrichment opportunities that will challenge you alongside your most promising and talented peers.

Named after Elsie Jean Dalyell OBE (1881-1948), a distinguished medical graduate of the University, Dalyell Scholars have the opportunity to collaborate and network with likeminded world influencers.

In addition to completing distinctive Dalyell units of study, you will have access to enrichment opportunities, including:

- accelerated learning options, such as early access to advanced units of study
- access to specialised Language (Arts) and Mathematical Sciences (Science) programs (optional)
- tailored mentoring and professional skills development to enhance your study and career opportunities
- international experiences to develop your global perspective, including a \$2000 global mobility scholarship.

To study as a Dalyell Scholar, admission is by UAC preference or invitation.

Learn more about the Dalyell Scholars program.

- [sydney.edu.au/dalyell-scholars](https://sydney.edu.au/dalyell-scholars)

**The following science, agriculture and veterinary science degrees are available through the Dalyell Scholars program:**

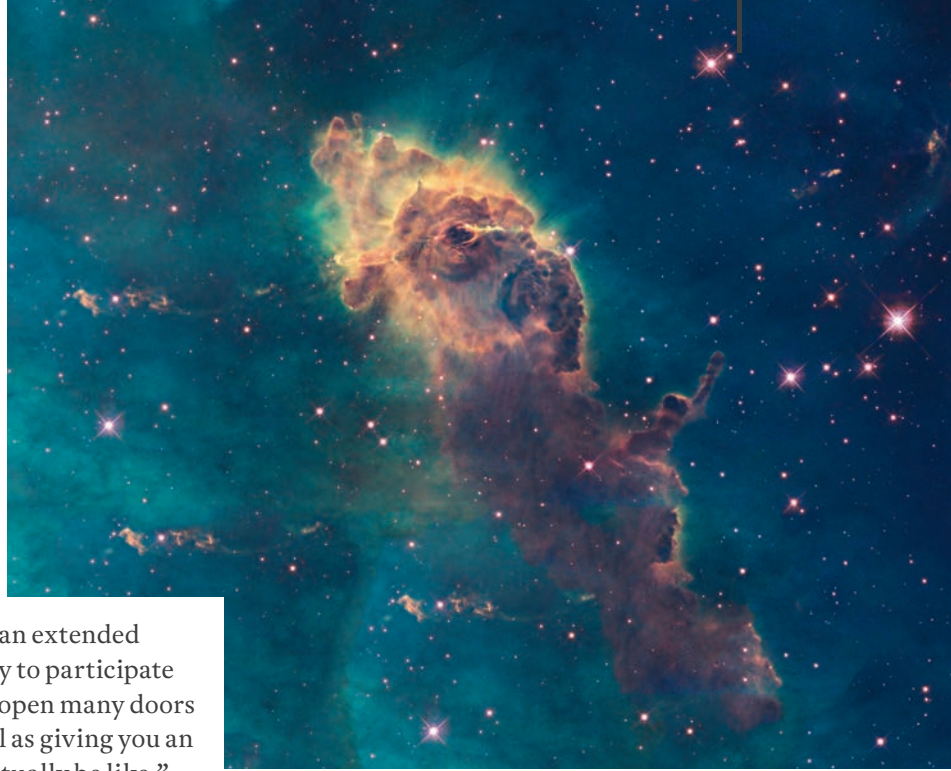
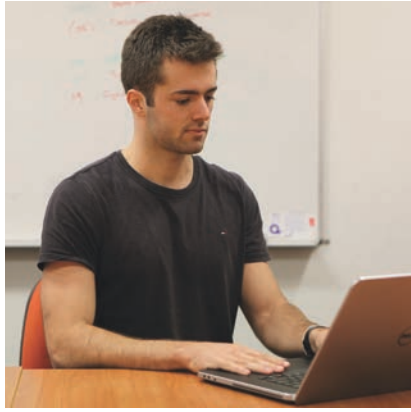
- B Psychology
- B Science
- B Science (Health)
- B Science (Medical Science)
- B Science/B Advanced Studies
- B Science/B Advanced Studies (Advanced)
- B Science/B Advanced Studies (Agriculture)
- B Science/B Advanced Studies (Animal and Veterinary Bioscience)
- B Science/B Advanced Studies (Food and Agribusiness)
- B Science/B Advanced Studies (Health)
- B Science/B Advanced Studies (Medical Science)
- B Science/B Advanced Studies (Taronga Wildlife Conservation)
- B Science/M Mathematical Sciences
- B Science/M Nutrition and Dietetics
- B Science/D Dental Medicine
- B Science/D Medicine
- B Science/M Nursing
- B Science (Health)/M Nursing
- B Science/B Laws
- B Engineering Honours/B Science
- B Engineering Honours/B Science (Health)
- B Engineering Honours/B Science (Medical Science)
- B Advanced Computing/B Science
- B Advanced Computing/B Science (Health)
- B Advanced Computing/B Science (Medical Science)
- B Education (Secondary Education: Mathematics)/B Science
- B Education (Secondary Education: Science)/B Science

B = Bachelor of  
M = Master of  
D = Doctor of

<sup>1</sup> Admission to this course is by application

<sup>2</sup> Degree subject to final approval

<sup>3</sup> The structure of this course may be affected by changes to government policy. For the latest information, refer to [sydney.edu.au/student-fees](https://sydney.edu.au/student-fees)



“I would strongly recommend participating in an extended program at university. Having the opportunity to participate in active fields of research is invaluable. It can open many doors to future projects, internships and jobs, as well as giving you an idea about what a career as a scientist might actually be like.”

### **Harrison Steel**

Bachelor of Engineering (Mechanical (Space))  
Bachelor of Science (Advanced)

Harrison has worked at the forefront of scientific understanding in a number of fields during his degree, and through the talented student program offered by the Faculty of Science. His second-year projects resulted in two peer-reviewed scientific publications.



### **Dalyell Scholars program for talented students in science**

Since 1993, the Faculty of Science has run special programs for talented students. The Dalyell Scholars Program now opens up these opportunities to talented students across the University. It's a uniquely valuable offering if you're seeking to expand your intellectual horizons and follow your curiosity.

– [sydney.edu.au/science/dalyell](http://sydney.edu.au/science/dalyell)

#### **Research experience**

You'll be introduced to academic research practices from your first semester, when you will have the opportunity to engage in research projects with small numbers of fellow students, a senior student mentor and an academic mentor through the Dalyell Showcase unit.

#### **Networking opportunities**

Each year the faculty holds exclusive activities and events for talented students, offering networking opportunities with like-minded students, alumni, academic and research staff and community and industry leaders.

#### **Inside view**

“My science degree and the talented student program taught me to continually question why things are the way they are, rather than just accepting them at face value. I feel that it enriched my medical studies. I gained a deeper understanding of scientific concepts and the ability to critically appraise scientific research papers, which has improved how I practise in my day-to-day life as a doctor.”

#### **Monique Atkinson**

Obstetrics and Gynaecology Registrar  
at Westmead Hospital  
Bachelor of Science (Advanced),  
and Bachelor of Medicine and  
Bachelor of Surgery

# A UNIQUE LEARNING ENVIRONMENT

What sets the University of Sydney apart? Exceptional facilities, an innovative edge and the drive to challenge traditional ways of thinking.

We're committed to providing an environment in which your ideas and creativity can flourish. At the University of Sydney you'll be encouraged to challenge yourself, ask the big questions and make a real difference.

You'll learn from and be inspired by academics who have pushed the boundaries of knowledge to become leaders in their fields. It's thanks to the outstanding calibre of their work that we rank among the top research universities in the world and offer a dynamic curriculum that is constantly fed by new research.

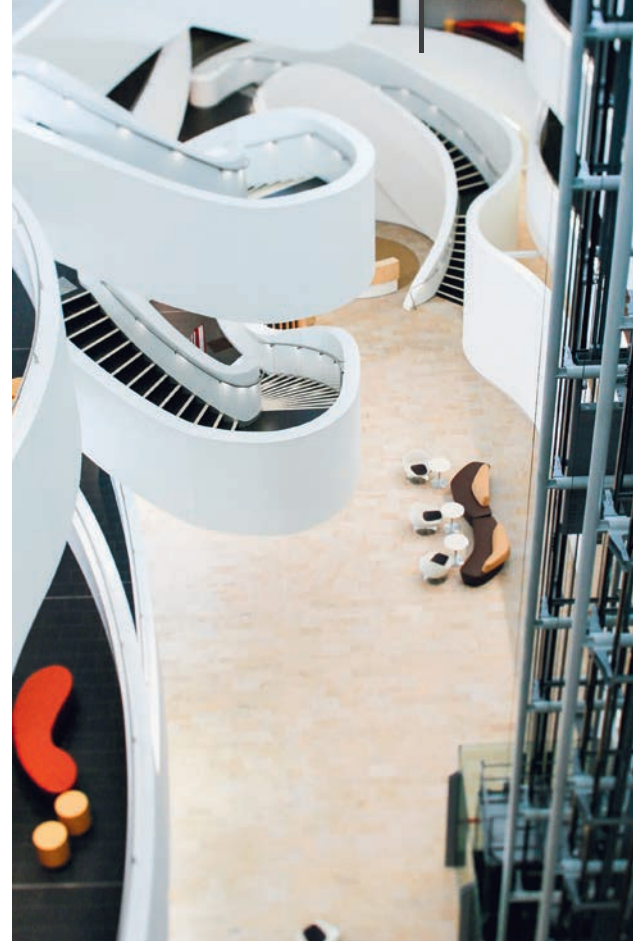
All of this adds up to a learning environment that provides an extraordinary depth of subject knowledge and invaluable research skills that will set you apart as a leader in your chosen discipline.

## Investing in your future

Our plans to develop a new precinct dedicated solely to the life, earth and environmental sciences will bring together scientists like never before. For the first time, students and researchers from diverse faculties will work and learn together in a single, ultra-modern complex. This will foster multidisciplinary collaborations that will lead us into an exciting new era of education and research.







## World-class infrastructure

Our laboratories, teaching spaces and learning hubs are designed to help you get the most out of your learning experience. They incorporate the latest technology and equipment and allow interactive study, research and collaboration. Some of our facilities are as follows.

### Sydney Nanoscience Hub

Opened in 2016, this \$150 million facility is the only one of its type in the southern hemisphere. It is the nation's first single institute in which students and academics can devise, fabricate, test and deploy new science at the nanoscale. It includes some of the highest-performing nanoscience facilities in the Asia-Pacific region, from a high-calibre cleanroom for making nanodevices to measurement laboratories and pioneering teaching spaces.

### IA Watson Grains Research Centre

The biggest centre of its kind in Australia, the IA Watson Grains Research Institute is devoted to finding better ways to grow cereals, pulses, beans and peas. Owned by the University and located in Narrabri in northwestern New South Wales, the institute's facilities span 2268 hectares and offer outstanding opportunities to learn about sustainable grain production.

### Charles Perkins Centre

This centre brings together experts from multiple disciplines to develop solutions to the epidemics of obesity, diabetes, cardiovascular disease and related conditions. At the centre's heart is a \$385 million research and education hub in which 1500 students and 900 researchers collaborate.

### Veterinary teaching hospitals

Our veterinary teaching hospitals employ highly respected specialists and the latest in veterinary medical technology to care for small animals, wildlife, livestock and horses. This is where we provide real-world training to the next generation of expert veterinary practitioners and specialists.

### Sydney Imaging

One of our latest biomedical research facilities, Sydney Imaging is located at the University's Brain and Mind Centre and the Charles Perkins hub. It has a comprehensive suite of preclinical and clinical imaging modalities, a state-of-the-art hybrid theatre, and exceptional technical expertise.

### Robotic dairy

Our innovative researchers piloted the world's first robotic rotary milking system. Today our robotic dairy milks our commercial herd around the clock, on demand. The data from this pioneering technology is improving the lives, wellbeing and productivity of cows and dairy farmers alike.

# INTERNATIONAL OPPORTUNITIES

Studying science or mathematics can take you anywhere in the world. Our students work on a wide range of exciting international and global projects, and the same opportunities will be open to you as a student of the faculty.

Do you love tropical ecology and want to study international rainforests? Maybe you've got your eye on a high-tech career and want to create networks in Silicon Valley? Or would you just like to get out of your comfort zone for a semester? Taking part in an international placement, internship, exchange or study abroad program is a challenging and stimulating way to broaden your horizons.

## Study abroad and exchange

A study abroad experience through the University of Sydney is your passport to discovery and enables you to graduate with a truly global perspective. Combine study and travel and make the world your campus, with opportunities at more than 300 universities in 35 countries.

– [sydney.edu.au/study/overseas-exchange](https://sydney.edu.au/study/overseas-exchange)

## Our students' experiences

Science and engineering student Harrison Steel, who participated in the Faculty of Science's talented student program (now the Dalyell Scholars program), has completed student internships at NASA's Ames Research Center in California and Deutsches Elektronen-Synchrotron in Hamburg, Germany.

For the past four years, veterinary science PhD student Julia De Bruyn has been part of an interdisciplinary research team working to strengthen food and nutrition security in Tanzania and Zambia through veterinary and agricultural interventions.

Joshua Critchley-Marrows, who studied a Bachelor of Engineering (Aeronautical Engineering (Space)) and Bachelor of Science (Advanced Mathematics), undertook a three-month internship at the German Aerospace Centre.

Each year our physics and chemistry students travel to Nanjing University to conduct research projects. Their experience in China is funded entirely by the universities and our students get to host Nanjing University students in Sydney the following year.

In 2018, Longen Lan, studying a Bachelor of Science/Bachelor of Laws, and Zachary Wolf studying a Bachelor of Commerce/Bachelor of Science (Advanced Mathematics), each won funding from the federal government's prestigious New Colombo Plan to study in Asia.

Undergraduate geology students visit Tibet regularly to study the geological evolution of the Himalayas.

Health students develop physical activity, dental hygiene and healthy eating programs for community organisations and orphanages in Vietnam, Cambodia, Nepal, India and Thailand.

Eligible students can undertake a semester-long geography immersion program in Indonesia with a New Colombo Plan Scholarship.

Agriculture student Samuel Coggins used his time in Sri Lanka to learn about food security in Southeast Asia and to promote agricultural science and its importance in southern Asia.

Wendy Xiao, who studied the Bachelor of Science (Advanced) with a major in plant science, travelled to the Solomon Islands to develop her knowledge of food security and development.

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# MATHEMATICS: MORE THAN JUST NUMBERS

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The discipline of mathematics underpins all science degrees and is the cornerstone of understanding the world around us.

sydney.edu.au/science

By studying the highest level of mathematics you're capable of at high school, you'll extend your abilities and learn how to question, test and analyse, laying the groundwork for a smooth transition to studying at university and preparing yourself for a career that involves tackling the greatest challenges of the future.

A major in mathematics at university can lead you to many exciting careers, including in the fields of data analysis, statistics, artificial intelligence, economic forecasting, air-traffic control, meteorology and more.



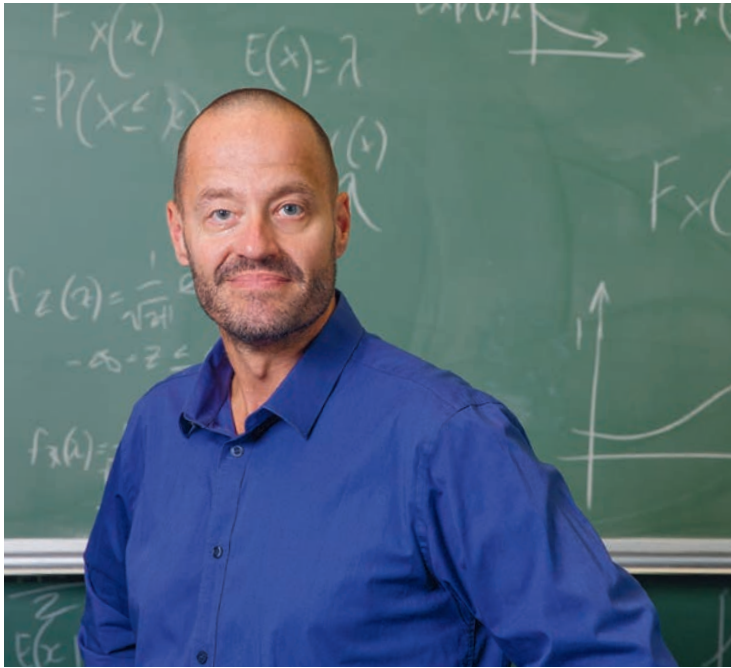
“We are in the era of big data, but what good is data without the ability to interpret and analyse it? We need people who have the skills to take that raw information and turn it into something useful.”

“Maths underpins just about everything – from the technology in your smartphone to the banking and financial systems that support our economy and how we measure and predict our health. Maths is also the cornerstone of all scientific endeavour – so if we are training new scientists without a good understanding of maths, Australian science will soon be in trouble.”

**Professor Nalini Joshi**

Georgina Sweet Australian Laureate Fellow and Chair of Applied Mathematics, the University of Sydney

The University of Sydney



“Mathematics is the language in which the symphony of the universe is written. It’s everywhere! Maths underpins all the STEM fields, as well as lots of other areas such as business and music, and anywhere where you need to apply logic and solve problems.”

**Adam Spencer**  
Mathematics and Science Ambassador,  
the University of Sydney

## Mathematics prerequisites

To help our students thrive in their studies and meet career challenges of the future, we have introduced mathematics prerequisites for many of our courses.

These prerequisites apply to students studying in Year 12 in Australia.

To enrol in any of the following courses at the University of Sydney, you need to achieve a Band 4 result in HSC Mathematics (not General Mathematics), or a similar result in equivalent interstate or International Baccalaureate subjects.

- B Science
  - B Science (Health)
  - B Science (Medical Science)
  - B Science/B Advanced Studies
  - B Science/B Advanced Studies (Dalyell Scholars including Mathematical Science)
  - B Science/B Advanced Studies (Advanced)
  - B Science/B Advanced Studies (Agriculture)
  - B Science/B Advanced Studies (Animal and Veterinary Bioscience)
  - B Science/B Advanced Studies (Food and Agribusiness)
  - B Science/B Advanced Studies (Health)
  - B Science/B Advanced Studies (Medical Science)
  - B Science/B Advanced Studies (Taronga Wildlife Conservation)
  - B Science/M Nutrition and Dietetics
  - B Veterinary Biology/D Veterinary Medicine
- B Education (Secondary: Mathematics)/B Science
  - B Education (Secondary: Science)/B Science
  - B Advanced Computing/B Science
  - B Advanced Computing/B Science (Health)
  - B Advanced Computing/B Science (Medical Science)
  - B Engineering Honours/B Science
  - B Engineering Honours/B Science (Health)
  - B Engineering Honours/B Science (Medical Science)
  - B Psychology

B = Bachelor of  
M = Master of  
D = Doctor of

<sup>1</sup> Degree subject to final approval

<sup>2</sup> The structure of this course may be affected by changes to government policy. For the latest information, refer to [sydney.edu.au/student-fees](http://sydney.edu.au/student-fees)

# BACHELOR OF LIBERAL ARTS AND SCIENCE

With its flexibility and extensive choice of majors, the Bachelor of Liberal Arts and Science provides you with experience in humanities, sciences, and liberal studies, giving you skills that are highly valued by employers across many industries. From writing and presenting to thinking ethically and critically, this degree is your preparation for life beyond the classroom.

## Assumed knowledge

Depends on subjects chosen

## Major studies

You may choose an Arts or Science major, and a sequence in Science (if Arts major) or in Arts (if Science major).

**Science majors:** Anatomy and Histology; Animal Health, Disease and Welfare; Animal Production; Applied Medical Science; Biochemistry and Molecular Biology; Biology; Cell and Developmental Biology; Chemistry; Computer Science; Data Science; Ecology and Evolutionary Biology; Environmental Studies; Financial Mathematics and Statistics; Food Science; Genetics and Genomics; Geography; Geology and Geophysics; History and Philosophy of Science; Immunology and Pathology; Infectious Diseases; Information Systems; Marine Science; Mathematics; Medicinal Chemistry; Microbiology; Neuroscience; Nutrition Science; Pharmacology; Physics; Physiology; Plant Production; Psychology; Quantitative Life Sciences; Software Development; Soil Science and Hydrology; Statistics.

**Arts majors:** Agricultural and Resource Economics; American Studies; Ancient Greek; Ancient History; Anthropology; Arabic Language and Cultures; Archaeology; Art History; Asian Studies; Australian Literature (minor); Biblical Studies and Classical Hebrew; Celtic Studies (minor); Chinese Studies; Criminology (minor); Cultural Studies; Digital Cultures; Diversity Studies (minor); Econometrics; Economic Policy; Economics; English; European Studies; Film Studies; Financial Economics; French and Francophone Studies; Gender Studies; Germanic Studies; Hebrew (modern); History; Indigenous Studies; Indonesian Studies; International Comparative Literary Studies; International Relations; Italian Studies; Japanese Studies; Jewish Civilisation, Thought and Culture; Korean Studies; Latin; Linguistics; Modern Greek Studies; Music; Philosophy; Political Economy; Politics; Sanskrit (minor); Social Policy (minor); Socio-legal Studies; Sociology; Spanish and Latin American Studies; Studies in Religion; Theatre and Performance Studies; Writing Studies (minor).

## Career possibilities

Science media adviser; science historian; science documentary maker; algebraic geometer; theoretical chemist; mammalian ecologist; human resources manager.

## Degree sample: Bachelor of Liberal Arts and Science

Year	Semester	Unit of study			
1	1	Major	Elective	Analytical Thinking	Sequence
	2	Major	Elective	Writing and Rhetoric: Academic Essay	Sequence
2	1	Major	Elective	Ethics	Sequence
	2	Major	Elective	Elective	Sequence
3	1	Major	Major	Elective	Sequence
	2	Major	Major	Elective	Sequence

■ Major 1 ■ Major 2 or Minor □ Elective ■ Liberal Studies

# BACHELOR OF PSYCHOLOGY

If you want to understand human thinking, motivation and behaviour, the Bachelor of Psychology is ideal. After graduating, you will have the basis for provisional registration as a psychologist in Australia, and enough training to start working in a range of roles in schools, hospitals and prisons, as well as in areas such as human resources, developmental disability and social policy in the private and public sectors.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics. Additional assumed knowledge depends on subjects chosen.

## Major studies

Psychology program; and a minor from either the Bachelor of Science or Table S (see page 19).

## Career possibilities

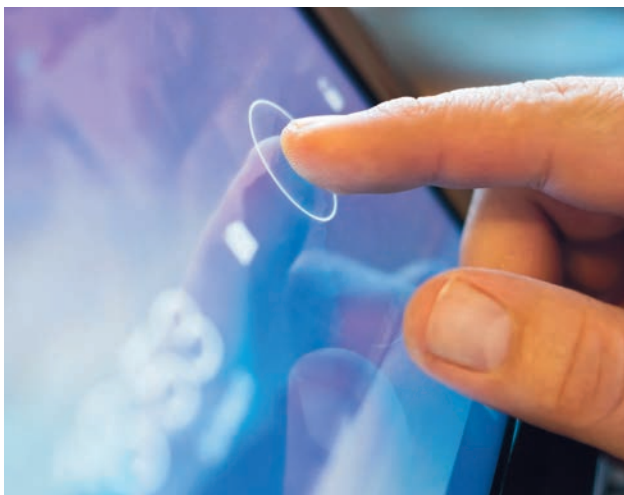
Clinical psychologist (with further study); neuroscientist; organisational psychologist; market researcher; advertising executive; social psychology researcher; learning and attention researcher; biomedical statistician.

## Degree sample: Bachelor of Psychology

Year	Semester	Unit of study			
1	1	Psychology	Maths	Elective	Minor
	2	Psychology	Elective	Elective	Minor
2	1	Statistics and Research	Brain and Behavioural Psychology	Elective	Minor
	2	Personality and Social Psychology	Perception, Cognition and Intelligence	Elective	Minor
3	1	Advanced Statistics for Psychology	Psychology elective*	Elective	Minor
	2	Psychology elective*	Psychology elective*	Psych 4000-level	Minor
4	1	Honours	Honours	Honours	Honours
	2	Honours	Honours	Honours	Honours

■ Major 1 ■ Major 2 or Minor ■ Degree core □ Elective ■ Advanced coursework or honours

\* Psychology electives include: social, cognitive, behaviour, perceptual systems, statistics, personality, developmental, abnormal, application, psychiatry, neuroscience.



# BACHELOR OF SCIENCE

There are several ways you can study the Bachelor of Science. You can enrol in a:

- Bachelor of Science
- Bachelor of Science/Bachelor of Advanced Studies
- Bachelor of Science/Bachelor of Advanced Studies (Dalyell Scholars including Mathematical Science).

The Bachelor of Science opens a world of opportunity. Whether you dream of joining the forefront of research, learning how to analyse and think critically or helping to make the planet a better place, this degree will give you highly sought-after skills for a huge range of careers in the sciences and beyond.

## Advanced Studies

You can also choose to combine your Bachelor of Science degree with a Bachelor of Advanced Studies. In the Bachelor of Advanced Studies you can complete a second major, combine studies from a range of disciplines, undertake advanced coursework and get involved in cross-disciplinary community, professional, research or entrepreneurial project work.

## Dalyell Scholars program

As a Dalyell Scholar, you will have the opportunity to cultivate scientific expertise alongside critical and analytical skills. Your studies throughout the sciences will be complemented by distinctive Dalyell units and enrichment opportunities.

- [sydney.edu.au/science/dalyell](https://sydney.edu.au/science/dalyell)

## Prerequisites

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics or Mathematics Extension 1. Other assumed knowledge depends on subjects chosen.





### Major studies

**Programs:** Agroecosystems (including one major chosen from: Animal Production; Plant Production; Soil Science and Hydrology); Environmental Science; Nanoscience and Nanotechnology (only available in B Science/B Advanced Studies; includes a major in Physics or Chemistry); Neuroscience; Psychology (Psychological Science major). The Mathematical Sciences program is only available to students eligible for the Dalyell stream.

**Majors:** Anatomy and Histology; Animal Health, Disease and Welfare; Animal Production; Applied Medical Science; Biochemistry and Molecular Biology; Biology; Cell and Developmental Biology; Chemistry; Computer Science; Data Science; Ecology and Evolutionary Biology; Environmental Studies; Financial Mathematics and Statistics; Food Science; Genetics and Genomics; Geography; Geology and Geophysics; History and Philosophy of Science; Immunology and Pathology; Infectious Diseases; Information Systems; Marine Science; Mathematics; Medicinal Chemistry; Microbiology; Neuroscience; Nutrition Science; Pharmacology; Physics; Physiology; Plant Production; Psychological Science; Quantitative Life Sciences; Software Development; Soil Science and Hydrology; Statistics.

### Career possibilities

The Bachelor of Science leads to a diverse range of careers. Some examples include: astronomer; entomologist; geophysicist; mathematician; psychologist; medicinal chemist; microbiologist; science historian.



### Degree sample: Bachelor of Science/Bachelor of Advanced Studies

Year	Semester	Unit of study			
1	1	Science major	Science	Mathematics	Major 2
	2	Science major	Elective	OLE	Major 2
2	1	Science major	Science	Mathematics	Major 2
	2	Science major	Elective	OLE	Major 2
3	1	Science major	Science major	Major 2	Major 2
	2	Science major	Science major	Major 2	Major 2
4	1	Advanced coursework	Advanced coursework	Project	Project
	2	Advanced coursework	Advanced coursework	Project	Project

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
  Elective  
■ Open Learning Environment (OLE)   
 ■ Advanced coursework

# BACHELOR OF SCIENCE (HEALTH)

Health is one of Australia's fastest-growing sectors. Graduates who understand the health problems global communities face, and how to design effective approaches to an increasingly consumer-driven and ageing population, are in high demand.

The Bachelor of Science (Health) provides a comprehensive understanding of health and health systems at local, national and global levels. You will gain the ability to navigate the complexity of health issues in different sociocultural, political and economic contexts, and develop core skills in critical thinking, complex problem solving, communication, and empathy.

## Advanced Studies

Combining your Health studies with the Bachelor of Advanced Studies offers you the opportunity to complete a capstone experience through research, community or entrepreneurial projects, industry placements and advanced coursework.

## Prerequisites

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics or Mathematics Extension 1; for Human Movement major: Chemistry

## Major studies

**Stream:** Health

**Majors:** A second major can be taken from either the shared pool of majors shown in Table S (see page 19) or from the Bachelor of Science. Science options include: Anatomy and Histology; Animal Health, Disease and Welfare; Animal Production; Applied Medical Science; Biochemistry and Molecular Biology; Biology; Cell and Developmental Biology; Chemistry; Computer Science; Data Science; Ecology and Evolutionary Biology; Environmental Studies; Financial Mathematics and Statistics; Food Science; Genetics and Genomics; Geography; Geology and Geophysics; History and Philosophy of Science; Human Movement;\* Immunology and Pathology; Infectious Diseases; Information Systems; Marine Science; Mathematics; Medicinal Chemistry; Microbiology; Neuroscience; Nutrition Science; Pharmacology; Physics; Physiology; Plant Production; Psychological Science; Quantitative Life Sciences; Software Development; Soil Science and Hydrology; Statistics.

\* Human Movement is an optional second major offered only to Bachelor of Science (Health) students. It helps to prepare you for many of the graduate-entry master's programs in Health, including those in Physiotherapy and Exercise Physiology.

## Career possibilities

Health promotion; health policy; project management; case management; consultancy; logistics and procurement; insurance; business development; marketing; public relations.





### Degree sample: Bachelor of Science (Health)

Year	Semester	Unit of study			
1	1	Introduction to Health and Health Care	Human Biology or Life and Evolution	Mathematics	Functional Musculoskeletal Anatomy A
	2	Society and Health	Psychology	Mathematics/Data Science	Functional Musculoskeletal Anatomy B
2	1	Research Methods in Health	OLE	OLE	Body Systems and Human Performance
	2	Innovations in eHealth	Elective	Fundamentals of Movement Science	Neuroscience in Health and Disease
3	1	Health elective*	Health elective*	Elective	Motor Control and Learning
	2	Research selective	Health project	Biomechanics or Anatomical Analysis of Exercise	Exercise Physiology
4	1	Project	Project	Advanced coursework	Advanced coursework
	2	Project	Project	Advanced coursework	Advanced coursework

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
 ■ Stream core   
 □ Elective  
■ Open Learning Environment (OLE)   
■ Advanced coursework

Human Movement major listed as second major (red)

\* Health elective units include: Indigenous health, strategy and policy, health ethics and the law, health research, international health, health promotion, rural health, mental health, ageing, health promotion, and community placements

# BACHELOR OF SCIENCE (MEDICAL SCIENCE)

Whether you want to work in the latest area of medical research, medicine, health policy, public health, the private sector or pharmaceutical industries, this degree will give you the essential foundations for a rewarding career improving the health and wellbeing of people and communities. Employment opportunities in broad medical and health sciences areas are growing.

You will learn about the structure and function of the human body and the causes and treatments of disease. We will prepare you for graduate research in the medical sciences and provide you with an excellent foundation for graduate medicine, dentistry, pharmacy, health sciences, public health and other medical science and health areas at the University.

In this degree you can choose another discipline as a major or minor in addition to medical science. So, for example, you could combine medical science with design or mathematics, to create a unique career path.

## Prerequisites

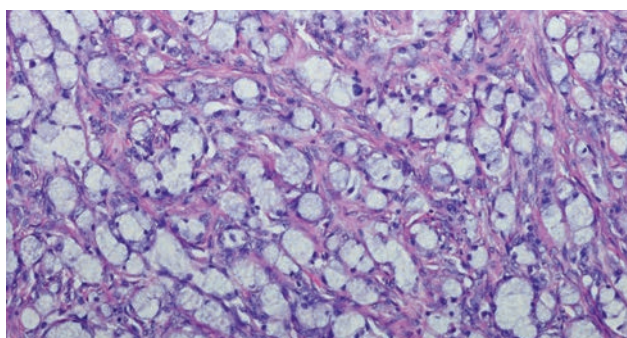
Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics or Mathematics Extension 1, Chemistry, and Biology or Physics

## Advanced Studies

Combining your studies with the Bachelor of Advanced Studies gives you the opportunity to complete a capstone experience with research, community, or entrepreneurial projects, industry placements and advanced coursework.



## Major studies

**Program:** Medical Science

**Majors/minors:** A second major/minor can be taken from the shared pool of majors shown in Table S (see page 19) or from the Bachelor of Science. Science options include: Anatomy and Histology; Animal Health, Disease and Welfare; Animal Production; Applied Medical Science; Biochemistry and Molecular Biology; Biology; Cell and Developmental Biology; Chemistry; Computer Science; Data Science; Environmental Studies; Financial Mathematics and Statistics; Food Science; Genetics and Genomics; Geography; Geology and Geophysics; History and Philosophy of Science; Immunology; Infectious Diseases; Information Systems; Marine Science; Mathematics; Medicinal Chemistry; Microbiology; Neuroscience; Nutrition Science; Pathology; Pharmacology; Physics; Physiology; Plant Production; Plant Science; Psychological Science; Quantitative Life Sciences; Software Development; Soil Science and Hydrology; Statistics; Virology; Wildlife Conservation.

## Career possibilities

Medical sciences researcher; laboratory pathologist; doctor (after further study); dentist (after further study); pharmacist (after further study); pharmaceutical and medical device developer (after further study); medical administrator; careers in the pharmaceutical industry; careers in the government sector.



### Degree sample: Bachelor of Science (Medical Science)

Year	Semester	Unit of study			
1	1	Human Biology	Chemistry	Mathematics	Major
	2	From Molecules to Ecosystems	OLE	Mathematics	Major
2	1	Human Anatomy and Histology	Key Concepts in Physiology	Biochemistry and Molecular Biology	Major
	2	Microbes, Infection and Immunity	Key Concepts in Pharmacology	OLE	Major
3	1	Medical Science selective units*	Medical Science Interdisciplinary Project	Elective	Major
	2	Medical Science selective units*	Medical Science selective units*	Elective	Major
4	1	Project	Project	Advanced coursework	Major
	2	Project	Project	Advanced coursework	Major

- Major 1    ■ Major 2 or Minor    ■ Degree core    ■ Stream core
- Open Learning Environment (OLE)    ■ Advanced coursework

\* Medical Science selective units: Cancer; Interrogating Biomedical and Health Data; Diagnostics and Biomarkers; Visceral Anatomy; Cranial and Cervical Anatomy; Musculoskeletal Anatomy; Systems Histology and Embryology; Molecular Biology and Biochemistry - Genes; Human Molecular Cell Biology; Pathogenesis of Human Disease; Cells and Development; Molecular and Cellular Immunology; Immunology of Human Disease; Infectious Diseases; Microbes in Infection; Cellular and Developmental Neuroscience; Integrative Neuroscience; Functional Neuroanatomy; Neural Information Processing; Toxicology; Drug Design and Development; Neuropharmacology; Frontiers in Cellular Physiology; Reproduction, Development and Disease; Physiology of Disease; Virology; Medical and Applied Virology; Science Interdisciplinary Project



# BACHELOR OF SCIENCE/BACHELOR OF ADVANCED STUDIES (ADVANCED)

This course offers exceptional opportunities to budding scientists who relish a challenge. From lectures to independent research and in-depth problem solving, our advanced stream will give you the skills to embark on a rewarding career or join the forefront of scientific research.

What sets this course apart is the opportunity it offers you to study at an advanced level, either by choosing advanced units of study or by completing extra third-year units in place of second-year units.

As a science student at the University of Sydney you will be taught by dedicated scientific thinkers, including members of the Australian Academy of Science, Australian Research Council Fellows and winners of prestigious prizes including the Prime Minister's Prize for Science and the Eureka Prize.

You will learn in the latest facilities, including the multimillion-dollar Sydney Nanoscience Hub and the Charles Perkins Centre, which focuses on diabetes, obesity and cardiovascular disease.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics or Mathematics Extension 1. Other assumed knowledge depends on the subjects you choose. Some advanced units of study require certain marks in specified HSC subjects or equivalent.

## Major studies

**Programs:** Agroecosystems (including one major chosen from: Animal Production; Plant Production; Soil Science and Hydrology); Environmental Science; Nanoscience and Technology (Chemistry or Physics major); Neuroscience; Psychology (Psychological Science major). The Mathematical Sciences program is only available to students eligible for the Dalyell stream.

**Majors:** See Bachelor of Science. A second major also needs to be taken from those available in the Bachelor of Science or from the shared pool of majors shown in Table S (see page 19). Majors available with advanced units of study are: Anatomy and Histology; Biochemistry and Molecular Biology; Biology; Cell and Developmental Biology; Chemistry; Computer Science; Data Science; Ecology and Evolutionary Biology; Environmental Studies; Financial Mathematics and Statistics; Food Science; Genetics and Genomics; Geography; Geology and Geophysics; History and Philosophy of Science; Infectious Diseases; Information Systems; Marine Science; Mathematics; Medicinal Chemistry; Microbiology; Neuroscience; Nutrition Science; Physics; Physiology; Plant Production; Psychological Science; Quantitative Life Sciences; Software Development; Soil Science and Hydrology; Statistics.

## Career possibilities

Optics researcher; plant cell physiologist; geologist; statistician; sensory perception researcher; renewable energy chemist; biochemist; science journalist.

## Degree sample: Bachelor of Science/Bachelor of Advanced Studies (Advanced)

Year	Semester	Unit of study			
1	1	Science major	Science	Mathematics	Major 2
	2	Science major	Science	Mathematics	Major 2
2	1	Science major	Elective	OLE	Major 2
	2	Science major*	Elective	OLE	Major 2
3	1	Science major*	Science major*	Major 2	Major 2
	2	Science major*	Science major	Major 2	Major 2
4	1	Advanced coursework	Advanced coursework	Project	Project
	2	Advanced coursework	Advanced coursework	Project	Project

■ Major 1    ■ Major 2 or Minor    ■ Degree core     Elective  
■ Open Learning Environment (OLE)    ■ Advanced coursework

\* An advanced unit is either a unit that is coded advanced or a third-year unit completed in place of a second-year unit.

# BACHELOR OF SCIENCE/BACHELOR OF ADVANCED STUDIES (AGRICULTURE)

Whether you'd like to strengthen food security, sustain the world's natural resources and biodiversity, or make the next agricultural breakthrough that contributes to the health of the planet and its people, this course will give you the knowledge and skills you need to make it happen.

You'll develop expertise in the multidisciplinary world of agriculture as you examine how living systems are managed, how they interact with the surrounding environment, and how they contribute to our economic and social systems. You'll gain knowledge in the four key areas of animal production, plant production, and soil and water sciences, along with agribusiness.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics and Chemistry

## Major studies

You need to take an agriculture program, including a major in Animal Production, Plant Production, or Soil Science and Hydrology. You also need to take a second major, either in agriculture or from those available in the Bachelor of Science, or from the shared pool of majors shown in Table S (see page 19).

## Career possibilities

Agricultural business manager; agronomist; biotechnologist; environment protection manager; data and spatial scientist; financial manager; horticulturalist; water manager; marketer of agricultural products; plant breeder; scientific researcher; soil scientist; statistician; sustainable production manager.



## Degree sample: Bachelor of Science/Bachelor of Advanced Studies (Agriculture)\*

Year	Semester	Unit of study			
1	1	Life and Evolution	Earth, Environment and Society	Introduction to Statistical Methods	Major 2
	2	From Molecules to Ecosystems	Global Challenges: Food, Water and Climate	Elective	Major 2
2	1	Plant Management in Agroecosystems	Soil & Water	Applied Statistical Methods	Major 2
	2	Plants and Environment	Genetics and Genomics	OLE	Major 2
3	1	Plant Protection	Agroecosystems in Developing Countries, or Environmental GIS, or Production Horticulture	OLE	Major 2
	2	Sustainable Plant Production	Applied Plant function, or Science Interdisciplinary Project	Elective	Major 2
4	1	Research Project A	Research Project A	Advanced coursework	Major 2
	2	Research Project B	Research Project B	Professional Development	Major 2

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
 ■ Program unit   
  Elective  
■ Open Learning Environment (OLE)   
■ Advanced coursework

\* With a Plant Production major

# BACHELOR OF SCIENCE/BACHELOR OF ADVANCED STUDIES (ANIMAL AND VETERINARY BIOSCIENCE)

This degree provides you with an all-inclusive appreciation of the multidisciplinary sciences involved in the veterinary and allied animal science industries, including companion animals and wildlife.

Alongside the breadth of animal science, you can choose a complementary major from a broad range, either to specialise or diversify your knowledge and prepare you for dynamic opportunities to work with animals.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics and Chemistry

## Recommended studies

Biology

## Major studies

Animal and Veterinary Bioscience. You will also need to take a second major from those available in the Bachelor of Science or from the shared pool of majors shown in Table S (see page 19).

## Career possibilities

Animal health and quarantine manager; animal nutritionist; biosecurity scientist; biotechnologist; animal breeding program manager; animal production manager (intensive and extensive); medical researcher; microbiologist; molecular geneticist (animal and human); national parks and wildlife services officer; reproductive technologist (animal and human); sustainable agriculturalist

**Degree sample: Bachelor of Science/Bachelor of Advanced Studies (Animal and Veterinary Bioscience)**

Year	Semester	Unit of study			
1	1	Chemistry 1A	Animals and Us	Introduction to Statistical Methods	Major 2
	2	From Molecules to Ecosystems	Concepts of Animal Management	Elective	Major 2
2	1	Animal Structure and Function	Animal Energetics and Homeostasis	Applied Statistical Methods	Major 2
	2	Genetics and Genomics or Australian Wildlife Biology	Animal Nutrition	OLE	Major 2
3	1	Animal Reproduction	Elective	OLE	Major 2
	2	Animal Biotechnology	Animal Behaviour and Welfare Science	Interdisciplinary Project	Major 2
4	1	Research Project A	Research Project	Advanced coursework*	Major 2
	2	Research Project	Research Project	Professional development	Major 2

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
 ■ Program unit   
  Elective  
■ Open Learning Environment (OLE)   
 ■ Advanced coursework

\* Dairy Production and Industry; Food Safety Assessment and Management; Feed Technology; Extensive Animal Industries



# BACHELOR OF SCIENCE/BACHELOR OF ADVANCED STUDIES (FOOD AND AGRIBUSINESS)

Feeding the world is big business. Our innovative and multidisciplinary Food and Agribusiness course teaches you about the business and science of sustainably supplying food to a growing global population. We will also provide you with the work experience you need to launch your career in the next boom industry.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics and Chemistry

## Recommended studies

Biology

## Major studies

Food Science and a Business major chosen from: Agricultural and Resource Economics; Accounting; Banking; Business Analytics; Business Information Systems; Business Law; Econometrics; Economics; Economic Policy; Finance; Financial Economics; Industrial Relations and Human Resource Management; International Business; Management; Marketing.

## Career possibilities

Roles in food/agribusiness industry in food production, processing operations, quality assurance, food safety, new product development, research and development, supply chain and logistics management. Depending on your second major, roles in agribusiness, banking, finance, marketing, consumer research, retail, procurement, trade, industrial relations/human resources, information systems, policy.

## Degree sample: Bachelor of Science/Bachelor of Advanced Studies (Food and Agribusiness)

Year	Semester	Unit of study			
1	1	Chemistry 1A	Introduction to Statistical Methods	Elective	Business major
	2	From Molecules to Ecosystems	Global Challenges: Food, Water, Climate	Elective	Business major
2	1	Biochemistry and Molecular Biology	Applied Statistical Methods	Elective	Business major
	2	Food Science	Managing Food and Beverage Supply Chains	OLE	Business major
3	1	Food Processing and Value Adding	Chemistry and Biochemistry of Foods	Elective	Business major
	2	Food Product Development or Science Interdisciplinary Project	Food Quality and Safety	OLE	Business major
4	1	Research Project A	Research Project A	Advanced Food Science	Business major
	2	Research Project B	Research Project B	Industry Internship	Business major

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
 ■ Program unit   
  Elective  
■ Open Learning Environment (OLE)   
■ Advanced coursework

# BACHELOR OF SCIENCE/BACHELOR OF ADVANCED STUDIES (TARONGA WILDLIFE CONSERVATION)\*

This unique degree will develop your expertise in wildlife conservation. If you dream of making an impact in the conservation sector, to secure a shared future for wildlife and people, this course will provide highly applicable and sought-after skills for a wide range of careers.

You will be taught by dedicated researchers and practitioners from two of Australia's premier institutions – the University of Sydney and Taronga Conservation Society Australia – as you learn to address global conservation challenges.

The Taronga Wildlife Conservation stream comprises a Wildlife Conservation major that combines biology and conservation management with additional prescribed units of study in statistics and animal sciences. It provides extensive training in wildlife conservation by incorporating the study of biodiversity and evolution, animal science, and animal behaviour and management.

You will graduate with advanced research skills in biology and wildlife conservation, a highly developed sense of curiosity and self-direction, and intercultural skills enhanced via mobility opportunities. You will be able to lead behavioural change in the community for sustaining our planet's biodiversity.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics, Chemistry

## Major studies

You need to take the Taronga Wildlife Conservation program with a Wildlife Conservation major that combines biology and conservation management. You will also need to take a second major from the Bachelor of Science or the shared pool of majors shown in Table S (see page 19).

## Career possibilities

Opportunities exist in wildlife conservation; sustainability; environmental consultancy; animal health and reproduction; government and policy; NGOs; business and analytics; genetics; teaching (with further training).

\* Degree subject to final approval

## Degree sample: Bachelor of Science/Bachelor of Advanced Studies (Taronga Wildlife Conservation)

Year	Semester	Unit of study			
1	1	Life & Evolution	Animals & Us	Intro to Statistical Methods	Major 2
	2	From Molecules to Ecosystems	Elective	OLE	Major 2
2	1	Applied Statistical Methods	Elective	OLE	Major 2
	2	Biology Experimental Design & Analysis	Ecology & Conservation	Australian Wildlife Biology	Major 2
3	1	Project Unit	Wildlife Conservation	Elective	Major 2
	2	Project Unit	Ecology	Elective	Major 2
4	1	Wildlife Management	Honours/advanced coursework	Honours/advanced coursework	Major 2
	2	Wildlife Health and Welfare	Honours/advanced coursework	Honours/advanced coursework	Major 2

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
 ■ Program unit   
  Elective  
■ Open Learning Environment (OLE)   
 ■ Advanced coursework

# BACHELOR OF SCIENCE/MASTER OF MATHEMATICAL SCIENCES\*

Become a leader in the field of mathematics and statistics. This degree is designed to give you deep training in mathematical sciences and will also assist you if you wish to transition from undergraduate studies to research in mathematical sciences in the future. You can focus on mathematics, statistics, financial mathematics and statistics, or data science.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics Extension 2

## Major studies

Mathematical Sciences program, including a major in mathematics; statistics; financial mathematics and statistics; or data science.

A minor or second major can also be taken from those available in the Bachelor of Science or from a shared pool of majors shown in Table S (see page 19).

## Career possibilities

Opportunities include: business analyst, bioinformatician, data scientist, economic modeller, energy forecaster, game designer, health planner, quantitative analyst in banking, statistician, market analyst, meteorologist, financial analyst, teacher (with further study), researcher, web analyst.

\* The structure of this course may be affected by changes to government policy. For the latest information, refer to [sydney.edu.au/student-fees](http://sydney.edu.au/student-fees)

## Degree sample: Bachelor of Science/Master of Mathematical Sciences<sup>^</sup>

Year	Semester	Unit of study			
1	1	Calculus and Linear Algebra	Intro to Statistical Methods	Elective	Major 2
	2	Calculus and Statistics	Informatics: Data and Computation	OLE	Major 2
2	1	Probability and Estimation Theory	Maths Selective	Elective	Major 2
	2	Optimisation and Financial Maths	Maths Selective	OLE	Major 2
3	1	Financial Derivatives	Convex Analysis and Optimal Control or Mathematical Computing	Elective/Major 2	Major 2
	2	Stochastic Processes	Statistical Inference or Applied Linear Models	Elective/Major 2	Major 2
4		<b>Master's degree topics</b> - Algebra - Advanced Mathematical Methods - Applied Analysis - Applied Mathematics - Applied Statistics - Computational Mathematics - Computational Statistics - Financial Mathematics - Financial Statistics - Geometry - Mathematics - Mathematical Physics Measure Theory - Nonlinear Systems - Probability - Representation Theory - Statistics - Statistical Theory - Topology			
5		Research project			

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
 ■ Program unit   
  Elective  
■ Open Learning Environment (OLE)   
■ Postgraduate coursework for the master's degree

<sup>^</sup> With a Financial Mathematics and Statistics major

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# BACHELOR OF SCIENCE/MASTER OF NUTRITION AND DIETETICS\*

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With a solid foundation in science plus a two-year master's degree, the Bachelor of Science and Master of Nutrition and Dietetics provides the training you need to launch straight into a career in nutrition and dietetics.

This degree offers access to prominent dietitians and scientists at the forefront of research and practice. Join a highly regarded program in nutrition and dietetics that is the longest running in Australia (52 years in 2019).

Our teaching is research driven to ensure you gain exposure to the latest developments and advances in evidence-based dietetics, the science of nutrition, and community and public health nutrition. A special feature of our master's degree is one full semester of research that will build your skills in research and project management and enable you to begin PhD studies if you choose.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics, Chemistry, and Biology

## Major studies

Nutrition and Dietetics program (with a Nutrition Science major). You can take a second major or minor from those available in the Bachelor of Science or from the shared pool of majors shown in Table S (see page 19).

## Professional recognition

The Master of Nutrition and Dietetics is accredited by the Dietitians Association of Australia. A graduate of this program is eligible to become a full member of the association and to join the Accredited Practising Dietitian Program.

## Career possibilities

You will graduate with a sound knowledge of nutritional science and the expertise to pursue a career as an accredited dietitian in a range of professional settings, including private practice, hospitals, community health centres or aged care facilities; health promotion for government, non-government organisations or consultancy; and nutritional research.

\* The structure of this course may be affected by changes to government policy. For the latest information, refer to [sydney.edu.au/student-fees](http://sydney.edu.au/student-fees)



### Degree sample: Bachelor of Science/Master of Nutrition and Dietetics

Year	Semester	Unit of study			
1	1	Chemistry 1A	Human Biology	Mathematics	Minor
	2	From Molecules to Ecosystems	Chemistry 1B	OLE	Minor
2	1	Biochemistry and Molecular Biology	Key Concepts in Physiology	Mathematics	Minor
	2	Proteins in Cells	Integrated Physiology	OLE	Minor
3	1	Introductory Nutrition and Metabolism	Core selective, eg: Molecular Biochemistry	Major 2/Elective	Minor
	2	Metabolic Cybernetics	Food Processing and Value Adding	Major 2/Elective	Minor
4	1	Dietary Intake and Nutrition Assessment	Food and Nutrition Science	Methods in Nutrition Research	Dietetics Professional Studies
	2	Food Service Management	Community and Public Health Nutrition	Medical Nutrition	
5	1	Dietetics Training Placement			
	2	Nutrition Research Project			

■ Major 1   
 ■ Major 2 or Minor   
 ■ Degree core   
  Program unit   
  Elective  
 Open Learning Environment (OLE)   
 Postgraduate coursework for the master's degree



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# BACHELOR OF VETERINARY BIOLOGY/DOCTOR OF VETERINARY MEDICINE

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This degree provides both a scientific foundation and specialist clinical and medical experience. With its integrated approach designed for understanding real-world situations, the six-year course will turn you into a global professional at the forefront of modern veterinary medicine.

In the first and second years of the degree you will learn the fundamentals of the biomedical and animal sciences that underpin veterinary science. This learning takes place in an integrated, cross-disciplinary environment that sets you up for understanding real-world situations.

## Prerequisite

Mathematics (Band 4 or higher) or Mathematics Extension 1 or 2 (Band E3), or equivalent

## Assumed knowledge

Mathematics, Chemistry, and Physics

## Recommended studies

Biology

## Additional selection criteria

Year 12 applicants will be considered for selection based on the ATAR (or equivalent) and Commitment to Veterinary Science statement.

Non-Year 12 applicants who have completed a minimum of one year of full-time university study (or equivalent to 48 credit points) will be considered for selection based on their grade point average and their Commitment to Veterinary Science statement.

## Commitment to Veterinary Science statement

You can find information about the statement and the relevant form at:

- [sydney.edu.au/courses/bachelor-of-veterinary-biology-and-doctor-of-veterinary-medicine](https://sydney.edu.au/courses/bachelor-of-veterinary-biology-and-doctor-of-veterinary-medicine)

Check out the website for deadlines.

## Major studies

Animal Behaviour and Welfare Science; Animal Diseases and Pathobiology; Animal Husbandry; Cell Biology; Clinical and Professional Practice; Pharmacology; Veterinary Anatomy and Physiology; Veterinary Conservation Biology; Veterinary Medicine; Veterinary Public Health; Veterinary Surgery.

## Professional recognition

Graduates are eligible for immediate registration with the Veterinary Practitioners Board in each state and territory in Australia. They are also recognised internationally by the American Veterinary Medical Association and the Royal College of Veterinary Surgeons (UK).

## Career possibilities

Private veterinary practice; corporate veterinary medicine; animal welfare agencies; government departments; agricultural industries including inspection and environmental quality control; infectious disease control; wildlife conservation; work in diagnostic and research laboratories; veterinary public health.



## Degree sample: Bachelor of Veterinary Biology/Doctor of Veterinary Medicine

Year	Semester	Unit of study
1	1	Life and Evolution Chemistry 1A Introduction to Statistical Methods Elective
	2	From Molecules to Ecosystems Chemistry 1B Concepts of Animal Management Elective
2	1	Genetics and Genomics Animal Energetics and Homeostasis Animal Structure and Function Elective
	2	Introductory Veterinary Pathogenesis Animal Nutrition Elective Elective
3		Foundations of Veterinary Science A & B Professional Skills 1A & 1B The Veterinary Professional 1 Animal Management Systems 1 Research and Enquiry 1A & 1B
4		Principles of Animal Disease A & B Professional Skills 2A & 2B The Veterinary Professional 2 Animal Management Systems 2 Research and Enquiry 2A & 2B
5		Small Animal Practice A & B Veterinary Public Practice Veterinary Practice Management Clinical Foundations Research and Enquiry 3B Small Practice A & B Livestock Practice A & B Equine Practice A & B Exotic and Wildlife Practice Intensive Animal Practice
6		Small Animal Clinics A, B, C & D Large Animal Clinics A & B Lab Investigations of Clinical Disease Public, Industry or Community Placement Extramural Placement 1, 2, 3 & 4

■ Bachelor of Veterinary Biology compulsory units  
■ Postgraduate coursework for the Doctor of Veterinary Medicine

□ Elective

### Tuition fees

This combined degree comprises some undergraduate components (the Bachelor of Veterinary Biology, in Years 1 and 2) and some postgraduate components (the Doctor of Veterinary Medicine, in Years 3 to 6).

For Commonwealth-supported students, the Year 1 student contribution amount listed on the course page at [sydney.edu.au/courses](http://sydney.edu.au/courses) is an indication only of the amount you will pay in the advertised calendar year of study, for full-time study of 48 credit points.

The student contribution amount is subject to annual increases for each year of your study in the combined degree (subject to an Australian Government-specified cap), effective at the start of each year.

The exact amount you will pay also depends on the specific units of study in which you enrol as a Commonwealth-supported student in the combined degree. In the years in which you are undertaking postgraduate (Doctor of Veterinary Medicine) units of study, you will be paying a higher student contribution amount.

At the time of publication, the University is unable to provide an indication of your student contribution amount for Years 2 to 6 of the combined degree.

For more information about fees, please contact us:  
1800 SYD UNI (1800 793 864)  
+61 2 8627 1444 (from outside Australia)  
– [sydney.edu.au/ask](http://sydney.edu.au/ask)

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# OTHER DEGREE OPTIONS

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## Degree name

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### **Bachelor of Advanced Computing/Bachelor of Science**

### **Bachelor of Advanced Computing/Bachelor of Science (Health)**

### **Bachelor of Advanced Computing/Bachelor of Science (Medical Science)**

Redefine the digital landscape. The combined Bachelor of Advanced Computing and Bachelor of Science will develop your technical skills in computing and IT while cultivating your knowledge of scientific enquiry. Underpinned by critical analytical and leadership skills, the course will position you to transform our world for the better. By choosing the Health or Medical Science stream you will also be able to apply your expertise in the healthcare, medical science, biomedicine or bioinformatics fields.

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### **Bachelor of Education (Secondary: Mathematics)/Bachelor of Science**

This five-year combined degree will give you a professional qualification to teach in secondary schools in mathematics or science. You will acquire a strong practical and theoretical preparation for teaching. The course covers professional teaching, special education, international education, and information and communications technology.

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### **Bachelor of Education (Secondary: Science)/Bachelor of Science**

This five-year combined degree will give you a professional qualification to teach science in secondary schools. You will acquire a strong practical and theoretical preparation for teaching. Two teaching areas are selected from the following: biology, chemistry, geography, mathematics, physics.

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### **Bachelor of Engineering Honours/Bachelor of Science**

### **Bachelor of Engineering Honours/Bachelor of Science (Health)**

### **Bachelor of Engineering Honours/Bachelor of Science (Medical Science)**

This combined degree emphasises the strong scientific foundations of engineering. It will expand your career options by giving you two qualifications with just one extra year of study. In addition to your engineering stream, you will complete a Science major (including the Health and Medical Science streams). You can combine any engineering stream with a Bachelor of Science.

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### **Bachelor of Science/Bachelor of Laws**

The legal field needs professionals who can understand and translate complex science. With a Bachelor of Science/Bachelor of Laws, you will graduate with two degrees and a suite of specialist skills that will allow you to carve out a niche in the legal sector. It will prepare you for jobs across patents, intellectual property and even forensics.

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### **Bachelor of Science/Master of Nursing**

### **Bachelor of Science (Health)/Master of Nursing**

Become a leader in healthcare and nursing. This combined degree cultivates critical thinking skills across the breadth of the sciences, while providing you with the expertise and experience to become a registered nurse. You will have a wide range of career opportunities across both clinical and non-clinical settings. The Health stream provides additional expertise, preparing you to pioneer healthcare innovations and transform lives.

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### **Bachelor of Science/Doctor of Dental Medicine**

This double degree gives you the opportunity to study science before undertaking dentistry. Designed for high school leavers who have achieved outstanding results, the double degree has you studying in a three-year undergraduate science degree, followed by a four-year Doctor of Dental Medicine. If you become a Dalyell Scholar, you will gain a deeper understanding of the scientific fundamentals that underpin dentistry and be better prepared for any career path you choose.

Additional admission criteria: ATAR of 99.5 (or equivalent), and satisfactory performance in an assessment process comprising a written assessment and faculty discussion session.

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### **Bachelor of Science/Doctor of Medicine**

This double degree gives you the opportunity to study science before undertaking medicine. This pathway allows school leavers who have achieved exceptional results to commence a three-year undergraduate science degree followed by a four-year Doctor of Medicine (MD). It gives you a deeper understanding of the scientific fundamentals that underpin medicine, so you will be better prepared for any career in medicine, from specialisation to research and teaching. You may elect to complete the Dalyell stream, Medical Science stream or choose from a wide range of majors from across the sciences.

Additional admission criteria: ATAR of 99.95 (or equivalent), and satisfactory performance in an assessment process comprising a written assessment and faculty discussion session.

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# SCIENCE PROGRAMS – STRUCTURE

This table shows all the available science programs and major study options in our degrees. When you see 'req' (required), it means the major must be completed. For example, to complete our Psychology program, you need to take the Psychological Science major.

Degree		Bachelor of Science							
Stream		No stream					Dalyell eligible	Health	Medical Science
Program		(No program)	Agroecosystems	Environmental Science	Neuroscience	Psychology	Mathematical Sciences		Medical Science
	Anatomy and Histology	●	●	●	●	●	●	●	●
	Animal Health, Disease and Welfare	●	●	●	●	●	●	●	◆
	Animal Production	●	req/opt	●	●	●	●	●	◆
	Animal Veterinary Bioscience								
	Applied Medical Science	●	●	●	●	●	●	●	●
	Biochemistry and Molecular Biology	●	●	●	●	●	●	●	●
	Biology	●	●	●	●	●	●	●	●
	Business √								
	Cell and Developmental Biology	●	●	●	●	●	●	●	●
	Chemistry	●	●	●	●	●	●	●	◆
	Computer Science	●	●	●	●	●	●	●	◆
	Data Science	●	●	●	●	●	●	●	◆
	Ecology and Evolutionary Biology	■	■	■	■	■	■	■	■
	Environmental Studies	●	●	●	●	●	●	●	◆
	Environmental Science			req					
	Financial Mathematics and Statistics	●	●	●	●	●	req/opt	●	◆
	Food Science	●	●	●	●	●	●	●	◆
	Genetics and Genomics	●	●	●	●	●	●	●	◆
	Geography	●	●	●	●	●	●	●	◆
	Geology and Geophysics	●	●	●	●	●	●	●	◆
	Health	★	★	★	★	★	★	req	★
	History and Philosophy of Science	●	●	●	●	●	●	●	◆
	Human Movement						●		
Majors	Immunology and Pathology	■	■	■	■	■	■	■	■
	Immunology	◆	◆	◆	◆	◆	◆	◆	◆
	Infectious Diseases	●	●	●	●	●	●	●	◆
	Information Systems	●	●	●	●	●	●	●	◆
	Marine Science	●	●	●	●	●	●	●	◆
	Mathematics	●	●	●	●	●	req/opt	●	◆
	Medical Science								req
	Medicinal Chemistry	●	●	●	●	●	●	●	◆
	Microbiology	●	●	●	●	●	●	●	◆
	Neuroscience	●	●	●	req	●	●	●	●
	Nutrition Science	●	●	●	●	●	●	●	◆
	Pathology	◆	◆	◆	◆	◆	◆	◆	◆
	Pharmacology	●	●	●	●	●	●	●	●
	Physics	●	●	●	●	●	●	●	◆
	Physiology	●	●	●	●	●	●	●	●
	Plant Production	●	req/opt	●	●	●	●	●	◆
	Plant Science	◆	◆	◆	◆	◆	◆	◆	◆
	Psychological Science	●	●	●	●	req	●	●	◆
	Qualitative Life Sciences	●	●	●	●	●	●	●	◆
	Software Development	●	●	●	●	●	●	●	◆
	Soil Science and Hydrology	●	req/opt	●	●	●	●	●	◆
	Statistics	●	●	●	●	●	req/opt	●	◆
	Virology	◆	◆	◆	◆	◆	◆	◆	◆
	Wildlife Conservation	◆	◆	◆	◆	◆	◆	◆	◆

Key  
 ● = major (48cp) and minor (36cp); ■ = major only (48cp); ◆ = minor only (36cp)  
 req (or req/opt) = Selected stream requires the completion of this major (or from a choice of majors)  
 ★ Available as a second major in the degree.

√ Business major options for Food and Agribusiness only: Agricultural and Resource Economics; Accounting; Banking; Business Analytics; Business Information Systems; Business Law; Economics; Economic Policy; Finance; Industrial Relations and HRM; International Business; Management; Marketing.  
 Note: The Dalyell Scholars program is available across all streams and programs.

Bachelor of Science/Bachelor of Advanced Studies												
	No stream					Advanced	Agriculture	Animal and Veterinary Bioscience	Dalyell eligible	Food and Agribusiness	Health	Medical Science
(No program)	Agroecosystems	Environmental Science	Nanoscience and Nanotechnology	Neuroscience	Psychology	Available in all BSc/BAS programs	Agriculture	Animal Veterinary Bioscience	Mathematical Sciences	Food and Agribusiness <sup>√</sup>		Medical Science
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	req/opt	■	■	■	■	■	req/opt	■	■		■	◆
								req				
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
										req/opt √		
■	■	■	req/opt	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	req/opt		■	■
■	■	■	■	■	■	■	■	■	■	req	■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
★	★	★	★	★	★	★	★	★	★		req	★
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	req/opt		■	■
												req
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	req	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	req/opt	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	req/opt	■	■	■	■	■	req/opt	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	■		■	■
■	req/opt	■	■	■	■	■	■	■	■		■	■
■	■	■	■	■	■	■	■	■	req/opt		■	■

# STREAMS, PROGRAMS, MAJORS AND MINORS

Our diverse range of streams, programs, majors and minors allows you to achieve your academic and professional ambitions and pursue your passions and interests – whatever they may be.

For more information about the undergraduate courses, streams, programs and majors offered by the Faculty of Science, visit

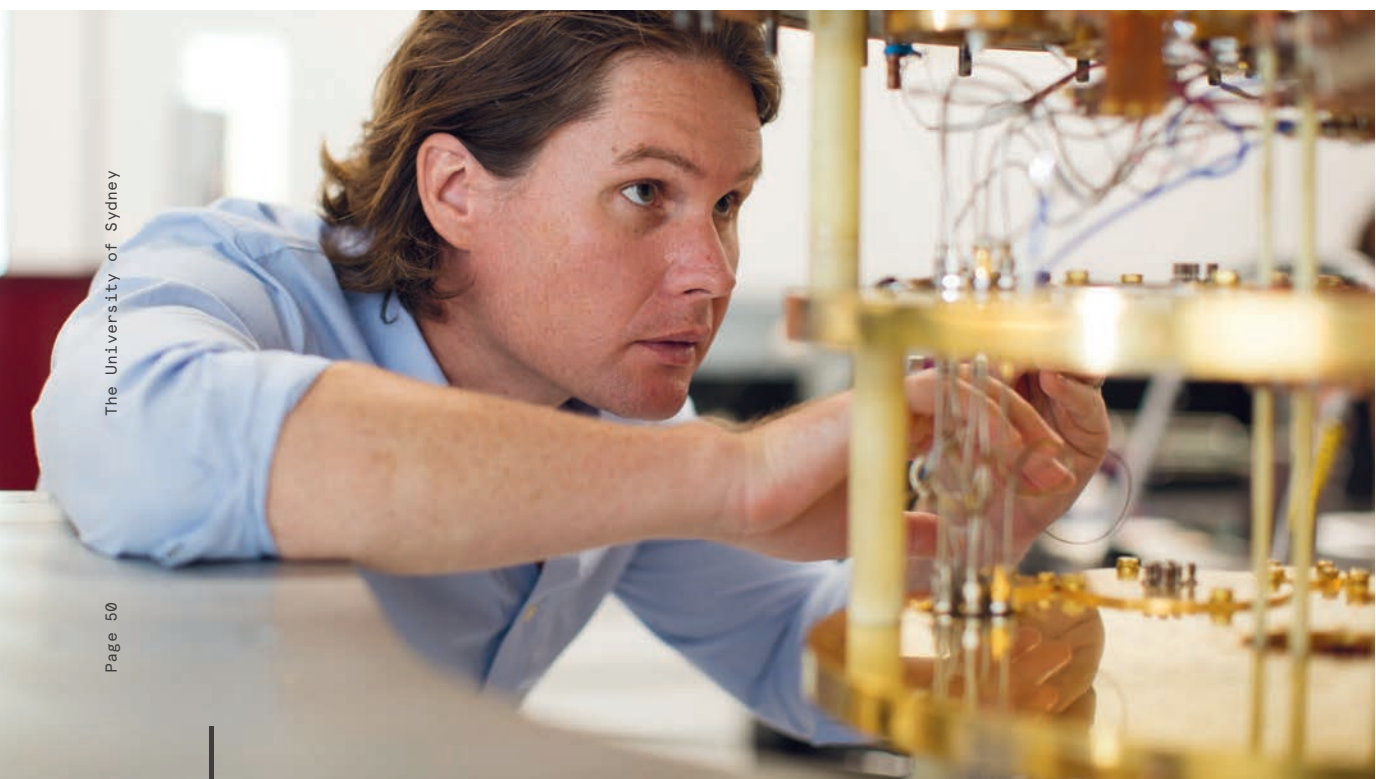
– [sydney.edu.au/science/ug-courses](https://sydney.edu.au/science/ug-courses)

**Streams** are versions of our degrees that have separate entry requirements and include specific programs in a given discipline. For example, one of our streams is the Bachelor of Science (Health).

**Majors** are 48 credit points of units of study in a particular discipline taken from first year that continue throughout your degree and develop your depth of expertise in a specific field.

**Programs** are a combination of units of study that develop your expertise in greater depth within a specific discipline, and involve more units than a major.

**Minors** are 36 credit points of units of study in a defined sequence in a particular discipline, which develop your expertise in a specific field.



## Agriculture

**Study options: stream (embedded program with a major in Animal Production; Plant Production; or Soil Science and Hydrology), honours**

Prepare to address the challenges and opportunities facing agriculture into the future. You will acquire the knowledge and skills to explain the role and relevance of agriculture and understand the major scientific, technological and economic drivers that support changes in agricultural practice. You will also develop strong multidisciplinary understanding of agricultural practice and innovation, strengthened by the ability to generate, manage and analyse agriculturally derived experimental, temporal and spatial data.

## Agroecosystems

**Study options: program, honours**

Whether you dream of joining the forefront of agricultural research or want to help make the future of food more secure, the Agroecosystems program will give you highly sought-after skills for a huge range of careers. Agriculture is by nature multidisciplinary, and this program will give you great depth of knowledge through your choice of a major in Soil Science and Hydrology; Plant Production; or Animal Production.

By the end of your studies you'll be ready to embark on a huge range of careers, from scientific research to agricultural policymaking and agribusiness.



## Anatomy and Histology

**Study options: major, minor, honours**

Anatomy and histology involve the study of the structure of living things. Your introduction to this area will be through the study of cell structure (histology) and the basic tissue of mammalian biology and musculoskeletal anatomy. In your senior year your studies will focus on four distinct disciplines: topographical anatomy (bones, muscles, nerves, arteries and veins); neuroanatomy (anatomy and organisation of the nervous system); histology (microscopic anatomy of cells and tissues); and embryology (development of an embryo from fertilisation to foetus stage). Dissection plays a part.

## Animal and Veterinary Bioscience

**Study options: stream (embedded program and major), honours**

Acquire fundamental and applied knowledge in animal bioscience, with a broad overview of domestic animals and wildlife species and their environment, and integrated comparative knowledge in fields such as applied biotechnologies, reproduction and nutrition. This will be supported by detailed knowledge of animal structure and function and a focus on application of innovative approaches and technologies to enhance animal management and welfare.

## Animal Health, Disease and Welfare

**Study options: major, minor, honours**

Animals play a significant role in the lives of people and communities, including as sources of food and fibre and as pets for companionship. The Animal Health, Disease and Welfare major integrates the areas of animal biology and microbiology with comparative and veterinary science. You will learn about the science that underpins the biology of animal health and disease, including physiology, microbiology, molecular biology, infectious agents and animal welfare. This major emphasises the prevention, treatment and understanding of disease in production and companion animals and wildlife.

This major will prepare you for a career in animal health sciences, including areas of infectious disease control, disease surveillance, animal welfare and animal production industries.

## Animal Production

**Study options: major, minor, honours**

Contemporary animal production aims to yield high-quality products in ways that are efficient, sustainable and humane. In the Animal Production major, you will learn how environment affects livestock productivity, how physiology affects production and reproduction, and how to improve animal performance through the application of animal sciences. You will also study animal behaviour and learn about production systems that promote animal wellbeing and welfare.

You will graduate with a recognised industry-oriented science-based education with a strong focus on enhancing the health, wellbeing and productivity of animals used in production systems, through innovative approaches. You will be well prepared for a career in one of the many animal production industries and organisations associated with food and fibre production, including aquaculture, beef, dairy, pigs, poultry and sheep.

## Applied Medical Science

**Study options: major, minor, honours**

This major will position you at the intersection of science and medicine, acquiring a fundamental understanding of human health and of the mechanisms of diseases, their diagnosis, prevention and treatment. You will be equipped with the insights and skills to understand ongoing scientific discoveries and to apply that knowledge to clinical situations.

The ability to apply theory to practice in medical science is essential for professionals addressing major global health issues such as mental illness, neurodegenerative disease, obesity, diabetes, cardiovascular disease, infections, cancer and auto-inflammatory disease. In this major you will learn the strategies by which medical science theory is translated into tangible health outcomes. Your experience is connected with clinical and medical sciences as most classes are taught at Westmead.

## Biochemistry and Molecular Biology

**Study options: major (Biochemistry or Molecular Biology and Genetics majors in the Bachelor of Liberal Arts and Science), minor, honours**

The Biochemistry and Molecular Biology major will provide you with a thorough understanding of the chemistry of life and the molecules that regulate living processes. This major emphasises how these molecules pass information and energy within and between cells, and from generation to generation, and how these processes affect form and function. If you wish to study the fundamental molecular processes that underlie normal physiology, disease in all kingdoms of life and develop treatment of these diseases, this is the major for you.

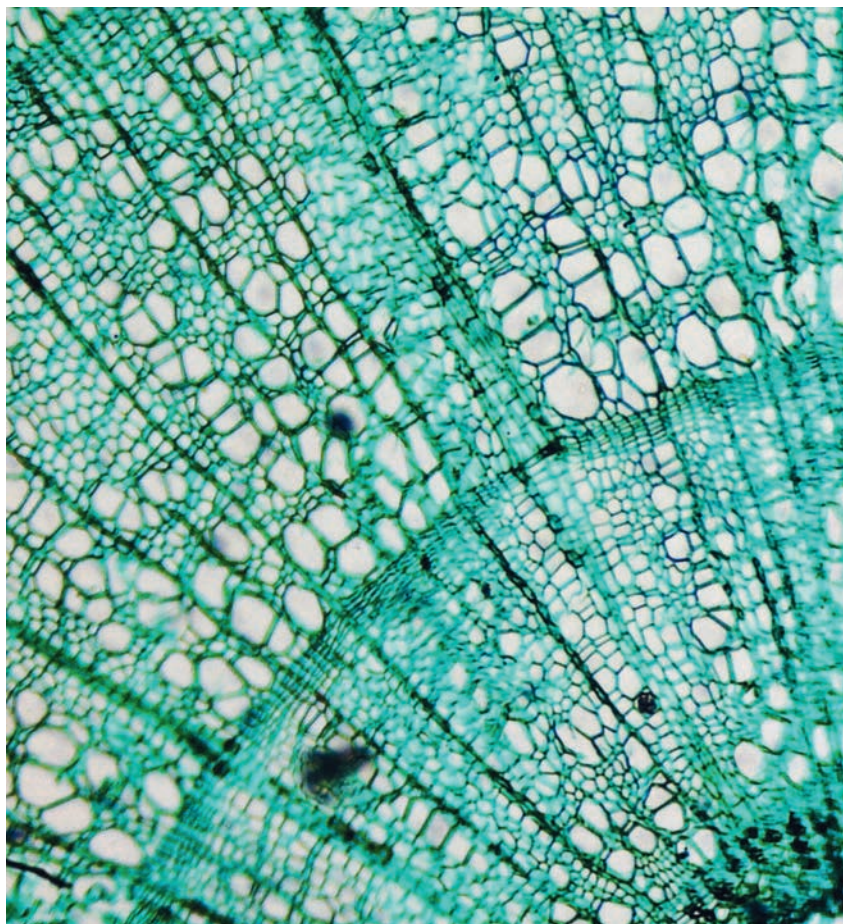
Biochemists work at the forefront of scientific research, including in food manufacturing industries, biotechnology companies, hospitals, diagnostic laboratories, universities, schools, the pharmaceutical industry, agriculture and research institutes.

## Biology

**Study options: major, minor (Biology, Plant Science), honours**

Biology is the study of living organisms – whether single-celled or multicellular, and whether as individuals or groups – and their interaction with their environment and with each other. It is concerned with all levels of biological complexity from the molecular level through to cells and tissues, organisms, their populations and the ecosystems of which they form part. It includes a number of sub-disciplines such as taxonomy, ecology, botany, plant science, phylogenetics, cytology, molecular biology and zoology.

As a graduate with a Biology major, you can expect an exciting and rewarding career contributing to the community through opportunities in business, research, training, education and government. You may also combine laboratory research and fieldwork to study biological systems in many of the world's remote and fascinating ecosystems.



Customis

## Cell and Developmental Biology

Study options: major, minor, honours

Cell and Developmental Biology aims to understand how a single cell undergoes divisions and differentiation to give rise to different cell and tissue types in a coordinated manner, ultimately leading to the development of a whole organism. A comprehensive understanding of cell biology within the context of development also provides the means to understand processes that lead to diseases such as cancer.

As a graduate you will be prepared for a career in the biological and biomedical sectors.

## Chemistry

Study options: major, minor, honours

Chemistry is the study of many of the things around us, including how one substance changes into another and the relationship between the nature and structure of molecules. It plays a key role in such diverse processes as obtaining metals from ores, converting oils into plastics and developing cures for cancer. By undertaking a Chemistry major you will come to understand the impact chemistry has on many of the items in the world around us, including dyes, paints, medicines, silicon chips, artificial hips, clothing, energy storage, optical fibres and rubber tyres.

There are many employment opportunities for chemists, including in industry, government laboratories, education and management. The industrial sector includes such diverse areas as petrochemicals, pharmaceuticals, medicine, food and drink, metals, polymers, computing and scientific journalism. Government laboratories include research, forensic and analytical laboratories and many statutory authorities.

## Computer Science

**Study options: major, minor, honours**

The major in computer science is about computation. You will learn the principles and techniques needed to solve tasks efficiently with computation, and how to express those solutions in software. You will discover different ways that computation can be modelled, and how to reason about the limits of what computation can achieve. Also, the major provides some experience of how computer systems are built internally in order to support efficient computations.

A major in computer science provides the knowledge and skills needed to innovate in information technology and create fundamentally new IT solutions to challenges.

## Data Science

**Study options: major, minor, honours**

Data is an essential asset in many organisations, as it enables informed decision making in many areas, including market intelligence and science. In this major you will develop computational and analytical skillsets that stem from statistics and computer science and learn to apply them to manage, interpret, understand, analyse and derive key knowledge from data.

With further study you could be on the path to becoming a data scientist, building intelligent data-driven systems in an existing area of expertise (for example, as a mining analyst), or improving scientific research through training in data management, analysis and modelling.



## Ecology and Evolutionary Biology

**Study options: major, Wildlife Conservation minor, honours (biology)**

Ecology investigates the processes that govern the biological interactions between individuals and operate on ecosystem scales. Evolution is a unifying theme that explains the patterns we observe in the natural world, ranging from genomes to the diversification of life through time.

The fields of ecology and evolution intersect at multiple levels and are critically relevant to real-world challenges, including wildlife conservation. In this major you will learn about evolutionary and ecological processes and how these influence the population dynamics of animals, plants and other organisms. This knowledge forms the basis for the effective management and conservation of biodiversity, ecosystems and habitats. As a graduate you may combine laboratory research and fieldwork to study ecological or evolutionary systems.

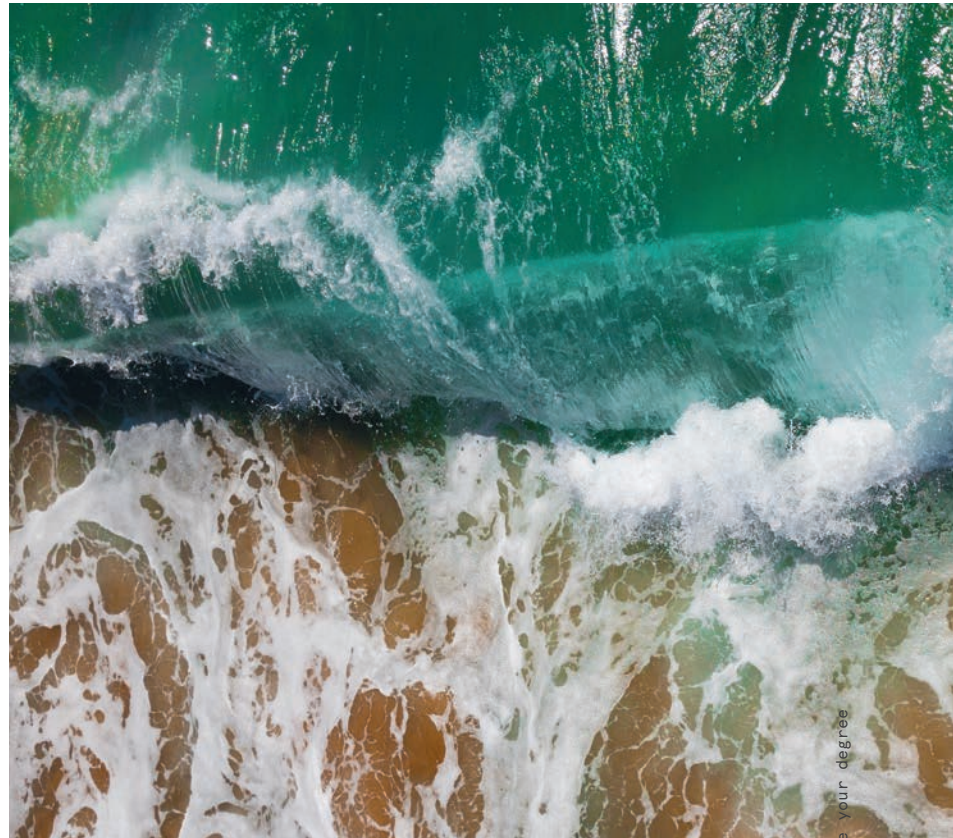
## Environmental Science

**Study options: program, honours**

A program in Environmental Science will provide you with the understanding and skills needed to find solutions to environmental issues, with multidisciplinary knowledge in the physical environment, managed and natural ecosystems. You will have the opportunity to obtain greater disciplinary depth in one or more of: plants, wildlife and the physical resource. You will develop the knowledge and skills to find solutions to complex environmental challenges; the technical laboratory and field skills to measure, monitor and analyse environmental problems; an understanding of the policy and regulatory contexts within which environmental scientists work; the ability to design and analyse experiments; experience working with spatial data using mapping and analysis tools; and a strong multidisciplinary scientific understanding of regional, national and global environmental issues.

As a graduate, you will be able to pursue a career in a government-funded organisation, in local government or with one of the multitude of private environmental consultancies seeking graduates with science-based skills and specialist knowledge of environmental issues.





## Environmental Studies

**Study options: major, minor, honours**

Environmental Studies is the examination of the social, economic and regulatory contexts that surround the management and monitoring of environmental and ecosystem health. This major incorporates the study of both social and biophysical phenomena within their regulatory and policy frameworks, and is therefore inherently multidisciplinary.

As a graduate you will be equipped to pursue a career in government and environmental policy, law and regulation and employment in areas such as sustainability. Our graduates work in corporations, government and NGOs internationally.

## Financial Mathematics and Statistics

**Study options: major, minor, honours**

Mathematics is the foundation of the financial world. It allows investors, traders and bankers to make optimal decisions and to distribute risk in a rational way. The mathematics behind finance is, however, not simple and relies heavily on ideas from statistics and the mathematical theory of random events.

Graduates with a major in Financial Mathematics and Statistics are highly sought after by the finance industry, which requires graduates with strong quantitative skills. The expertise acquired in this major is needed not only for the operation and analysis of investment portfolios but also for the establishment, operation and maintenance of protocols for pricing traditional products such as options and futures as well as more modern products such as barriers, caps, swaps, exotics and other derivative securities.

## Food and Agribusiness

**Study options:** stream (embedded program and food science major), honours

Food and Agribusiness equips you with a solid grounding in the underpinning science of food products and processes, combined with studies of the business or economic environment that drive commercial processes and decisions.

You will develop analytical, problem-solving and research skills, as well as contextual knowledge of food and agribusiness, with a strong emphasis on industry relevance and engagement. There is a high demand in the food and agribusiness sector for tertiary graduates to enter skilled employment and support productivity, research and innovation. The Food and Agribusiness stream offers a good foundation for such roles.

## Genetics and Genomics

**Study options:** major (Molecular Biology and Genetics major in the Bachelor of Liberal Arts and Science), minor, honours

Genetics is the science of biological inheritance and variation. Genomics is a relatively new discipline and involves manipulation of very large datasets. This major will provide you with knowledge that can be applied to improving our understanding of evolution (past and present) and of many aspects of the biology of all living organisms.

This knowledge can also be applied to the development of novel biotechnology products, to improving the health of humans and animals, to forensics, to the conservation and management of plants and animals, to the diagnosis and control of pests, parasites and harmful microorganisms, and to improving the means by which plants and animals can sustain the feeding and clothing of humanity.

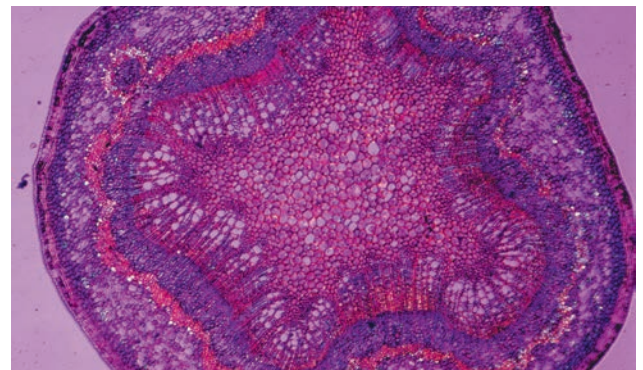
There is a strong demand for graduates as geneticists in a diverse range of national and international industries, including biotech companies, commercial and medical research organisations and conservation agencies.

## Food Science

**Study options:** major, minor, honours

Food is an integral part of our lives. Beyond providing essential nutrition and greatly influencing our health, food features strongly in our social and cultural systems, and is a major contributor to economic prosperity. Food and beverage manufacturing is the largest employing sector within manufacturing in Australia, and its importance will only grow as global population and food consumption increases.

This major will provide you with the fundamental knowledge and applied skills required for employment in the food industry. We need innovative products and processes to tap into new markets and expand existing ones, and to produce high-quality, healthy and safe foods more sustainably and cost-effectively. Food science is a rapidly growing field and there are increasing career opportunities in food businesses, as well as service providers, government and community organisations.



## Geography

**Study options: major, minor, honours**

Geography is the study of earth as the home of people. As the need to find solutions to issues of environmental degradation and sustainability, population change and globalisation have become more challenging, the skills and knowledge of geographers have come to the forefront.

You will study the interactions between earth, environment and society in Australia and abroad. This involves consideration of such issues as climate change, population growth, environmental hazards and environmental management.

Graduates have gone on to secure employment as environmental officers, overseas ambassadors, regional analysts, army officers, statisticians, cartographers, geographic information system (GIS) analysts, water quality officers, land care coordinators, and international development.

## Geology and Geophysics

**Study options: major, minor, honours  
(Geology, Geophysics)**

A major in Geology and Geophysics will provide you with a unifying context for understanding the surface and internal processes that determine how the Earth functions as a system. Global climate change, an increasing population and shrinking mineral and energy resources have heightened our sense of our dependence on the Earth's complex natural systems and increased our need to understand the dynamic structural relationships between the continents and oceans that provide the physical habitats for the Earth's various ecosystems. Technological advances create demand for new metals and minerals in computers, mobile phones and other everyday objects.

With this major you will acquire the skills necessary for employment in all areas of sustainable exploration and management of our natural, mineral and energy resources.

## Health

**Study options: stream, major, honours**

Health will equip you with a comprehensive understanding of health and health systems at the local, national, and global levels. Through our active, real-world learning approaches, your ability to navigate the complexity of health in different sociocultural, political and economic contexts will be nurtured and refined. You will develop core skills in critical thinking, complex problem solving, communication and empathy. The major provides you with a strong foundation in health and healthcare, while giving you the flexibility for in-depth study in particular areas of health that are of interest.



## History and Philosophy of Science

**Study options: major, minor, honours**

The History and Philosophy of Science major will enrich and deepen your knowledge of science and its place in modern society. It will allow you to stand back from the specialised concerns of your other subjects by gaining a broader perspective on what science is, how it acquired its current form, how it fits into contemporary society and how to analyse the ramifications of scientific developments from a social, cultural and ethical perspective. History and Philosophy of Science is a valuable field of study for any career requiring a broad and critical appreciation of science and its position in society. It is particularly relevant for careers in science administration, science policy, science education, science communication, science journalism, exhibition design and museum work.

## Human Movement

**Study options: major, minor, honours**

The Human Movement major integrates anatomical, physiological and biomechanical principles related to human movement. Graduates will be equipped to assist in health service roles and the conduct of research and analysis of data relevant to the study of human movement. The Human Movement major provides a strong foundation for further study in fields such as physiotherapy and medicine (subject to meeting eligibility criteria).



## Immunology and Pathology

**Study options: major, minor (Immunology; Pathology), honours**

The immune system is an integrated network of specialised cells and organs that respond to external and internal threats. It can be mobilised to protect humans from infections and cancer, but it can also be the cause of major acute and chronic pathology. The Immunology and Pathology major examines how it is that our immune system can be both the cause and the cure of disease. Understanding these immunological and pathological mechanisms behind this apparent paradox is important in enabling us to think about how our immune system can be manipulated to prevent and treat disease. You will discover the biological mechanisms governing disease pathogenesis in humans and gain experience using investigative techniques for disease detection in pathology.

Graduates of this major may proceed to further study or find employment as immunologists or pathologists in hospitals, in public or private research laboratories specialising in immunology, cell biology and biotechnology, or in other areas of biomedical sciences.

## Infectious Diseases

**Study options: major, minor (Infectious Diseases; Virology), honours**

Infectious diseases occur as a result of interactions between microbial pathogens and their hosts. The Infectious Diseases major is a multidisciplinary pathway of study that emphasises how infectious agents interact with human hosts at molecular, cellular, individual and community levels to cause disease. This major begins with developing an understanding of the relevance of infectious diseases within the concept of 'One Health', in which the multifactorial interrelationships between human, animal and environmental health are seen as critical.

Graduates of this major may proceed to further study or find employment as experts in hospitals, in public or private research laboratories specialising in immunology, cell biology or biotechnology, or in other areas such as public health.



Customise your degree

## Information Systems

**Study options: major, minor, honours**

The study of information systems (IS) involves designing, implementing and evaluating computer systems that satisfy organisational needs. IS encompasses systems approach, planning, requirements elicitation, system development, system implementation, and decision and knowledge systems. Beyond developing and enhancing the performance of computers, IS is client facing and all about making computer systems work within a broader sociotechnical context. These are important skills that will substantially increase your employability in any profession. Many IS graduates become systems analysts.

## Marine Science

**Study options: major, minor, honours**

Mitigating and managing the marine environment to withstand constant and highly variable climate change is a strategic science and research priority of the Australian Government. The Marine Science major draws together multidisciplinary material to provide you with in-depth knowledge of marine science. The major is explicitly science-based but seeks to provide you with a broader range of capabilities and an interdisciplinary mindset to service the large and growing demand for coastal and marine experts in a range of fields. As a marine scientist you will be equipped to observe, measure and experiment in marine environments and habitats. You may work in laboratories or in the field, in the open ocean, coasts, islands or reef systems.

Science undergraduate guide 2019

## Mathematical Sciences

**Study options: program; includes a major in one of the following: Financial Mathematics and Statistics; Mathematics; or Statistics; Honours (Pure Mathematics, Applied Mathematics, Statistics)**

As a student in the Dalyell stream, you can choose the Mathematical Sciences program, which will give you a recognised and distinctive pathway of accelerated or advanced study in the mathematical sciences.

Generally speaking, a deep understanding of these common ideas and their application in both theoretical and practical spheres comes as a result of high-level syntheses rather than low-level foundational learning.

The Mathematical Sciences program gives you the opportunity to attain this level of learning by enabling you to engage across the breadth of the subject and to develop depth in one or more subdisciplines. This program forms an outstanding foundation for Honours in Pure Mathematics, Applied Mathematics or Statistics.

## Medical Science

**Study options: stream (embedded program and major), honours**

Medical Science is research informed and enquiry-led, leveraging off the world-class research and industry strengths of the medical sciences disciplines, the Charles Perkins Centre as well as the developments at the Westmead campus. It is designed to provide flexible pathways into the myriad of career opportunities in the biomedical sciences.

This program capitalises on the diverse nature of the medical sciences by integrating disciplinary depth with multidisciplinary breadth. By providing a strong foundation in physiology, anatomy and biochemistry, alongside other essential medical sciences such as pharmacology, microbiology, pathology, immunobiology and infectious diseases, the program also provides a solid base for prerequisite knowledge for anyone interested in progressing into medicine and dentistry.

## Mathematics

**Study options: major, minor, honours (Pure Mathematics, Applied Mathematics)**

Mathematics is powerful, beautiful and diverse. It is a language, a tool for analysis and prediction, and a way of thinking about the world. The Mathematics major starts by equipping you with the foundational ideas of mathematics: abstract algebra, vector calculus and calculus of several variables, as well as formal proof and analysis. In your senior years you will have the choice of a wide range of electives in both pure and applied areas of mathematics, including number theory, dynamical systems, geometry, topology and mathematical computing.

Graduates with mathematical skills are in demand in many areas, especially in businesses associated with financial services and information technology. They are also needed in almost all areas of scientific, medical, technological and industrial research.

## Medicinal Chemistry

**Study options: major, minor, honours**

The Medicinal Chemistry major will provide you with the knowledge, training and skills needed for employment and research opportunities in drug discovery and development. The discovery of new drugs is one of the most exciting and rapidly developing fields in science, and there is a growing need for safer, more effective pharmaceuticals against long-standing diseases (such as cancer), new ones (such as HIV/AIDS) and those that are becoming more widespread (such as malaria and tuberculosis). Society also faces related challenges ranging from antimicrobial resistance to dementia. Medicinal chemistry looks at how to find drugs to combat these diseases, and how to make those drugs.

With a major in Medicinal Chemistry you can work in universities, corporate laboratories, pharmaceutical and biotechnology industries and hospitals. You will possess strong analytical and technical expertise in determining possible curative and preventative drugs for diseases such as cancer, AIDS, hepatitis, polio and even the common cold.

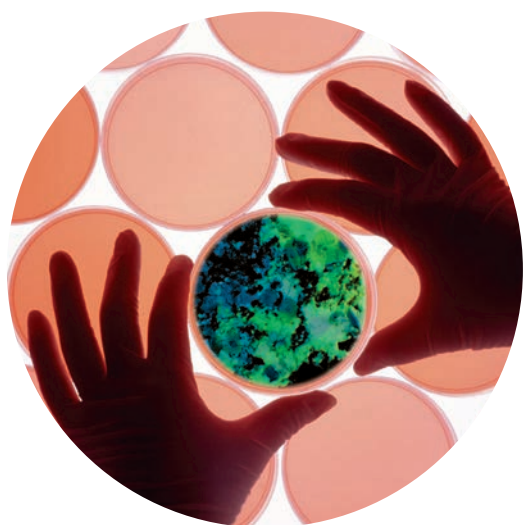
## Microbiology

**Study options: major, minor, honours**

Microbiology teaches us about life forms that are too small to see with the naked eye. They are vital for life on earth but can also cause huge problems as infectious disease agents, plant pathogens, contaminants of food and water, and biofoulers.

You will explore the impacts of microbes on other life forms, their role in health and disease at the level of individuals, populations and ecosystems, and in particular their place in human, animal and environmental interrelationships.

Employment opportunities for microbiology graduates are diverse. You can work in organisations such as universities, and various government bodies involved in health, agriculture, food and water quality, engineering and the environment, or in private companies working in areas including biotechnology, pharmaceuticals, pathology and diagnostics, food and beverage production, sanitation, bioremediation and bioprospecting. Allied fields include teaching, sales and support, policy development, public health, and administrative work in hospitals, universities and other complex organisations.



## Nanoscience and Nanotechnology

**Study options: program (embedded major in Chemistry or Physics); major (Bachelor of Liberal Arts and Science); honours**

Join the nanoscience and nanotechnology revolution. Nanoscience and nanotechnology concern the study of matter at the nanometre scale (10<sup>-9</sup> metres). At the microscale and even more at the nanoscale, the properties of matter are very different from those in the bulk. Modern methods used in nanoscience enable the manipulation and fabrication of matter and devices with unique and specific physical, chemical or biological properties. This program allows you to explore the highly interdisciplinary nature of nanoscience and nanotechnology, while giving you a strong foundation of disciplinary depth in science – primarily maths, physics and chemistry.

A wide variety of career options exist within the area of nanoscience for engineers, chemists, physicists, computer scientists and materials scientists. With technological development and very high precision, engineers manufacture, machine and manipulate material to smaller and smaller dimensions. At the same time, chemists and materials scientists have developed methods for synthesising and assembling extremely small structures atom by atom.

## Neuroscience

**Study options: program, major, minor, honours**

Neuroscience – the study of the brain and nervous system – is one of the largest and fastest-growing endeavours of the biological sciences, and a research strength at the University of Sydney. A major in Neuroscience will provide you with a foundation in the biology of the brain and the fundamentals of cognition.

This major will equip you to join the rapidly expanding field of global research activity in neuroscience, a discipline that is currently seeing translation in a number of exciting areas, including in the fields of engineering, computation, economics and business, and education.

Graduating with a major in neuroscience will allow you to pursue further study, work in one of the many rapidly growing areas within the pharmaceutical, medical or biotechnology industries, or pursue a professional course in medicine or psychology (subject to meeting eligibility requirements).

## Nutrition and Dietetics

**Study options: program (Bachelor of Science/Master of Nutrition and Dietetics only)**

The Nutrition and Dietetics program ensures you receive a thorough understanding and practical training in all aspects of human nutrition, including food science, nutritional science, dietary assessment and research methodology, medical nutrition, public health, and food service management, and have access to eminent dietitians at the forefront of dietetic and nutrition research and practice.

The program ensures all prerequisites are met for the Master of Nutrition and Dietetics, which has full accreditation from the Dietitians Association of Australia.

## Nutrition Science

**Study options: major (Nutrition and Metabolism major in the Bachelor of Liberal Arts and Science), minor, honours**

Nutrition Science is a multidisciplinary area of study that focuses on the role of food and nutrients in health and disease across the lifespan. This major explores the basics of biology and biochemistry before focusing on human nutrition. You will have opportunities to investigate nutrition and the effects of various nutrients on health and disease, from molecular to systems level. You will learn how we sense, digest, metabolise and store nutrients and develop a wide range of laboratory and research skills, including working with big datasets, which will provide a strong foundation for a career as a nutrition scientist or researcher.

A major in Nutrition Science can also open the door to further study in this area. You might wish to consider completing an honours year or postgraduate studies in Nutrition, including entry to the Master of Nutrition and Dietetics (subject to completing the eligibility requirements), which is accredited by the Dietitians Association of Australia.

## Pharmacology

**Study options: major, minor, honours**

Pharmacology is the study of the properties and biological actions of drugs and other chemicals, and the key roles they play in the prevention and treatment of human diseases. A drug is any agent – biological or chemical – that modifies the function of living tissues. The science of pharmacology is closely linked with chemistry, biochemistry, immunology, microbiology, molecular biology, physiology and toxicology.

A major in Pharmacology will give you thorough knowledge of the discovery, development and testing of drugs, and their importance to the future of medical research and practice. You will learn about the mechanisms of drug action, absorption, distribution, metabolism and elimination, drug activity and chemical structure, the effect of drugs on body systems, and the toxic effects of drugs and xenobiotics.

As a medical and pharmaceutical science, pharmacology is applied across a range of practices, including medical science research, medicine, dentistry, pharmacy and public health, and lends itself to a broad range of careers in the pharmaceutical industry and government.

## Physics

**Study options: major, minor, honours**

Study physics and not only will you become a good scientist, you'll also have a degree in how to solve problems. With a Physics major you'll learn how to design and conduct experiments and how to analyse the results. Physics explores the fundamental structure of the universe, starting with the smallest subatomic particles. It has provided the foundation for much modern technology, from smartphones and tablet computers to medical imaging equipment.

Physics is a generalist major: rather than preparing you for a narrow career path in just one area, it allows you great freedom of choice in your ultimate employment. This may appeal to you if you have not yet committed yourself to one career choice. Physics graduates have excellent training for hundreds of careers: jobs requiring critical reasoning, logical thought, teamwork and problem solving are commonly filled by physics graduates.





## Physiology

**Study options: major, minor, honours**

Physiology is the study of how the human body works and is a core discipline area in the medical and life sciences. It plays a central role in the medical sciences, integrating from molecular and cellular levels through to whole tissues and organs to help us understand whole body function. Physiology involves studying examples of common body dysfunctions to enable a broad understanding of both the normal and abnormal functioning of the human body. You will gain a thorough understanding of how the body works along with the transferable skills of data analysis, interpretation and communication.

With a major in Physiology you can become a professional in a vast range of health-related roles, including clinical practice, biomedical research, health promotion and medical journalism. Physiologists also work in fields as diverse as conservation and wildlife biology and cancer diagnostics. Your career development will depend on your personal strengths and interests.

## Plant Production

**Study options: major (Plant Science major in the Bachelor of Liberal Arts and Science), minor, honours**

Increasing the sustainable production of food and fibre products from plants over the next 50 years is one of the great challenges facing the planet. The plant production system encompasses the basic genetic and physiological regulation of plant growth, the impacts on plant growth of soil, water, nutrients, disease and pests, and the influence of management processes. Achieving increased sustainable plant productivity will require implementing innovations across all aspects of the production system while more efficiently using resources and reducing negative impacts on the environment.

After graduation, you may find yourself working with farmers as a consultant, managing properties or working in a laboratory to develop more robust crops. In your career as an agricultural or horticultural scientist you could work to develop better and more sustainable ways to manage plants for the production of food or fibre, for pasture or for ornamental purposes.

## Psychology

**Study options: program, major (Bachelor of Liberal Arts and Science only), honours**

Psychology is the scientific study of human behaviours and mental processes by investigating the way we behave as individuals and as social beings, interrogating the way we act and the way we think, and exploring our interaction with the physical world and with each other. The undergraduate psychology program forms an ideal base if you want to pursue registration as a clinical psychologist, and offers you study options in a wide range of specialist psychology areas. In this program you will study a range of areas, including behavioural neuroscience, social psychology, personality theory, perception, intelligence, abnormal psychology and developmental psychology.

The three-year program can be extended by adding a fourth year of honours in Psychology. With four years of accredited psychology study you will have the necessary qualification to be eligible for entry into all professional psychology programs that qualify you to become a clinical psychologist.

## Psychological Science

**Study options: major, minor**

Psychological sciences concern the scientific study of human behaviour, psychology and mental processes. You will learn about how we behave as individuals as well as in groups; the way we act as well as the way we think; and our interactions with the physical world as well as our interactions with others.

Career options include work in community and mental health services, universities, research facilities, market research, human resources and policy. Please note that the Psychological Science major is not a pathway to professional accreditation as a psychologist. If you wish to undertake professional training at postgraduate level to become a registered psychologist, you will need to complete the full Psychology program.



## Quantitative Life Sciences

**Study options: major (Bioinformatics major in the Bachelor of Liberal Arts and Science), minor, honours**

This exciting interdisciplinary major combines mathematics, statistics and information technology and applies them to biological data analytics. It gives you an opportunity to explore the areas of bioinformatics, mathematical modelling and the interpretation of data, all of which have become essential elements of biological research. It is a highly recommended second field of study for all students majoring in the life and environmental sciences.

The Quantitative Life Sciences major forms an ideal base for continuing on to honours followed by a master's degree or PhD. Alternatively, you might choose to move into private industry or government, where a major in Quantitative Life Sciences is a strong advantage in this era of big data and ever-growing computing resources.

## Software Development

**Study options: major, minor, honours**

The Software Development major gives you the understanding and skills that you need to produce high-quality software that meets the needs of its users. From a foundation of individual programming skill, you will learn the theory and practices involved in determining requirements, designing effective software solutions and delivering the outcomes reliably. The units in this major focus on work that uses the Java developers' ecosystem of tools, and that follows agile development processes.

Software developers have varied careers: they can work in large organisations or in small ones, in groups that are focused on IT or in multidisciplinary teams that are structured around business needs, as long-term employees or as contractors. Often developers move over time to take on leadership roles in teams.

## Soil Science and Hydrology

**Study options: major (Soil Science major in the Bachelor of Liberal Arts and Science), minor, honours**

Soil and water security are major challenges for Australia. The Soil Science and Hydrology major will provide you with training in the three key areas of soil, water and climate and their links with functional, resilient and productive ecosystems. This major has a strong emphasis on field-based learning through field schools, and field measurement and modelling through analysis of spatial and non-spatial data. Working with case studies and projects, you will identify and analyse real-world problems with the aim of identifying options to maintain the functionality of these interrelated systems.

You will develop generic skills in geographic information systems and in laboratory and data analysis that will enable you to work in a wide range of occupations in public or private enterprises with a focus on fundamental or applied research in land and soil management.

## Statistics

**Study options: major, minor, honours**

Statistics is pervasive in all areas of the sciences, the social sciences, finance and business, and is the key paradigm used to assess the strength of evidence from all kinds of data. In the Statistics major you will learn about theoretical, computational and applied statistics and probability theory, and apply the techniques you learn to a variety of real-world issues. You will also learn about quantifying uncertainty, experimental design, probabilistic modelling and the latest techniques in statistical and machine learning. This major is essential training if you wish to become a professional statistician.

A Statistics major is not only a pathway to employment as a statistician but an invaluable adjunct to a career in any area. Graduating with a major in Statistics and another area of science enhances your value to prospective employers and is an excellent foundation for all types of scientific research.

# HOW TO APPLY DOMESTIC STUDENTS\*

1

## Choose your course

- [sydney.edu.au/courses](https://sydney.edu.au/courses)

2

## Check admission criteria

For most undergraduate courses, admission is based on your Australian Tertiary Admission Rank (ATAR) or equivalent. Some courses have additional admission criteria, such as an interview, portfolio or performance. For details, visit

- [sydney.edu.au/study/admission-criteria](https://sydney.edu.au/study/admission-criteria)

### Prerequisites

Some courses have prerequisites, often in mathematics, which apply if you are taking a Year 12 qualification such as the HSC (or equivalent) in Australia.

### Assumed knowledge

This may also be specified for a course or unit of study. It means we expect you to have a certain level of knowledge in areas such as mathematics, physics, biology and chemistry. If you have not studied these subjects in high school, we recommend you take a bridging course before starting your degree.

- [sydney.edu.au/ug-bridging](https://sydney.edu.au/ug-bridging)

For course-specific prerequisites and assumed knowledge, refer to your course in this guide (pages 28 to 45) or look it up on our website.

- [sydney.edu.au/courses](https://sydney.edu.au/courses)

3

## Explore admission pathways

If you're not sure you'll reach the ATAR for your preferred course, check whether you're eligible to apply to through another admission pathway.

- [sydney.edu.au/study/admission-pathways](https://sydney.edu.au/study/admission-pathways)

4

## Submit your application

As a domestic student, you need to submit your application online through the Universities Admissions Centre (UAC) website.

Check the UAC website for current application deadlines. Late fees apply.

- [www.uac.edu.au](https://www.uac.edu.au)

5

## Apply for scholarships

In 2018, we awarded more than 3000 scholarships to undergraduate students, based on academic, personal leadership and equity grounds.

Most scholarship applications are due by early October, so you need to apply for them around the same time you submit your university application to UAC.

Please note that deadlines and application requirements may differ depending on the scholarship.

- [sydney.edu.au/scholarships](https://sydney.edu.au/scholarships)

6

## Visit us on Open Day

The best way to get a feel for the campus is to visit us on Open Day. Explore the campus, enjoy the atmosphere, and learn more about our courses and facilities by attending mini-lectures, activities and tours.

Check our website for dates:

- [sydney.edu.au/open-day](https://sydney.edu.au/open-day)

\* You are a domestic student if you are an Australian or New Zealand citizen (including dual citizens of Australia or New Zealand and another country), or an Australian permanent resident or permanent humanitarian visa holder.

# HOW TO APPLY INTERNATIONAL STUDENTS\*

1

## Choose your course

- [sydney.edu.au/courses](https://sydney.edu.au/courses)

2

## Check admission criteria

For most undergraduate courses, admission is based on an Australian Tertiary Admission Rank (ATAR), International Baccalaureate (IB) or the equivalent qualifications we accept from your country.

- [sydney.edu.au/study/secondary-qualifications](https://sydney.edu.au/study/secondary-qualifications)

Some courses have additional admission criteria, such as an interview, portfolio or performance.

### Prerequisites

Some courses have prerequisites, often in mathematics, which apply if you are taking a Year 12 qualification such as the HSC (or equivalent) in Australia.

### Assumed knowledge

This may also be specified for a course or unit of study. It means we expect you to have a certain level of knowledge in areas such as mathematics, physics, biology and chemistry. If you have not studied these subjects in high school, we recommend you take a bridging course before starting your degree.

- [sydney.edu.au/ug-bridging](https://sydney.edu.au/ug-bridging)

For course-specific prerequisites and assumed knowledge, refer to your course in this guide (pages 28 to 45) or look it up on our website.

- [sydney.edu.au/courses](https://sydney.edu.au/courses)

### English language requirements

If English is not your first language, you need to demonstrate that your English language skills meet the minimum level required for your chosen course. For details, visit

- [sydney.edu.au/study/english-reqs](https://sydney.edu.au/study/english-reqs)

3

## Submit your application

If you are completing:

- a current Australian Year 12 secondary school examination in or outside Australia; or
- a current International Baccalaureate (IB) diploma in Australia

then you need to submit your application online through the Universities Admissions Centre (UAC) International website

- [www.uac.edu.au/international](https://www.uac.edu.au/international)

Everyone else needs to apply directly to the University. Go to [sydney.edu.au/courses](https://sydney.edu.au/courses) to search for your course, then click on the 'Apply' button on the course page.

If you will be studying on-shore in Australia, you also need to obtain a student visa. For details, visit:

- [sydney.edu.au/student-visas](https://sydney.edu.au/student-visas)

\* An international student is anyone who is not an Australian or New Zealand citizen (or dual citizen of Australia or New Zealand and another country), permanent resident of Australia, or holder of a permanent Australian humanitarian visa. To enrol at university, international students need to hold a visa that allows them to study in Australia.

# ADMISSION REQUIREMENTS

Course	UAC code	Domestic		International		Entry	Duration <sup>1</sup>
		ATAR	IB	ATAR	IB		
B Liberal Arts and Science	513900	70	25	70	25	Feb/Aug	3
B Psychology	513905	95*	37*	93.5*	36*	Feb	3
B Science	513910	80	28	80	28	Feb/Aug	3
B Science (Health)	513915	80	28	80	28	Feb/Aug	3
B Science (Medical Science)	513925	90	33	85	31	Feb/Aug	3
B Science/B Advanced Studies	513930	80	28	80	28	Feb/Aug	4
B Science/B Advanced Studies (Advanced)	513935	95	37	93	35	Feb/Aug	4
B Science/B Advanced Studies (Agriculture)	513940	75	26	75	26	Feb/Aug	4
B Science/B Advanced Studies (Animal and Veterinary Bioscience)	513945	80	28	80	28	Feb/Aug	4
B Science/B Advanced Studies (Dalyell Scholars including Mathematical Sciences)	513911	98	40	98	40	Feb/Aug	4
B Science/B Advanced Studies (Food and Agribusiness)	513950	80	28	80	28	Feb/Aug	4
B Science/B Advanced Studies (Health)	513920	80	28	80	28	Feb/Aug	4
B Science/B Advanced Studies (Medical Science)	513960	90	33	85	31	Feb/Aug	4
B Science/B Advanced Studies (Taronga Wildlife Conservation) <sup>2</sup>	513961	85	31	80	28	Feb/Aug	4
B Science/M Mathematical Sciences <sup>3</sup>	513962	98	40	95	37	Feb/Aug	4.5
B Science/M Nutrition and Dietetics <sup>3</sup>	513965	97*	39*	95*	37*	Feb	5
B Veterinary Biology/D Veterinary Medicine	513970	A+C (97)*	A+C (39)*	A+C (92)*	A+C (34)*	Feb	6
B Advanced Computing/B Science	513510	90	33	90	33	Feb/Aug	5
B Advanced Computing/B Science (Health)	513515	90	33	90	33	Feb/Aug	5
B Advanced Computing/B Science (Medical Science)	513520	90	33	90	33	Feb/Aug	5
B Education (Secondary: Mathematics)/B Science	513260	80	28	80	28	Feb	5
B Education (Secondary: Science)/B Science	513265	80	28	80	28	Feb	5
B Engineering Honours/B Science	513595	92	34	85	31	Feb/Aug	5
B Engineering Honours/B Science (Health)	513600	92	34	85	31	Feb/Aug	5
B Engineering Honours/B Science (Medical Science)	513605	99.5	43	95.5	37	Feb/Aug	5
B Science/B Laws	513825	80	28	80	28	Feb	5
B Science/M Nursing	513745	80	28	80	28	Feb	4
B Science (Health)/M Nursing	513750	80	28	80	28	Feb	4
B Science/D Dental Medicine	513705	A+C (99.95)*	A+C (45)*	A+C (99.95)*	A+C (45)*	Feb	7
B Science/D Medicine	513720	A+C (99.95) <sup>4</sup>	A+C (45) <sup>4</sup>	A+C (99.95)	A+C (45)	Feb	7

B = Bachelor of; M = Master of; D = Doctor of  
A+C = ATAR (or equivalent) and additional criteria

\* These ATAR/IB scores are indicative only and not guaranteed for 2020;  
see [sydney.edu.au/sydney-atar](http://sydney.edu.au/sydney-atar)

<sup>1</sup> Duration in years (full time)

<sup>2</sup> Degree subject to final approval

<sup>3</sup> The structure of this course may be affected by changes to government policy; refer to [sydney.edu.au/student-fees](http://sydney.edu.au/student-fees)

<sup>4</sup> See [sydney.edu.au/courses](http://sydney.edu.au/courses) for admission criteria for Aboriginal or Torres Strait Islander applicants

Please note: Admission criteria and application processes for these courses are subject to change.

# KEY DATES

## August

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- The best way to get a feel for the campus is to visit us on Open Day. Explore the campus, enjoy the atmosphere and learn more about our courses and facilities by attending mini-lectures, activities and tours:  
[sydney.edu.au/open-day](https://sydney.edu.au/open-day)

## September

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- Submit your application to UAC:  
[www.uac.edu.au](https://www.uac.edu.au)
- Scholarship applications open:  
[sydney.edu.au/scholarships](https://sydney.edu.au/scholarships)

## December – January

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- Attend Info Day to experience campus life and get last-minute advice about your course and career options:  
[sydney.edu.au/info-day](https://sydney.edu.au/info-day)
- Finalise your UAC preferences
- Accept your UAC offer within one week of receiving it, to avoid losing your place.

## February

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- You may receive February Round UAC offers if you submitted your application late or did not receive an offer in the earlier rounds and your preferred course is not already full.
- Attend Orientation Week in the week before semester starts:  
[sydney.edu.au/orientation](https://sydney.edu.au/orientation)
- Semester 1 begins



**If you read only one thing, read this.**




Your journey to university is as unique as you are.

At the University of Sydney you have the opportunity to forge your own path. You can customise your course and get involved in extracurricular activities to personalise your uni experience.

To learn more, come and see us on Open Day, call our helpline or visit our website:

**[sydney.edu.au/open-day](https://sydney.edu.au/open-day)**

**Additional contact details**  
1800 SYD UNI (1800 793 864)  
**[sydney.edu.au](https://sydney.edu.au)**

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 **@sydney\_science**  
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 **@sydney\_uni**