



Curtin University

# Science

2023

UNDERGRADUATE  
COURSE GUIDE

Make tomorrow better.

# Change is here

The Binar-1 CubeSat, or miniature satellite, was built by Curtin students and staff at Curtin University's Space Science and Technology Centre.

It embarked on its space mission via a SpaceX rocket, launched from NASA's Kennedy Space Centre in August 2021 and bound for the International Space Station. Binar-1 was then deployed 400km above Earth to collect data and capture images for a range of research endeavours.

About the size of a half-loaf of bread – but packed full of electronics – Binar-1 is named after the Nyungar word for fireball. The project progressed from the innovative Desert Fireball Network, a Curtin research and citizen-science program that is studying meteorites and fireballs.



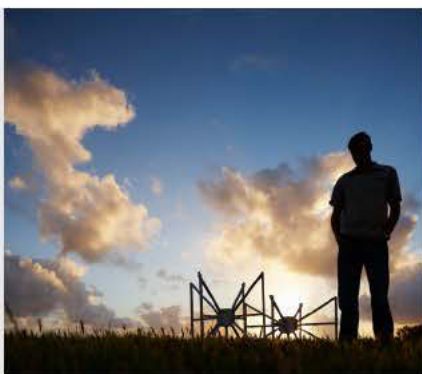
We're finding ways to address environmental challenges, conserve biodiversity and secure the future of sustainable, economical and ethical food production.



DNA is being extracted from our ocean to protect threatened coral ecosystems.



We're engineering and operating some of the world's most advanced radio astronomy technologies, uncovering the origins of the Solar System and exploring the expanses of space.



Our research into energy transition encompasses hydrogen storage, lithium battery technologies, sustainable engineering and energy economics.



We've discovered how tiny nanocrystals can produce high-quality pictures and lighting in electronic devices.

## First Nations acknowledgement

Curtin University acknowledges the traditional owners of the land on which Curtin Perth is located, the Whadjuk people of the Nyungar Nation, and on Curtin Kalgoorlie, the Wongutha people of the North-Eastern Goldfields; and the First Nations peoples on all Curtin locations.

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## CURTIN PERTH ACADEMIC CALENDAR

	SEMESTER 2, 2022	SEMESTER 1, 2023	SEMESTER 2, 2023
Orientation Week	18 – 22 July	20 – 24 February	17 – 21 July
Semester starts	25 July	27 February	24 July
Semester ends	11 November	16 June	10 November

Applications close two weeks before orientation\*.  
 Visit [curtin.edu/calendar](https://curtin.edu/calendar) for all study periods for 2023.  
 Visit [curtin.edu/deadlines](https://curtin.edu/deadlines) for application deadlines.

\* Application closing dates and orientation dates are subject to change and may vary depending on the course. Dates are for Curtin Perth only. Contact other campuses directly for details.

# Start your future career

Curtin is a vibrant, future-focused university where ideas and cultures combine to create a place of enthusiasm, endeavour and achievement.

We design our courses collaboratively with industry experts to ensure you graduate with the knowledge and skills that employers look for.



## TOP 1% IN THE WORLD

Curtin is ranked in the top 1% of universities worldwide, in the highly regarded Academic Ranking of World Universities 2021.



## GLOBAL TOP 100 RESEARCH INSTITUTIONS

Curtin is ranked in the global top 100 research institutions for earth and environmental sciences, by the prestigious Nature Index of Nature Research 2021.



## WESTERN AUSTRALIA'S #1

Curtin University has outranked all other public universities in Western Australia for undergraduate outcomes of full-time employment and starting salary, as well as staff qualifications, in the Good Universities Guide 2022.

## Get the real-world advantage

At Curtin, we've designed our science courses to optimise their industry relevance and your practical learning opportunities – so that you have the awareness and confidence to get to work in industry settings as soon as you graduate.

You will undertake instructive field trips during your course – which not only helps to consolidate the knowledge you've learned, but also gives you the confidence that comes with understanding industry practices. Your final-year capstone project is also an opportunity for you to apply your knowledge to research or an industry project with real-world impact.

## Make your industry connections

At Curtin, you'll receive exposure to our education and research partners, who are recognised as industry leaders, such as the CSIRO, ChemCentre, Cisco and NASA.

Our dedicated Student Engagement team will help organise your work-integrated learning (WIL). In addition to internship opportunities, you'll also benefit from on-campus guest lectures and professional training from industry specialists.





# Experience Perth

Located on the beautiful west coast of Australia, Perth is multicultural, prosperous and safe – an ideal destination for students and tourists alike.

## 01 Shopping and culture

Perth is home to Elizabeth Quay, Forrest Place, Murray Street Mall and numerous galleries. The historic port city of Fremantle is only 15 kilometres from Perth, where the Swan River meets the Indian Ocean.

## 02 Getting around

The metropolitan area is serviced with an extensive road network and public transport.

## 03 Western Australia's best food

Try some of the city's best food at farmers markets, and find gourmet food producers in the Swan Valley.

## 04 A natural beauty

There are many magnificent parks and gardens in and around Perth. Kings Park, which is larger than New York's Central Park, showcases more than 3,000 species of WA's unique flora. Caversham Wildlife Park has many Australian animals, including kangaroos you can handfeed.

## 05 Affordable living

Perth has lower living costs than Sydney, Melbourne and Canberra.\*

## 06 Close to campus

To the north, the suburb of Victoria Park is buzzing with a vibrant array of restaurants, pubs, beautiful parks and recreation areas.

To the south, the Canning River is home to dolphins, pelicans, swans and many other bird species. It's ideal for walking, picnicking and kayaking.

## 07 Be by the beach

Perth's coast features breath-taking beaches and scenery. Don't forget to visit Rottnest Island – a famous holiday destination near Perth that is home to the friendly quokka.

### Perth weather

Perth has a Mediterranean climate.



	High / Low (°C)	
<b>Summer</b> (December to February)	30	17.5
<b>Autumn</b> (March to May)	26	13.7
<b>Winter</b> (June to August)	19	8
<b>Spring</b> (September to November)	23	11.7

Source: australia.com

### Perth timezone



05



03

\* Expatistan (sourced 1 March 2022)



Photo: StudyPerth

# Learn in Western Australia

From regional Western Australia to the heart of the city, our locations are thriving places of community and innovation. You'll be connected with a diverse student community and benefit from a global perspective.

## PERTH

Our largest campus is just six kilometres from Perth city. It's a place of inspiration, technology-rich learning spaces, high impact research and exciting activities. All courses are available at Curtin Perth.

## PERTH CITY

Curtin Law School in central Perth strengthens our links with the legal profession and the commercial heart of Western Australia.

## MIDLAND

Our distinctive Midland campus provides health students with immersive learning facilities and connects them with nearby health services to apply their studies.

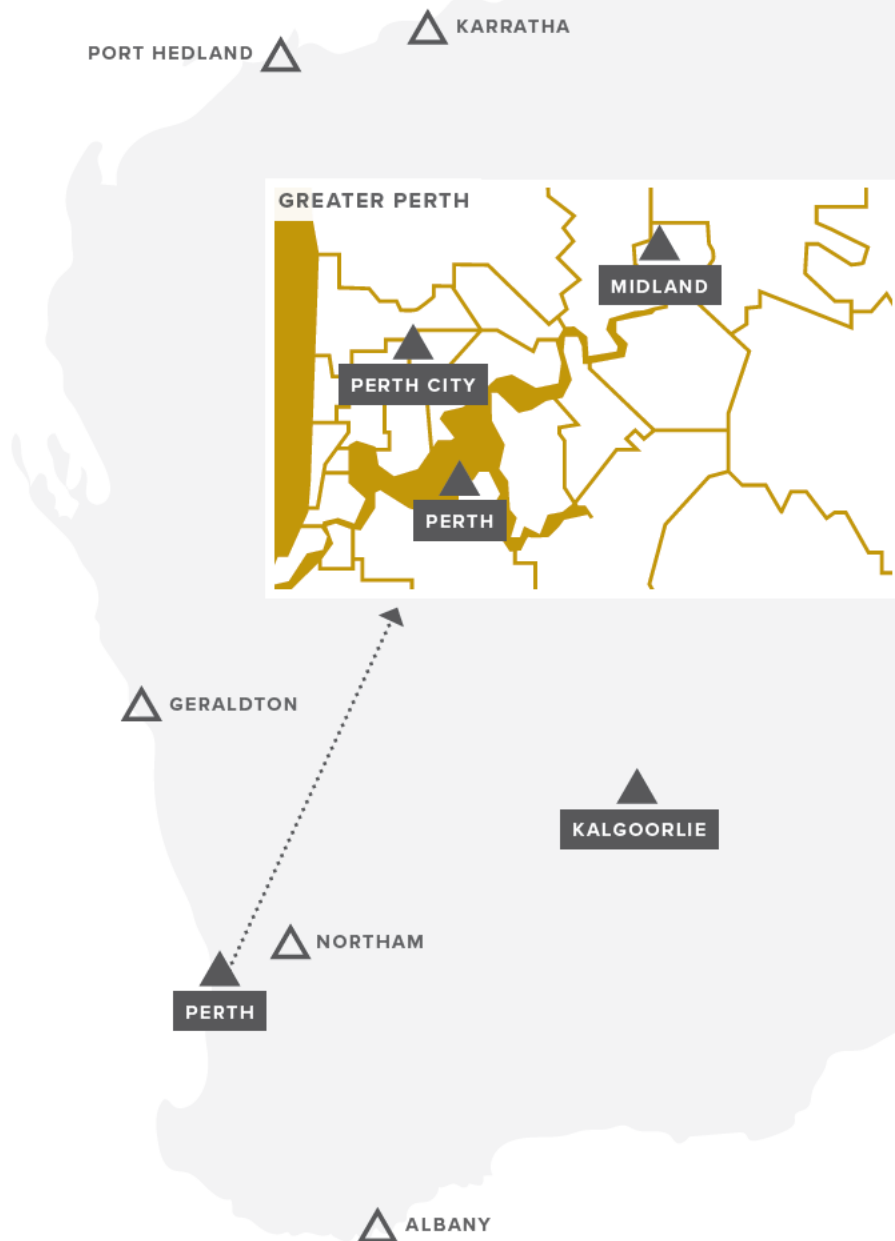
## KALGOORLIE

Our Kalgoorlie campus is located in Western Australia's historic gold mining region. You can study our renowned engineering degrees here, as well as online courses in business, education and health. Curtin Kalgoorlie also houses our Rural Health Campus, which offers regional training opportunities for medical and health science students.

## REGIONAL WESTERN AUSTRALIA

Want to study closer to home? We offer a variety of courses in partnership with higher education institutions in Albany, Northam, Geraldton, Karratha and Port Hedland.

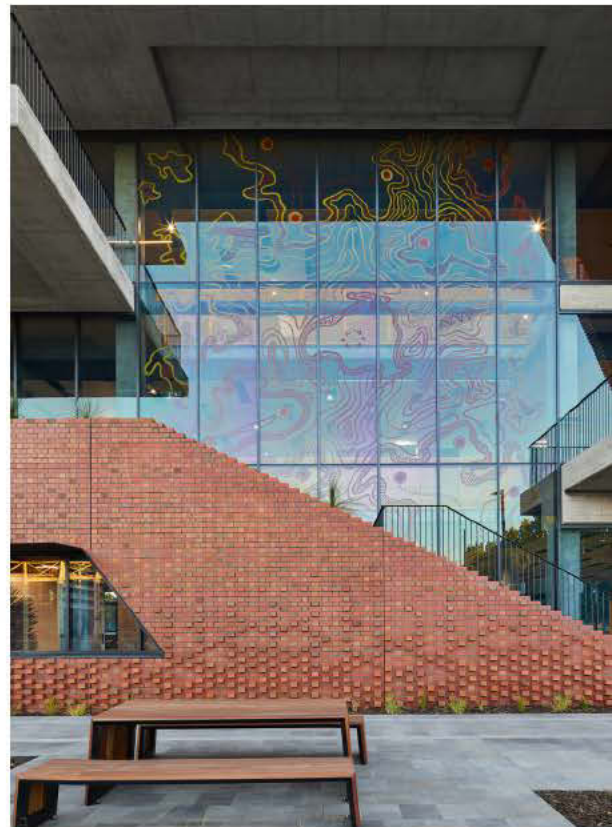
Visit [study.curtin.edu.au/curtin-life/regional-study](http://study.curtin.edu.au/curtin-life/regional-study).



## Nowanup Bush Campus

An innovative learning space set on 750 hectares of Nyungar bushland, hosting On-Country education programs delivered by Aboriginal Elders and educators. The bush setting offers a unique opportunity to learn the importance of Aboriginal culture.





# Explore your global opportunities



As a Curtin student, you'll have the opportunity to study at another Curtin campus or at one of our many partner universities in Africa, Asia, Europe, North America or South America.

You'll get to experience other cultures and build an international network that will prove invaluable both personally and professionally.

## 01 SINGAPORE

Curtin Singapore is located in one of Asia's major economic hubs, connecting it to the world of international business, and making it the ideal campus to study your commerce degree. You can also study a communications degree and health degrees, including nursing.

Visit [curtin.edu.sg](http://curtin.edu.sg).

## 02 DUBAI

Our Dubai campus gives you the opportunity to study in the heart of Middle Eastern banking, tourism and trade. Its rich culture and economic growth can complement your study in arts, commerce, engineering, or IT and computing.

Visit [curtindubai.ac.ae](http://curtindubai.ac.ae).

## 03 MAURITIUS

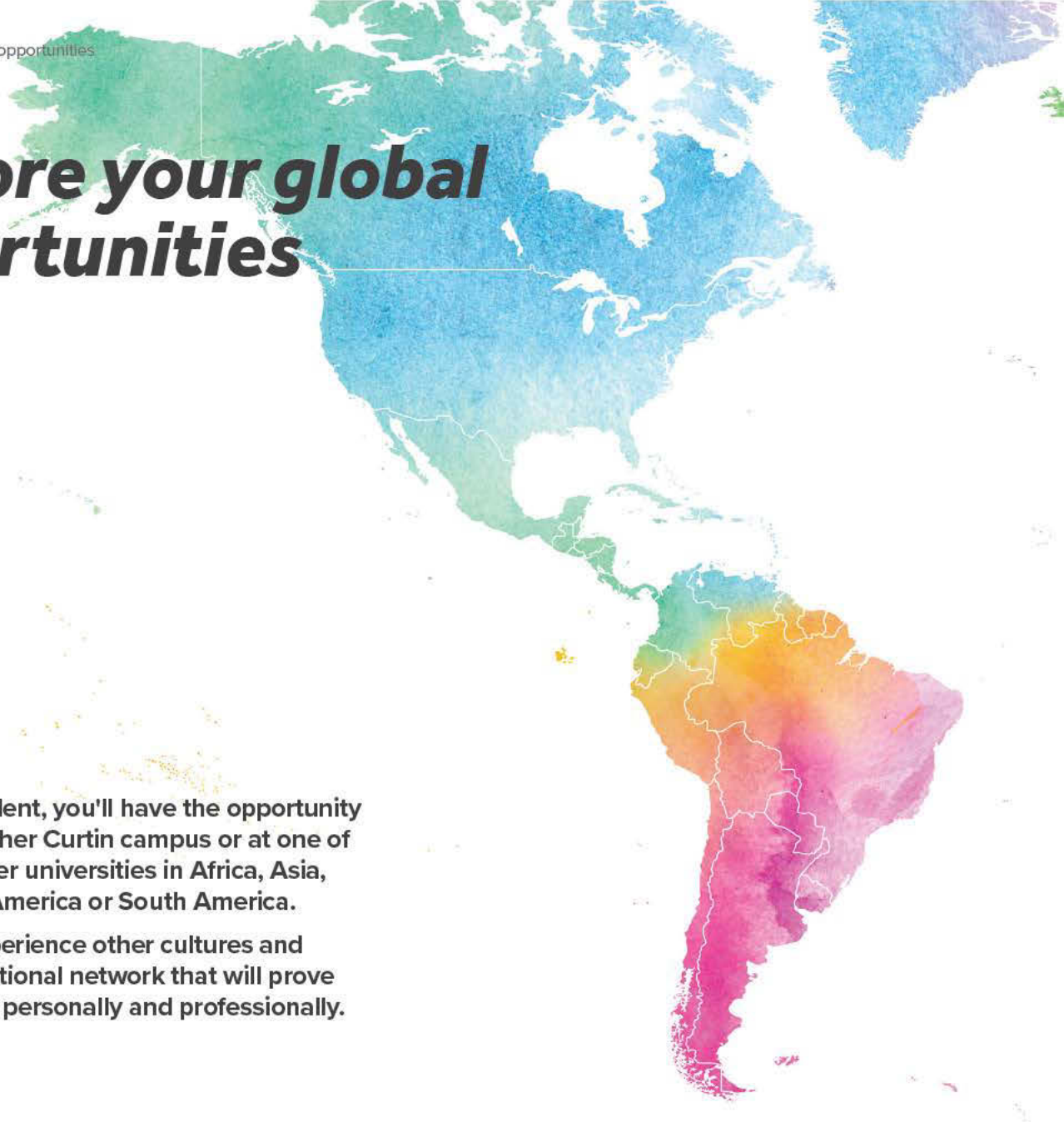
Curtin Mauritius offers courses in design, communications, commerce and science. It delivers a world-class education in a tropical island nation that blends cultures from Europe, Africa and Asia.

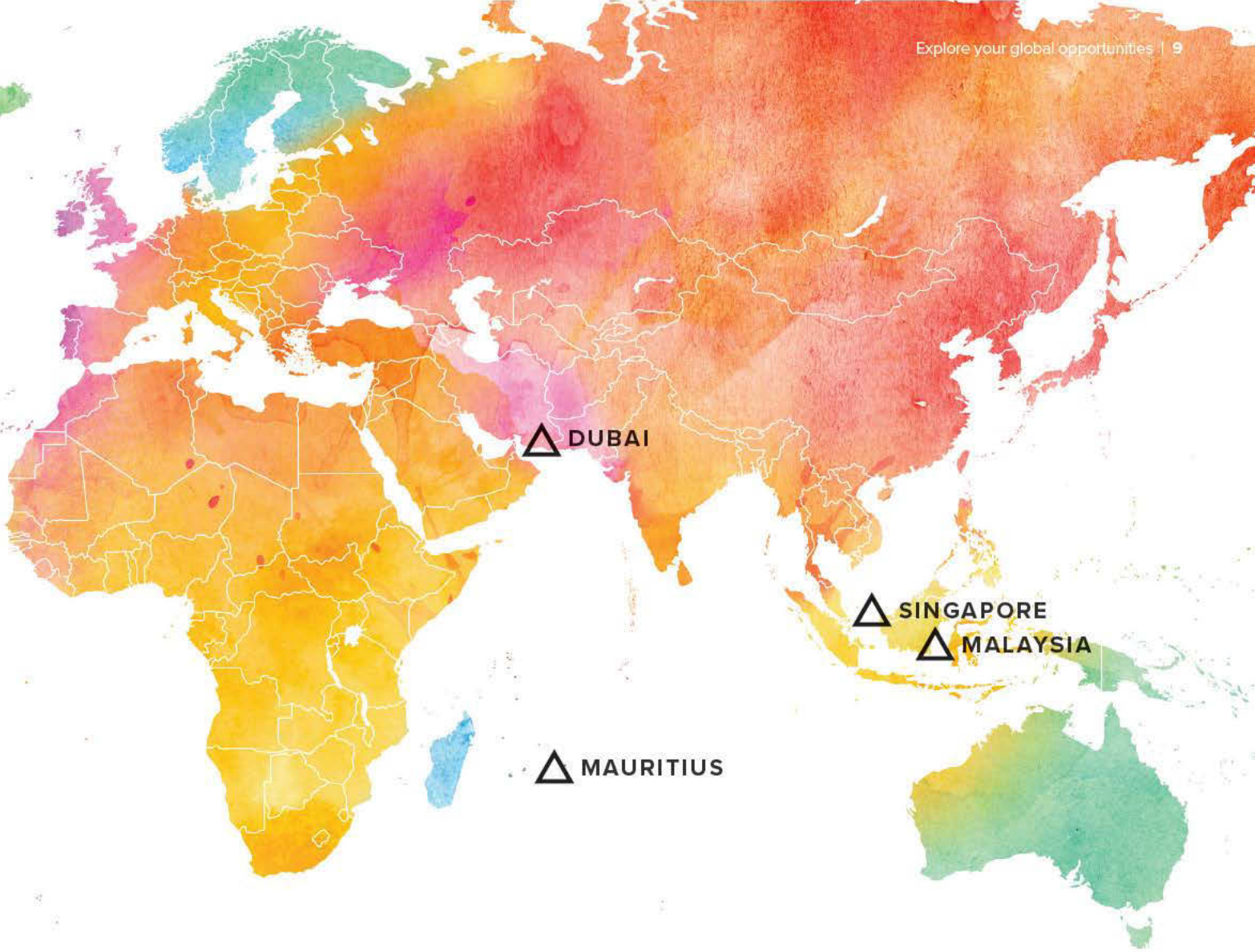
Visit [curtinmauritus.ac.mu](http://curtinmauritus.ac.mu).

## 04 MALAYSIA

Located on the island of Borneo, our Malaysian campus is modern and vibrant, featuring lush greenery and lakes. You can study a range of Curtin degrees here, including commerce, engineering, science and arts.

Visit [curtin.edu.my](http://curtin.edu.my).





# Benefit from immersive learning

At Curtin, you'll hone your skills in learning environments that simulate real workplaces, so you can step into your chosen career with confidence.





#### 01 Astrodome

The Astrodome provides a live feed from a 12-inch Meade Refractor telescope, giving Curtin students a direct link to national and global astronomy projects.

#### 02 Biology Superlab

Our multi-million-dollar Biology Superlab is a large physical containment level 2 (PC2) teaching laboratory. Here, Curtin students use advanced technologies to investigate pathogens and genetically modified organisms.

#### 03 Curtin Resources and Chemistry Precinct

Our Resources and Chemistry Precinct is a hub for science and engineering learning and research. The facility has four floors of laboratories, work spaces and meeting areas that promote interactive learning and collaboration.

#### 04 Field Trial Area

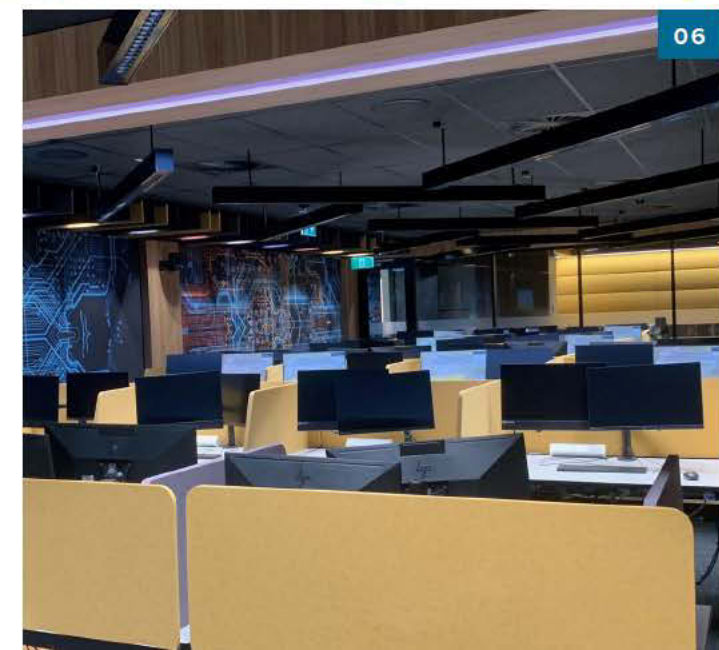
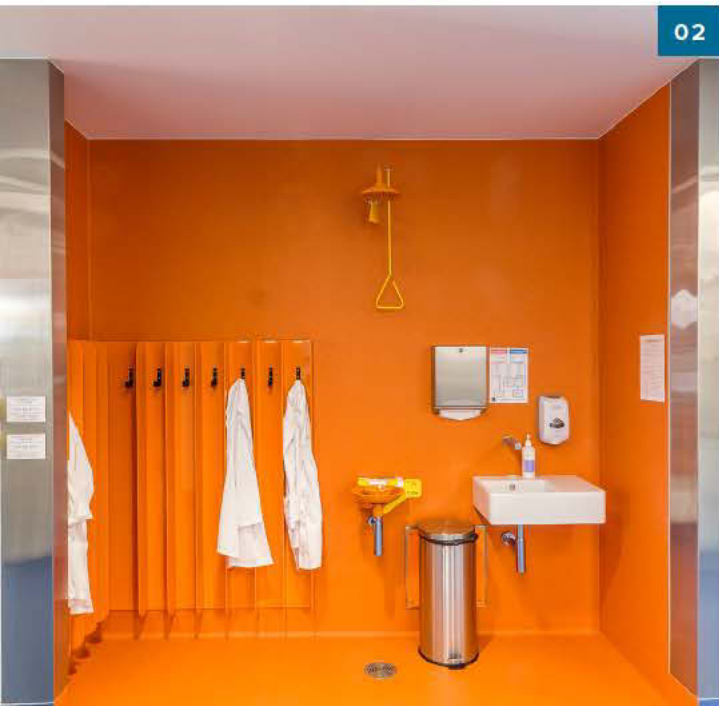
At our purpose-built Field Trial Area, Curtin researchers and students perform experiments under controlled conditions that emulate real-world environments. The facility includes four temperature and light-controlled PC2 plant growth rooms, a six-room glasshouse and 1,000m<sup>2</sup> of growing area.

#### 05 Green Electric Energy Park

At our Green Electric Energy Park (GEEP), Curtin students conduct advanced experiments and research projects on renewable energy sources.

#### 06 Supercomputer Lab

Our new supercomputer lab has 100 student workstations with high-performing Windows computers and Linux environments through virtual desktop infrastructure (VDI).



# Live and learn on campus





**There is a sense of community both in and out of the classroom, with collaborative learning spaces and outdoor leisure areas to enjoy between classes.**

### Buy your essentials on campus

Shops on campus stock a variety of textbooks, stationery, magazines, novels, cards, art and computer equipment. There's a dry-cleaning outlet and self-serve printing and binding.

### Events

Market days, multicultural week, live music and the Guild Ball are just a few of the amazing events held on campus.

### Technological convenience

Wi-fi can be accessed across the campus and there's a number of places on campus where you can recharge your devices. We also have several computer labs equipped with printing stations, scanners, graphic workstations, smart boards and current software.

### Study hard, play hard

Curtin Stadium is the home of sport and fitness on campus, offering you access to:

- a 900sqm fully equipped gymnasium
- a group fitness studio
- a specialised studio
- a health and rehabilitation clinic
- vast outdoor recreation spaces
- indoor and outdoor multi-use courts.

With a strong focus on enhancing wellbeing and healthy lifestyles, you're encouraged to participate at any level, from spectator and supporter to representative and competitor.

The facilities, services and programs will inspire and engage you, and contribute to your vibrant student experience. Take the opportunity to try new things, move each day and find out there is more to university life than study.

Visit [curtin.edu.au/sport](http://curtin.edu.au/sport).

### Food, glorious food

Whether you need coffee or kombucha, a quick sandwich or a hearty hot meal, you can get it on campus. We have great cafés and a variety of food trucks!

### Supporting your health and wellbeing

Studying can be challenging at times, so we offer a range of health and wellbeing services based conveniently on campus. These include a physiotherapy clinic, and a medical centre where you can make an appointment to see a doctor, occupational therapist, psychologist, counsellor or social worker.

If you have a disability or you're caring for someone with a disability, you can access support services and assistance to help you succeed at Curtin. Our Student Wellbeing Advisory service also offers free and confidential support for any issue that may be affecting you, no matter how big or small.

### Study support

We acknowledge that uni is different to school study, so we offer support to help you transition to university, such as for peer-to-peer tutoring and library help.

### Settling in

You'll start your course with Orientation Week, where you will receive lots of support from Curtin Connect and student advisors.

### Get the course advice you need

Head to Building 102 Curtin Connect for advice on courses, applications, enrolment, getting your ID card and organising your timetable.

### Security and personal safety

At Curtin Perth, we provide a 24/7 security patrol, after-hour security escort, campus courtesy bus, emergency telephone stations, the SafeZone safety app, secure-card building access and well-lit pathways.



# Accommodation

**If you're looking for independence when you finish school, consider living on campus. You'll enjoy an immersive university experience where you can live, study and socialise.**

Curtin has six on-campus housing options that are surrounded by recreational spaces. Our newest accommodation buildings, Twin Dolphin Hall and St Catherine's College, form part of our industry-connected Exchange precinct. We also have student accommodation options at Curtin Kalgoorlie.

All our Perth accommodation options are a five-to-ten-minute walk from your classes and close to Curtin Stadium, Curtin Central Bus Interchange, and cafés and restaurants – offering all the convenience of an urban lifestyle and plenty of opportunities to make new friends.

And when you're ready for a study break, you're a short drive from the Perth CBD, Optus Stadium, the South Perth foreshore, local café strips and major shopping precincts.

## St Catherine's College

St Catherine's College offers a personalised and supportive residential experience that helps you achieve success in your university studies and beyond.

Rent includes meals and academic support that is tailored to suit the different stages of your university journey, such as free tutoring and formal academic dinners. It also incorporates the wider college community for collaborating, networking and events and features an impressive dining hall, dedicated study spaces, common areas and music rooms. There are various room types that give you options to have a little extra space, and décor is modern and neutral so you can make it your own.

## UniLodge

UniLodge offers a range of independent living options including self-contained studios with ensuites and furnished private rooms in shared apartments. Living on campus with UniLodge you can enjoy weekly events and activities, 24/7 security, plus you don't have to pay a bond or security deposit.

## Twin Dolphin Hall

Twin Dolphin Hall offers self-contained studio options as well as private rooms in two-, four- or six-bedroom apartments, plus accessible units. The new ten-storey building has excellent facilities including commercial laundries, games room, music room, art room and common rooms on each level for you to relax or study with friends. On the top level you will also find a theatre room for movie marathons or catching up on your favourite shows.

## Benefits of living on campus

- You'll live in a supportive environment where you can meet new people, make friends and feel part of the community.
- All accommodation is furnished and you'll benefit from free Curtin wi-fi, an off-peak gym membership at Curtin Stadium, plus all your utilities are included in your weekly rent.
- You can make the most of the university services, including the library, peer study groups, sport facilities and medical services.
- There's minimal travel time to classes.
- You can have greater involvement in the campus community in clubs, volunteering and events.
- You'll gain independent living skills in a safe environment.

## Erica Underwood House

This homely environment sits across the road from Curtin, close to shops and restaurants and accommodates 324 students. There are 54 furnished, six-bedroom apartments, each with two bathrooms, bedrooms with desks and chairs, a lounge and dining area and an open-plan kitchen.

## Vickery House

Sitting amongst beautiful gardens on the southeast boundary of Curtin Perth, Vickery House offers 42 furnished six- and eight-bedroom units. The common space also features a music room with a drum kit, keyboard and microphone!

## Guild House

These furnished apartments are located across the road from Curtin Stadium, on the corner of Kent Street and Jackson Road – perfect for anyone wants to keep fit and enjoy the outdoors. There are 31 private rooms available across four- and six-bedroom apartments.

## Kurrajong Village

This housing is located on the west side of Curtin Perth, opposite Waterford Plaza shopping centre. There are four properties available within the tranquil gardens: Don Watts House, George James House, Japan House and Rotary International House. Options range from private rooms in eight-bedroom apartments to studio apartments.

## Studying in Kalgoorlie?

If you are studying at Curtin Kalgoorlie as part of your degree, you can live at the Agricola student accommodation. Agricola is located across from the campus and is just a short walk to the town centre.







▶▶▶ Visit [curtin.edu/accommodation](https://curtin.edu/accommodation).

# Find the course for your dream job



Here are some of the careers a Curtin degree may lead to, but there are many more.

Technological advancement means the jobs of tomorrow might differ to the jobs of today, but don't worry. Curtin degrees are designed to prepare you for a range of industries and careers – even those that don't exist yet.

The most important thing is to study subjects you're interested in and capable of doing. Let your interests and passions guide you.

## I WANT A JOB WHERE I'M...

Managing, preserving and protecting the living world, addressing global warming, finding innovative solutions for food production and assessing risks to flora and fauna.



## YOU MIGHT LIKE

- ▶ Agribusiness (page 27)
- ▶ Agriculture Science (page 29)
- ▶ Coastal and Marine Science (page 33)
- ▶ Earth Sciences (page 37)
- ▶ Environmental Science (page 38)
- ▶ Food Science (page 42)
- ▶ Molecular Genetics (Advanced) (page 49).

Designing software and multimedia, developing computer games, administering networks and protecting computers and systems from hackers.



## YOU MIGHT LIKE

- ▶ Computer Systems and Networking (page 34)
- ▶ Computing (page 35)
- ▶ Information and Communication Technology (page 44)
- ▶ Information Technology (page 45)
- ▶ Software Development (page 52).

Helping management to make data-driven decisions, using mathematics to analyse risk and predict patterns and trends, designing new data processes.



## YOU MIGHT LIKE

- ▶ Actuarial Science (page 26)
- ▶ Data Science (page 36)
- ▶ Financial Mathematics (Advanced) (page 41)
- ▶ Industrial and Applied Mathematics (Advanced) (page 43)
- ▶ Mathematics (page 46)
- ▶ Surveying (page 53).

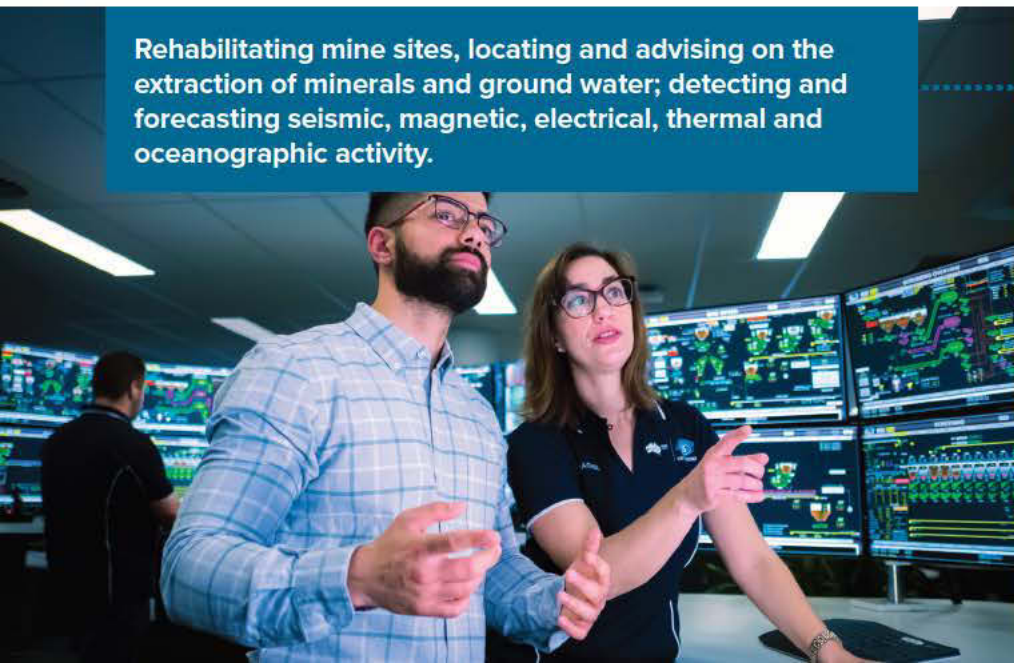
Working for a space agency, advancing healthcare options, developing new pharmaceuticals, designing new chemical processes, designing and manufacturing scientific instruments.



## YOU MIGHT LIKE

- ▶ Applied Geology (page 30)
- ▶ Biochemistry (page 31)
- ▶ Chemistry (page 32)
- ▶ Physics (page 51).

Rehabilitating mine sites, locating and advising on the extraction of minerals and ground water; detecting and forecasting seismic, magnetic, electrical, thermal and oceanographic activity.



## YOU MIGHT LIKE

- ▶ Applied Geology (page 30)
- ▶ Earth Sciences (page 37)
- ▶ Extractive Metallurgy (page 39)
- ▶ Mine and Engineering Surveying (page 47)
- ▶ Mining (page 48).

# Science or Advanced Science?

The world urgently needs scientists who have superior knowledge in their chosen discipline and can apply their expertise to real-world situations of local and global significance.

At Curtin, you can choose to study either a Bachelor of Science or a Bachelor of Advanced Science.

The Bachelor of Science comprises high-quality courses designed for rewarding careers. The Bachelor of Advanced Science (Honours) is designed for high-achieving ATAR students who would like their degree to include a greater focus on research activities.

Science and Advanced Science majors vary, as shown in the table below:

	Science	Advanced Science	Page
Actuarial Science	✓		26
Agriculture Science	✓	✓	29
Biochemistry	✓		31
Chemistry	✓	✓	32
Coastal and Marine Science	✓	✓	33
Data Science	✓	✓	36
Earth Sciences	✓	✓	37
Environmental Science	✓	✓	38
Extractive Metallurgy	✓		39
Financial Mathematics		✓	41
Food Science	✓		42
Industrial and Applied Mathematics		✓	43
Information and Communication Technology	✓		44
Mathematics	✓		46
Mining	✓		48
Molecular Genetics (Advanced)		✓	49
Physics	✓	✓	51
Software Development	✓		52

In addition to our Science and Advanced Science courses, the Faculty of Science and Engineering offers excellent, career-focused bachelor degree courses in:

- ▶ **Agribusiness (degree and associate degree)** (pages 27–28)
- ▶ **Applied Geology** (page 30)
- ▶ **Computer Systems and Networking** (page 34)
- ▶ **Computing** (page 35)
- ▶ **Information Technology** (page 45)
- ▶ **Mine and Engineering Surveying** (page 47)
- ▶ **Surveying** (page 53).

## Science

Learn the STEM skills that are central to science and technology innovation – and are vital for the careers of the future.

### DEGREE

Bachelor of Science (Science)

### MINIMUM ATAR

70

### PREREQUISITES

Each major has specific prerequisite ATAR subjects

### DESIRABLES

Each major has specific desirable ATAR subjects

### STAT

Each major has specific STAT requirements

### PORTFOLIO

Accepted for Multidisciplinary Science only

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-sci](http://curtin.edu/bach-sci)

In this course you will learn to apply scientific principles and methods to develop solutions to scientific problems facing communities and industry.

You'll also learn to use new technologies to retrieve, transform and present data and information. A Bachelor of Science will therefore give you a comprehensive foundation in your chosen field, preparing you for a range of employment opportunities within industry, government institutions and other organisations.

If you achieve a course weighted average of 65 or higher, you'll be able to apply for the one-year honours program.

## Advanced Science

Become a highly skilled scientist, applying your specialist knowledge to globally significant situations.

### DEGREE

Bachelor of Advanced Science (Honours)

### GUARANTEED ATAR

95

### PREREQUISITES

Each major has specific prerequisite ATAR subjects

### DESIRABLES

Each major has specific desirable ATAR subjects

### STAT

Each major has specific STAT requirements

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

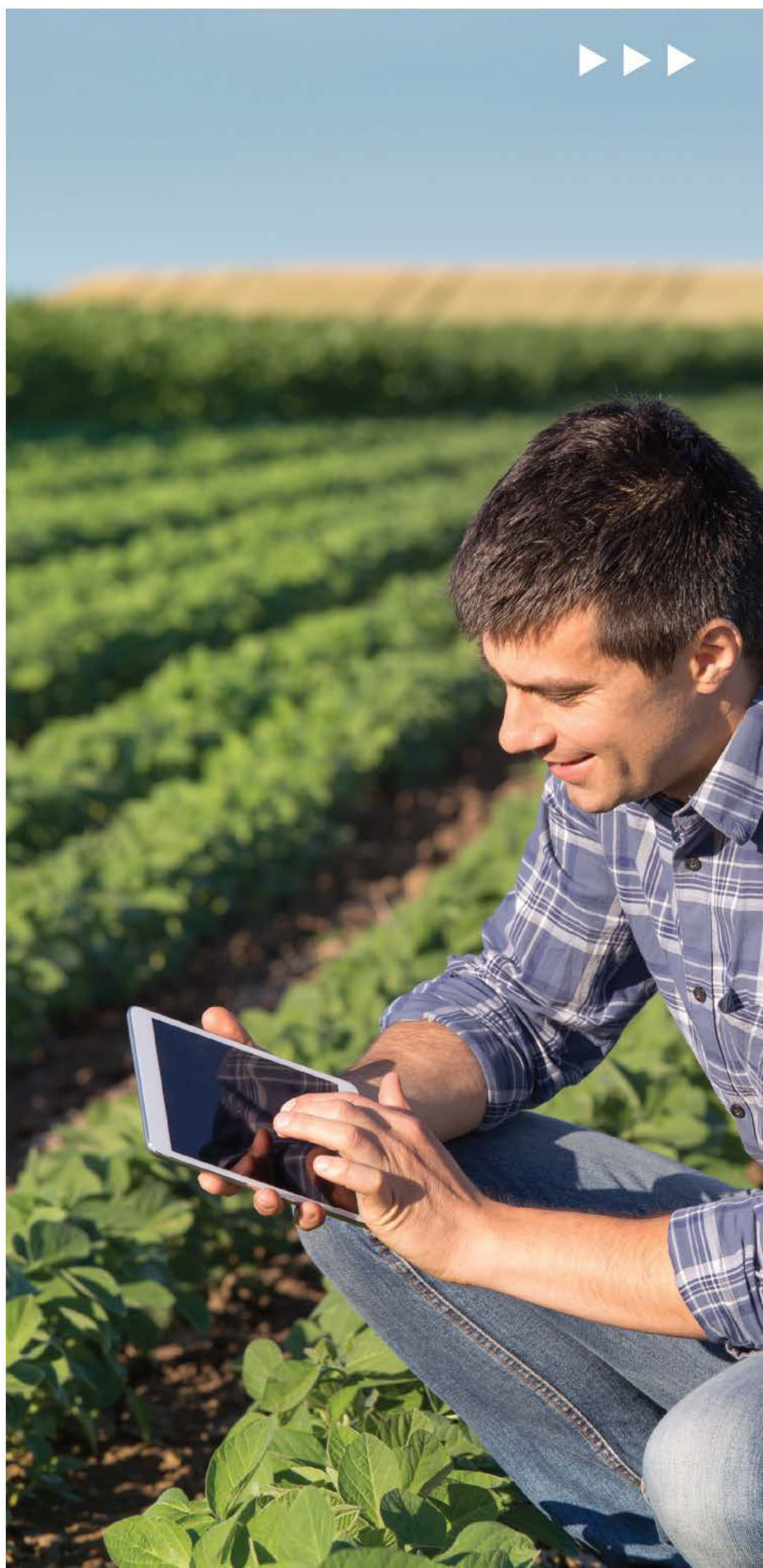
[curtin.edu/bach-advsci](http://curtin.edu/bach-advsci)

This course enables you to better tailor your study to suit your specific interests in science and gives you access to advanced-level units relevant to an honours degree.

You will learn core science units and choose a science major in which to specialise. You'll also undertake internal and external research experiences, and in your final year you may conduct a self-directed honours project that adds to the scientific knowledge of your field.

Throughout your course, you'll benefit from work-integrated learning opportunities that give you practical experience and skills before you graduate – an attribute that is highly valued by employers.

This course is unique in Western Australia in that you will also study scientific professional practice, entrepreneurship and leadership, so that you can respond innovatively to changing industry and employment landscapes.



# Single degree or double degree?

Our degrees provide opportunities to choose from a range of subjects, giving you the freedom to study towards your dream career and pursue personal study interests at the same time.

## Single degrees

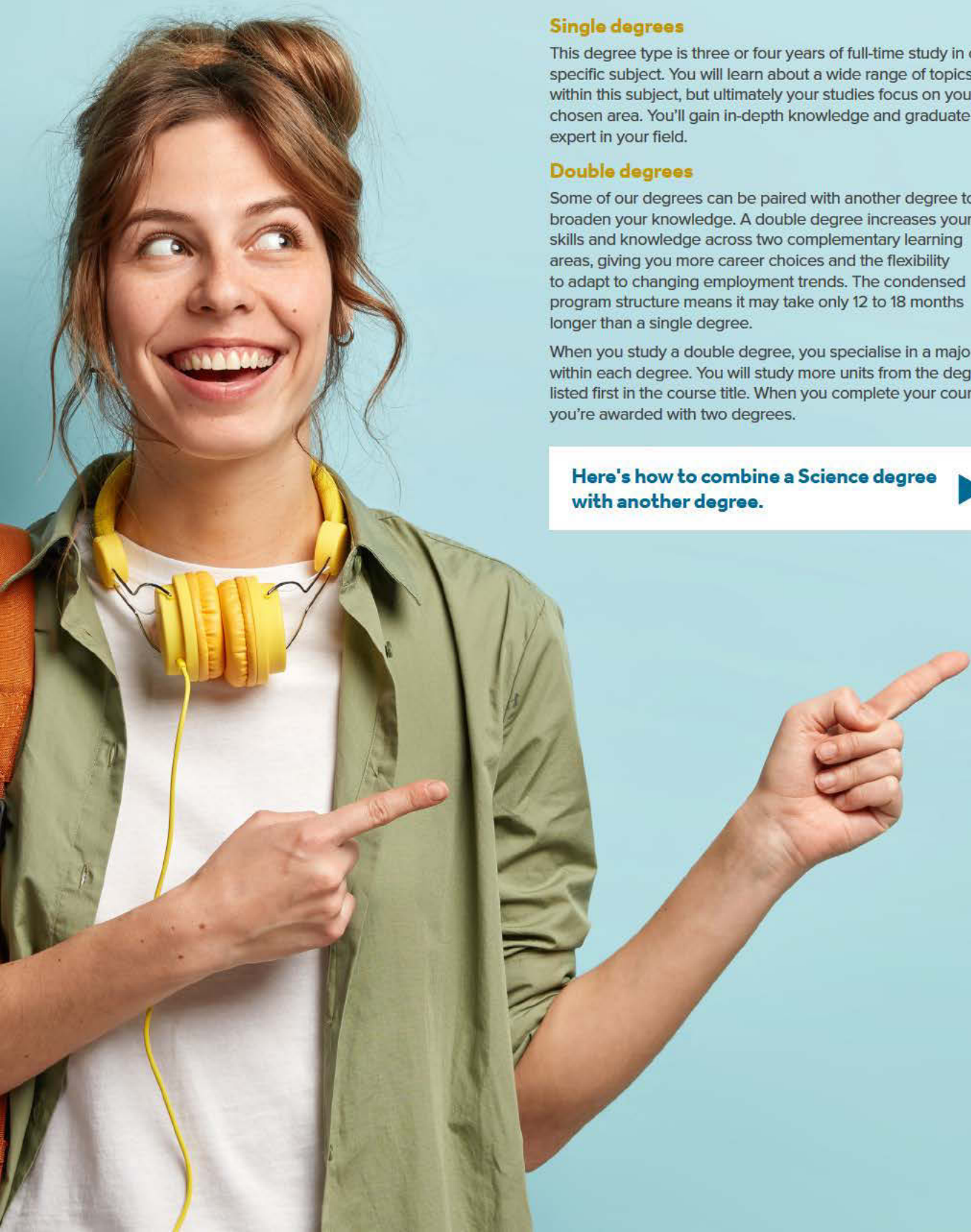
This degree type is three or four years of full-time study in one specific subject. You will learn about a wide range of topics within this subject, but ultimately your studies focus on your chosen area. You'll gain in-depth knowledge and graduate an expert in your field.

## Double degrees

Some of our degrees can be paired with another degree to broaden your knowledge. A double degree increases your skills and knowledge across two complementary learning areas, giving you more career choices and the flexibility to adapt to changing employment trends. The condensed program structure means it may take only 12 to 18 months longer than a single degree.

When you study a double degree, you specialise in a major within each degree. You will study more units from the degree listed first in the course title. When you complete your course, you're awarded with two degrees.

**Here's how to combine a Science degree with another degree.**



## Engineering and Science

### DEGREE

Bachelor of Engineering (Hons) and Bachelor of Science

### GUARANTEED ATAR

80

### PREREQUISITES

Mathematics Methods ATAR and at least one of Physics ATAR, Chemistry ATAR, Engineering Studies ATAR, or equivalent

### DESIRABLE

Mathematics Specialist ATAR, or equivalent

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

5 years full-time

### LOCATION

Perth

### CRICOS CODE

095950A

This double degree will give you a competitive edge to your career through an advanced understanding of the science that underpins practical engineering.

### Major combinations available

- Mechatronic Engineering and Computer Science
- Electrical and Electronic Engineering and Computer Science
- Electrical and Electronic Engineering and Data Science
- Electrical and Electronic Engineering and Physics.

## Chemical Engineering and Chemistry

### DEGREE

Bachelor of Engineering (Hons) (Chemical Engineering) and Bachelor of Science (Chemistry)

### GUARANTEED ATAR

80

### PREREQUISITES

Mathematics Methods ATAR and Chemistry ATAR, and at least one of Physics ATAR or Engineering Studies ATAR, or equivalent

### DESIRABLE

Mathematics Specialist ATAR, or equivalent

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

5 years full-time

### LOCATION

Perth

### CRICOS CODE

050336F

An in-depth knowledge of chemistry unlocks more opportunities for chemical engineers.

In this double degree you will specialise in biosystems engineering, chemical engineering or oil and gas.

You'll explore the development, design and operation of processes for the extraction, conversion and recovery of materials. You'll also develop the skills for a career in a modern analytical or industrial laboratory.

## Chemical Engineering and Extractive Metallurgy

### DEGREE

Bachelor of Engineering (Hons) (Chemical Engineering) and Bachelor of Science (Extractive Metallurgy)

### GUARANTEED ATAR

80

### PREREQUISITES

Mathematics Methods ATAR and at least one of Physics ATAR, Chemistry ATAR or Engineering Studies ATAR, or equivalent

### DESIRABLE

Mathematics Specialist ATAR, or equivalent

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1

### STUDY MODE

Full-time, part-time

### DURATION

5 years full-time

### LOCATION

Perth then Kalgoorlie

### CRICOS CODE

043753C

Grounded in chemistry and environmental science, this double degree will give you comprehensive skills in improving industrial procedures in the mining sector.

You'll also learn environmental considerations, and graduate ready to take a leading role in developing processes that extract, convert and recover materials and metals.

## Civil and Construction Engineering and Mining

### DEGREE

Bachelor of Engineering (Hons) (Civil and Construction Engineering) and Bachelor of Science (Mining)

### GUARANTEED ATAR

80

### PREREQUISITES

Mathematics Methods ATAR and at least one of the following: Physics ATAR, Chemistry ATAR or Engineering Studies ATAR, or equivalent

### DESIRABLE

Mathematics Specialist ATAR or equivalent

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

5 years full-time

### LOCATION

Perth then Kalgoorlie

### CRICOS CODE

050568A

This double degree will provide you with knowledge across various science, technology and engineering areas, including geology, environmental science, surveying and computing; and electrical, civil and mechanical engineering.

You'll also learn aspects of environmental conservation, health and safety, and management of people and resources – an ideal skill set for mining and energy industries.

## Science and Arts

### DEGREE

Bachelor of Science and Bachelor of Arts

### MINIMUM ATAR

70\*

### PREREQUISITES

Check science majors online

### DESIRABLE

Check science majors online

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

074653F

### LEARN MORE

[curtin.edu/Sci-Arts](http://curtin.edu/Sci-Arts)

*\*May be higher depending on science major selected.*

This double degree will broaden your career opportunities by supplementing your science expertise with a stronger understanding of society and culture.

You will graduate with the superior communication skills required to inspire and educate the public with the latest scientific discoveries.

### Science majors available

- Chemistry
- Coastal and Marine Science
- Data Science
- Environmental Biology
- Mathematics
- Physics.

### Arts majors available

- Anthropology and Sociology
- Chinese
- Digital and Social Media
- Geography
- International Relations
- Japanese
- Professional Writing and Publishing.

## Science and Commerce

### DEGREE

Bachelor of Science and Bachelor of Commerce

### MINIMUM ATAR 2021

70\*

### PREREQUISITES

Check science majors online

### DESIRABLE

Check science majors online

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

074654E

### LEARN MORE

[curtin.edu/Sci-Com](http://curtin.edu/Sci-Com)

*\*May be higher depending on science major selected.*

This double degree enables you to gain knowledge in a scientific discipline and develop strong foundational business skills.

It will prepare you to fulfil the financial potential of scientific discoveries and apply commercial knowledge in research environments. You'll learn to generate solutions to complex scientific, business and commercial problems.

### Science majors available

- Chemistry
- Coastal and Marine Science
- Data Science
- Environmental Biology
- Mathematics
- Physics.

### Commerce majors available

- Economics
- Finance.



## Applied Geology and Finance

### DEGREE

Bachelor of Applied Geology and Bachelor of Commerce (Finance)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR, or equivalent

### DESIRABLE

None

### STAT

Accepted

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

043262M

This double degree will augment your knowledge in geology – which is critical to the global economy – with knowledge of the resources industry and finance.

The finance component explores the financial services industry. You'll study areas in corporate finance and develop key understandings in investment, evaluation and the financial markets and their instruments.

This will provide the ideal skill sets for analysing the economic viability of resource exploration projects.

## Applied Geology and Environmental Biology

### DEGREE

Bachelor of Applied Geology and Bachelor of Science (Environmental Biology)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR and one ATAR science course, or equivalent

### DESIRABLE

None

### STAT

Accepted

### PORTFOLIO ENTRY

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

043265G

In this double degree you'll study fundamental geological and biological processes and apply them to mineral exploration and resource extraction and groundwater resources. You'll also learn how to manage ecosystems and rehabilitate landscapes impacted by salt degradation and resource extraction activity.

This combination of skill sets for extraction and environmental protection is increasingly important to the resources sector and to society.

## Computer Systems and Networking, and Information Technology

### DEGREE

Bachelor of Technology (Computer Systems and Networking) and Bachelor of Information Technology

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR or equivalent

### DESIRABLE

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO ENTRY

Accepted

### INTAKE

Semester 1, semester 2

### STUDY MODE

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

102589F

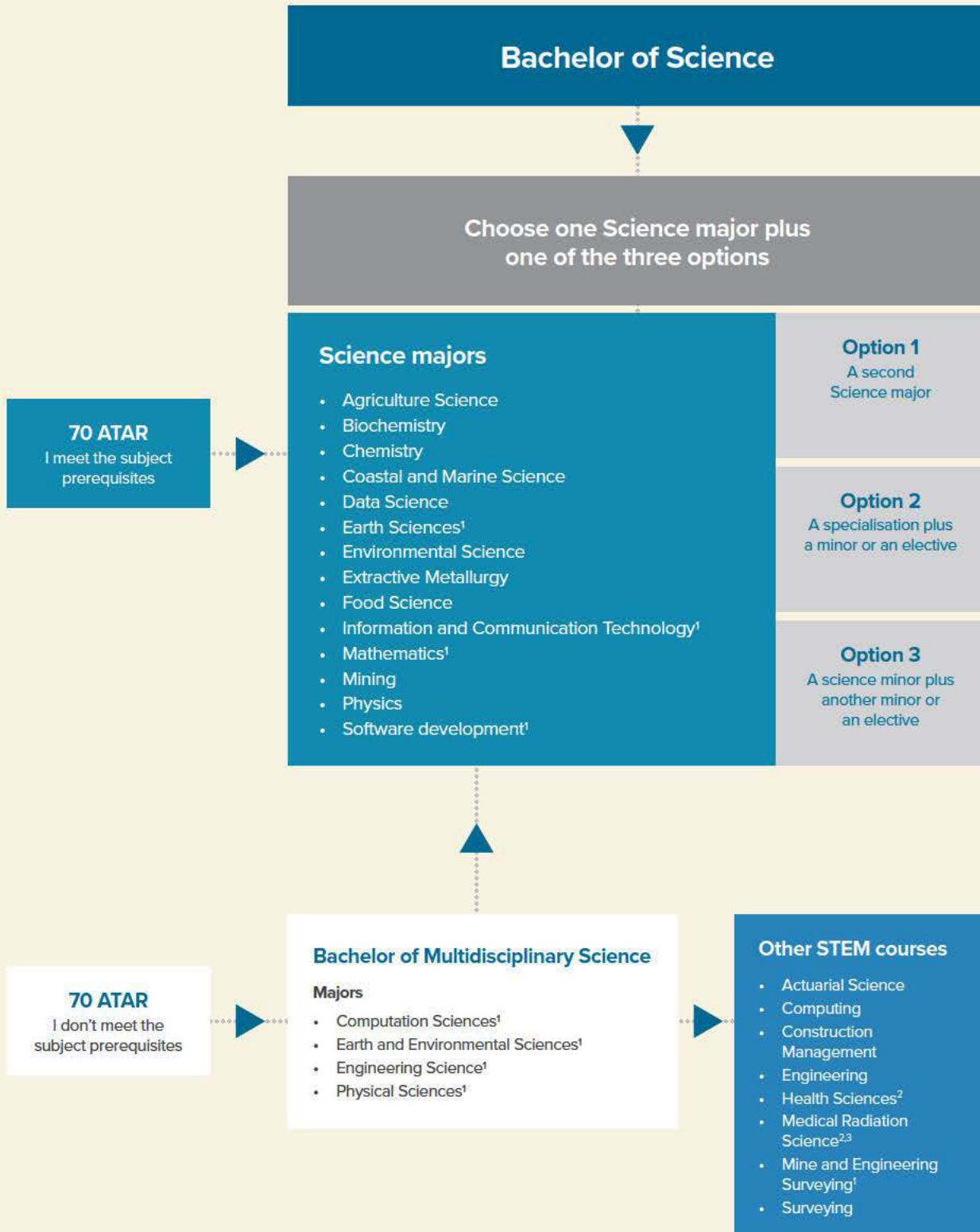
This double degree addresses the market demand for expertise in the design of distributed computing and sensing environments and the networks that underpin them.

The course focuses on computer technology (hardware and software), communications and networking that incorporate Local Area Networks (LANs) and Wide Area Networks (WANs), as well as network management and the Internet of Things.

It covers fundamental programming and security knowledge, network programming and other aspects of distributed computing. You'll learn Python as a tool for programming and Linux skills – starting with the basics and progressing to advanced topics.



# Starting your career in STEM



1. New majors in 2023. Visit [study.curtin.edu.au](http://study.curtin.edu.au) for course information  
 2. Studied in the Faculty of Health Sciences  
 3. Entry is highly competitive due to a cap on placements  
 4. Visit [curtin.edu/sae-special](http://curtin.edu/sae-special)



## Build your STEM expertise for a distinctive career that can help create change.

### Bachelor of Science: Choose your areas of expertise

Our flexible Bachelor of Science courses let you tailor your range of skills and knowledge to your aspirations for a career in STEM.

If you choose to study a double major, you'll explore two science disciplines in-depth.

If you choose to study a major and its specialisation, you'll be able to delve even deeper into that discipline. You'll also choose a science minor or an elective from a non-STEM area that may suit your personal or career interests (for example, combining agriculture and economics may create skill sets for an influential role in food security).

If you choose to study a major and a minor, you'll explore your major discipline in-depth and gain a second area of expertise to broaden your career options. You'll also choose a second minor or an elective from a non-STEM area that may suit your personal or career interests.

### Bachelor of Multidisciplinary Science: A springboard to your chosen career

We've changed our Multidisciplinary Science course to help you access an extended range of emerging STEM fields and in-demand careers.

This degree is also a pathway to study our Bachelor of Science majors and other STEM courses.





## Actuarial Science

Become an expert in predicting the effects of long-term risk in financial decisions and planning.

### DEGREE

Bachelor of Science (Actuarial Science)

### GUARANTEED ATAR

92

### PREREQUISITES

Mathematics Methods ATAR, or equivalent

### DESIRABLES

Mathematics Specialist ATAR, or equivalent

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

038785D

### LEARN MORE

[curtin.edu/bach-actuar](http://curtin.edu/bach-actuar)

Actuaries analyse mathematical, statistical, demographic, financial and economic data to predict and assess the effects of long-term risks involved in financial decisions and planning. Actuaries may also assess when and where devastating weather events may hit, to help predict risks and their associated costs for investments or insurance.

This course is designed to provide you with the necessary skills in mathematics, statistics, data analytics, finance and economics to prepare them as financial analysts in organisations that deal with risk – such as banks and other financial institutions, insurance companies and government agencies.

You will develop the mathematical and statistical techniques relevant to model industrial and commercial processes against a financial and economic background. You'll also learn to identify the risk factors and determine the price and cost of those risks.

In your third year you'll specialise in actuarial science or actuarial and applied statistics.

### Actuarial Science

You must achieve the set minimum course-weighted average mark to be eligible to study Actuarial Science in third year.

This major is recommended for students who intend to complete further studies and qualify as an actuary. It offers students the opportunity to gain exemptions from the six subjects comprising the Foundation Program, which is the first part of the professional examinations of the Actuaries Institute. For details on the Institute's professional requirements, visit [actuaries.asn.au](http://actuaries.asn.au).

### Actuarial and Applied Statistics

This is designed for students who want to broaden their degree with more knowledge about statistics and data analysis, but who do not intend to qualify and work as an actuary. It does not include all subjects of the Foundation Program.

### Professional recognition

Professionally accredited by the Actuaries Institute (Australia).

### Career information

#### Careers

- Actuary
- Business analyst
- Data scientist
- Mathematician
- Risk manager
- Statistician.

#### Industries

- Banking
- Education
- Financial services
- Health
- Mining, oil and gas infrastructure
- Insurance
- Public sector finance and infrastructure
- Superannuation.

# Agribusiness

Address concerns in food security, farming systems, climate change and shifting markets.

## DEGREE

Bachelor of Agribusiness

## GUARANTEED ATAR

70

## PREREQUISITES

Mathematics Applications ATAR, or equivalent

## DESIRABLES

One or more of the following ATAR subjects: Animal Production Systems, Aviation, Biology, Chemistry, Earth and Environmental Science, Human Biology, Integrated Science, Marine and Maritime Studies, Physics, Plant Production Systems, Psychology, Computer Science, Applied Information Technology

## STAT

Accepted

## PORTFOLIO

Accepted

## INTAKE

Semester 1, semester 2

## STUDY MODES

Full-time, part-time

## DURATION

3 years full-time

## LOCATION

Perth

## CRICOS CODE

029345C

## LEARN MORE

[curtin.edu/bach-agrib](http://curtin.edu/bach-agrib)

Agribusiness encompasses the entire food production system from paddock to plate, linking producers with consumers. It addresses global concerns such as food security and challenges to farming systems under a changing climate, shifting markets and increasing consumer awareness.

This course is the only Bachelor of Agribusiness offered in Western Australia. It will introduce you to the scientific and business principles that can be applied to agriculture.

You will gain scientific knowledge to develop an understanding of production systems and to apply problem-solving techniques to management strategies. You'll be introduced to technologies used in soil, crop and livestock management systems.

You'll engage in research-led activities, problem-solving and self-directed experiments using our field-trial site and glasshouse facilities.

You'll work individually and as an integral part of a team, to develop your agribusiness risk and farm management skills. You'll also have opportunities to develop links with industry experts and undertake field trips to research centres, agronomic field sites and farms.

This course includes a work placement to ensure you graduate with the science, technology and business skills needed for a thriving career in agribusiness. The placement can be with agriculture research, production or business industries locally or globally.

## Professional recognition

Graduates are eligible for membership of the Australian Institute of Agricultural Science and Technology.

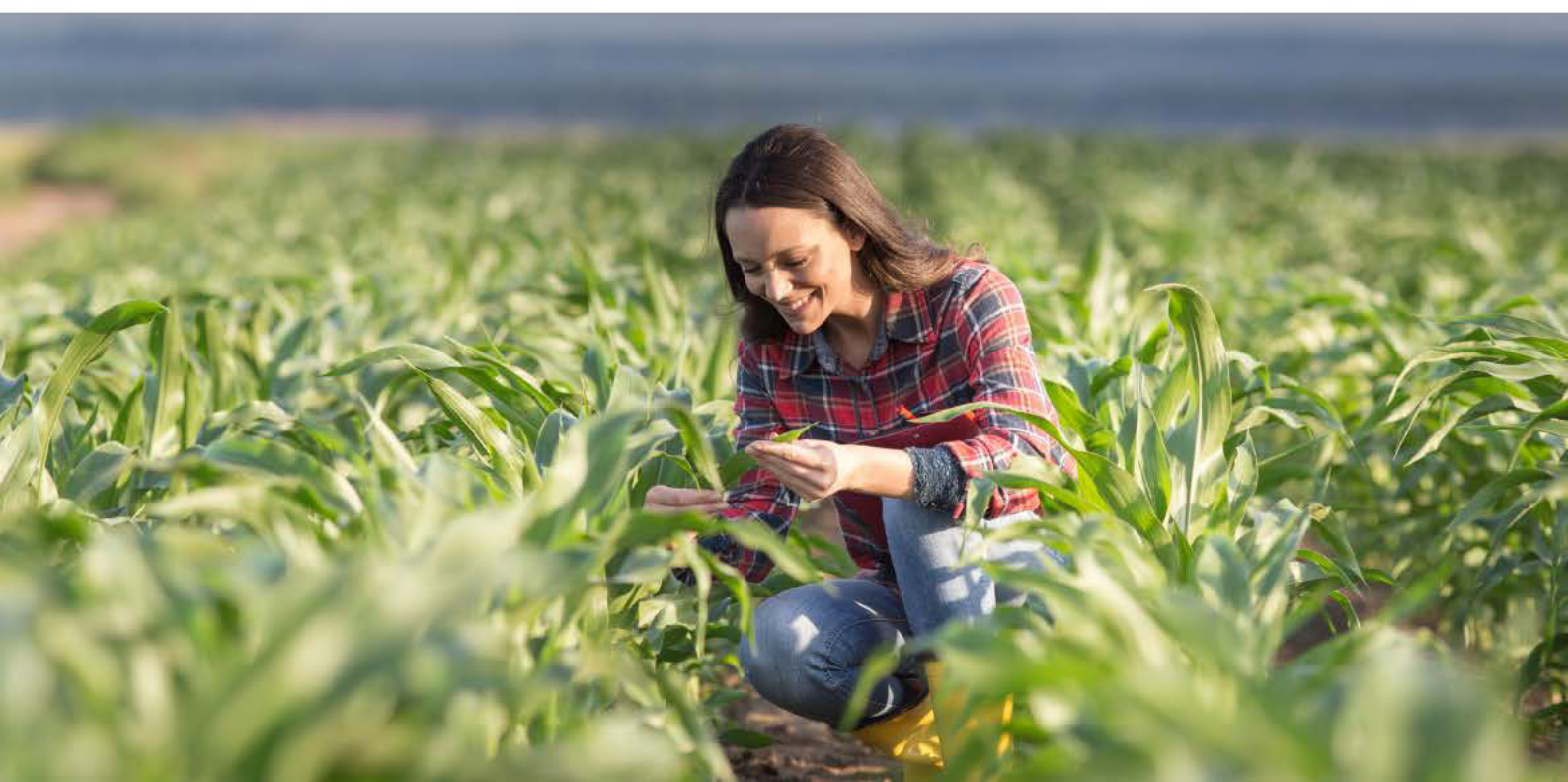
## Career information

### Careers

- Agricultural and resource economist
- Agricultural scientist
- Agronomist
- Biotechnologist
- Farm management and farm consultant
- Grain trader
- Research trials manager
- Soil scientist.

### Industries

- Agriculture
- Agriculture marketing and supply chain logistics
- Agricultural product supply
- Agronomy services
- Banking and finance
- Consultancy
- Farmer grower groups
- Farming
- Research.



## Agribusiness (associate degree)

Start your journey to a career in agribusiness or use this course as a pathway into a bachelor degree.

### DEGREE

Associate Degree in Agribusiness

### MINIMUM ATAR

N/A

### PREREQUISITES

None

### DESIRABLES

School leavers with a WACE, Agricultural College students, students who have completed a TAFE Cert III, IV or Diploma in Agriculture and mature-age students are encouraged to apply.

Students without a WACE are encouraged to complete the UniReady program and apply for entry after one semester.

Students with an ATAR greater than 70, a pass in Mathematics Applications ATAR or higher and a Science course at ATAR level are encouraged to apply directly to the Bachelor of Agribusiness.

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Entry to the course is by portfolio application only

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

2 years full-time

### LOCATION

Muresk

### CRICOS CODE

098315D

### LEARN MORE

[curtin.edu/ad-agrib](http://curtin.edu/ad-agrib)

Curtin offers an Associate Degree in Agribusiness at Muresk Institute in Northam, in the Wheatbelt region of Western Australia.

This course will provide you with an understanding of agricultural production systems and the business principles associated with the production, processing, marketing and distribution of food.

You will graduate technically competent and commercially savvy, with contemporary agribusiness skills relevant to agricultural production, farm management and agricultural equipment sales.

The course involves a high level of exposure to practical farm management and has been created in close collaboration with industry, to ensure it meets the needs of the Western Australian agriculture and food industry.

Study themes include:

- agribusiness accounting, economics, finance, management and marketing
- agricultural production systems, including animal and cropping systems
- broadacre crop and pasture science
- farm business management
- international agricultural trade
- soil and water resources.

The associate degree is also a pathway into the Bachelor of Agribusiness, providing at least 12 months credit. Pathways into other bachelor degrees are available.

## Career information

### Careers

- Agribusiness banking
- Agronomic and livestock sales
- Agronomic and livestock technical services
- Business consulting
- Commodity trading
- Exporting
- Financial management
- International marketing
- Professional farm management.

### Industries

- Agriculture
- Agriculture marketing and supply chain logistics
- Agricultural product supply
- Agronomy services
- Banking and finance
- Consultancy
- Farmer grower groups
- Farming
- Research.



# Agriculture Science

Get an industry-ready understanding of the science and technology of agriculture.

## DEGREE

Bachelor of Science (Agriculture Science)

## GUARANTEED ATAR

70

## PREREQUISITES

Mathematics Applications ATAR

## DESIRABLES

At least one of the following: Animal Production System ATAR, Aviation ATAR, Biology ATAR, Chemistry ATAR, Earth and Environmental Science ATAR, Human Biology ATAR, Integrated Science ATAR, Marine and Maritime studies ATAR, Physics ATAR, Plant Production Systems ATAR, Psychology ATAR, Computer Science ATAR, Applied Information Technology ATAR, Engineering Studies ATAR, Food Science and Technology ATAR

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1, semester 2

## STUDY MODES

Full-time, part-time

## DURATION

3 years full-time

## LOCATION

Perth

## CRICOS CODE

061600D

## LEARN MORE

[curtin.edu/bach-agric](http://curtin.edu/bach-agric)

Agriculture is the science and practice of food and fibre production. Australia has the potential to be a leader in developing innovative solutions for sustainable, economical and ethical food production, across domestic and international markets.

The Agricultural Science major is designed to give students an industry-ready understanding of the science and technology required for the production of plants and animals for food and fibre.

The study of agricultural science is multi-disciplinary. It builds from the basics of biology, chemistry and statistics, to the components of agricultural systems – including soil science, crop science, animal science and molecular genetics.

Topics range from overarching issues such as food security, sustainability and climate change, to specifics of crop and animal production and soil health.

## DEGREE

Bachelor of Advanced Science (Agricultural Science) (Hons)

## GUARANTEED ATAR

95

## PREREQUISITES

Mathematics Methods ATAR

## DESIRABLES

Biology ATAR, Chemistry ATAR

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1

## STUDY MODES

Full-time, part-time

## DURATION

4 years full-time

## LOCATION

Perth

## CRICOS CODE

095949E

## LEARN MORE

[curtin.edu/badvsci-agsci](http://curtin.edu/badvsci-agsci)

During your studies you'll have opportunities to engage with Curtin-based research centres, which could lead to career options in those areas.

With food production and security being important issues for both developed and emerging economies, careers in agricultural production and development are available throughout the world.

There are also career options in research, extension and service provision to agriculture and horticulture industries.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## Professional recognition

Graduates are eligible to apply for membership of the Australian Institute of Agricultural Science and Technology.

## Career information

### Careers

- Agricultural management/consultant
- Agricultural and resource economist
- Agricultural scientist/technologist
- Agronomist
- Biotechnologist
- Climate scientist
- Plant breeding
- Soil scientist.

### Industries

- Agriculture
- Agriculture and grain marketing
- Agricultural supply chain logistics
- Biosecurity
- Chemical industry
- Farmer grower groups
- Food security
- International agricultural aid
- Private farming
- Plant and animal breeding
- Government agriculture departments.





## Applied Geology

Learn about Earth's fascinating geological processes that affect our environment, climate and resources.

### DEGREE

Bachelor of Applied Geology

### GUARANTEED ATAR

70

### PREREQUISITES

At least Mathematics Applications ATAR

### DESIRABLES

None

### STAT

Accepted

### PORTFOLIO

Accepted

### INTAKE<sup>1</sup>

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION<sup>2</sup>

Perth, Malaysia

### CRICOS CODE

108986M

### LEARN MORE

[curtin.edu/bach-apgeol](http://curtin.edu/bach-apgeol)

*1. Perth intake shown.*

*2. Not all specialisations offered at all locations.*

Geology is the study of the Earth and its resources. This course combines a comprehensive background in geological principles with a practical emphasis on mineral, energy and groundwater resources and their environmental management.

This course is designed to produce career-ready professionals trained to discover new resources – especially those required for generation and storage of renewable energy – and develop and manage these resources in an environmentally responsible manner. Geology graduates pursue exciting and rewarding careers in Australia and overseas that combine practical skills with the latest technological developments.

In your first year you will gain a grounding in geology and also in chemistry, maths, scientific communication and computer skills. In your second year you will focus on the theoretical, laboratory and field skills needed to understand geological processes. Your third and final year emphasises applied aspects such as mineral and energy exploration techniques, managing climate change, environmental geoscience, engineering geology, hydrogeology and the sustainable use of Earth resources.

The first two years of your course are based at Curtin Perth. In your third year, you can study either the Applied Geology specialisation at Curtin Perth or the Mining Geology specialisation at Curtin Kalgoorlie, and select units to tailor your final year of study.

The course also has work-relevant components that include practical geological work similar to that conducted in resources and environmental industry settings, including hands-on computing and practical exercises with industry standard software and geology field trips.

### Double degree

You can study a Bachelor of Applied Geology as part of a double degree. See page 23 for double degree combinations.

### Professional recognition

Graduates may be eligible for membership to the Australian Institute of Geoscientists, the Australasian Institute of Mining and Metallurgy and the Geological Society of Australia.

### Career information

#### Careers

- Geologist
- Geological engineer
- Environmental geoscientist
- Geochemist
- Hydrogeologist.

#### Industries

- Environmental geology
- Groundwater extraction / hydrogeology
- Mineral and petroleum exploration
- Mining
- Natural hazards and risk analysis
- Radioactive waste storage
- Research and development.





## Biochemistry

From forensic science to clinical research, a biochemistry degree can lead to a range of fascinating career paths.

### DEGREE

Bachelor of Science (Biochemistry)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR and Chemistry ATAR

### DESIRABLES

Mathematics Methods ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-bioch](http://curtin.edu/bach-bioch)

Biochemists study the molecular structures and processes that form the foundation for living matter.

In this major, you will study the core principles of chemistry, molecular structure and chemical reactivity, and how they can be applied to biological molecules.

You will study second- and third-year units in biological, medicinal and natural product chemistry; and complementary units in cell biology, molecular biology and molecular genetics.

You'll investigate molecular systems that regulate cell growth, including signalling and defence, and related metabolic pathways.

You'll also study molecular recognition and its applications in biosensors, drug design and optimisation, and in monitoring the effects that exogenous compounds can have on living systems.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

### Professional recognition

Graduates may be eligible for membership of the Royal Australian Chemical Institute.

### Career information

#### Careers

- Biochemist
- Biotechnologist
- Forensic scientist
- Medicinal scientist.

#### Industries

- Agriculture
- Biotechnology
- Healthcare.



## Chemistry

Specialise in science at the molecular level, where advances are made in materials, nanotechnology, medicine and IT.

### DEGREE

Bachelor of Science (Chemistry)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR and Chemistry ATAR

### DESIRABLES

Physics ATAR and Mathematics Methods ATAR or Mathematics Specialist ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-chemi](http://curtin.edu/bach-chemi)

### DEGREE

Bachelor of Advanced Science (Hons) (Chemistry)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR, Chemistry ATAR

### DESIRABLES

Mathematics Specialist ATAR, Physics ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-chem](http://curtin.edu/badvsci-chem)

## Double degree

You can study a Bachelor of Science (Chemistry) as part of a double degree. See page 22 for double degree combinations.

## Professional recognition

Graduates are eligible for membership of the Royal Australian Chemical Institute.

## Career information

### Careers

- Analytical chemist
- Environmental chemist
- Forensic scientist
- Materials scientist
- Medicinal chemist
- Synthetic chemist.

### Industries

- Environment
- Forensics
- Health
- Manufacturing
- Petrochemical engineering.



Chemistry is called 'the central science' because it connects other sciences such as physics, biology and geology.

In this course you will gain the knowledge to become a skilled chemist. You'll study theoretical and practical aspects of chemistry, including synthesis, analysis and spectroscopy.

Much of your learning will be at the advanced laboratories of Curtin's Resources and Chemistry Precinct, where you'll study metals, semiconductors, glasses, ceramics, polymers and other materials. You'll also learn about analytical instruments and radiation that materials scientists use to investigate the microstructure of samples.

In addition, you'll gain the problem-solving, teamwork and critical-analysis skills that can open opportunities for diverse science careers.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## Coastal and Marine Science

Be a part of Australia's coastal and marine science community that is ensuring the sustainable management of our marine environment.

### DEGREE

Bachelor of Science (Coastal and Marine Science)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR

### DESIRABLES

One or more of the following ATAR subjects: Biology, Chemistry, Earth and Environmental Science, Marine and Maritime Studies

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

May be used to demonstrate English proficiency only

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-coamar](http://curtin.edu/bach-coamar)

### DEGREE

Bachelor of Advanced Science (Hons) (Coastal and Marine Science)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR

### DESIRABLES

At least one of the following: Chemistry ATAR, Biology ATAR, Marine and Maritime Studies ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-cmsci](http://curtin.edu/badvsci-cmsci)

Marine environments all around the world are increasingly vulnerable to climate change and continued coastal development and resources extraction.

This major responds to the growing need to protect Australia's coastlines, with an emphasis on marine biology, oceanographic sciences and resource management.

The course is informed and delivered by staff with research expertise in fish ecology, coral reef ecology, marine pollution, coastal geomorphology, sustainable fisheries and aquaculture. It has been designed with industry input, to ensure you develop scientific and marine research skills. You will learn to think as a marine scientist, developing your initiative and intellectual curiosity to help understand and protect the marine environment.

During your studies you'll interact with professionals working in marine and coastal science and management, such as Western Australia's departments of Fisheries, Environmental Protection, and Environment and Conservation; marine science consultancies; and Curtin's Centre for Marine Science and Technology.

You can select from a large range of specialisations to study with this Science major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

### Double degree

You can study a Bachelor of Science (Coastal and Marine Science) as part of a double degree. See page 22 for double degree combinations.

### Professional recognition

Graduates are eligible for membership of the Australian Marine Sciences Association.

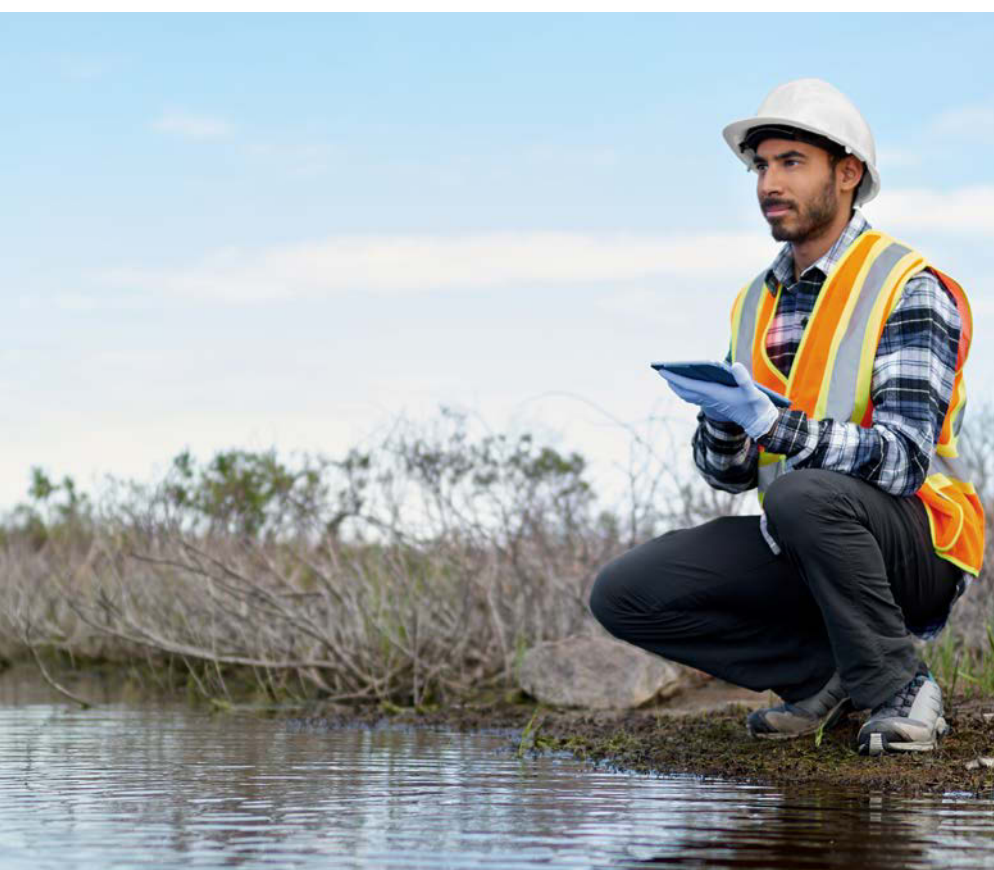
### Career information

#### Careers

- Aquaculturalist
- Ecotoxicologist
- Environmental officer
- Fisheries scientist
- Marine scientist
- Natural resource manager.

#### Industries

- Aquaculture
- Coastal management
- Ecotourism
- Fisheries
- Marine conservation
- Pollution control.





## Computer Systems and Networking

Expand computer system capabilities and learn how to build future networks.

### DEGREE

Bachelor of Technology (Computer Systems and Networking)

### GUARANTEED ATAR

70

### PREREQUISITES

At least Mathematics Applications ATAR, or equivalent

### DESIRABLES

Mathematics Methods ATAR or Mathematics Specialist ATAR, or equivalent

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE<sup>1</sup>

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth, Malaysia

### CRICOS CODE

041280C

### LEARN MORE

[curtin.edu/bach-comsys](http://curtin.edu/bach-comsys)

<sup>1</sup> Perth intake shown.

Computer systems and network administrators are responsible for the configuration and reliable operation of computer networks, which form the backbone of modern information systems.

This degree course will provide you with the knowledge and skills required to pursue career opportunities in this rapidly expanding field.

You'll learn about computer network design and development technologies, focusing on the design and support of distributed computer and telecommunications networks.

The course integrates current developments in wired and wireless networking and provides a comprehensive view of the industry. You'll develop skills in network design and management, and the convergence of computer hardware, embedded systems, IT, technical support, real-time systems, software and telecommunications.

You'll also learn about the internet of things (IoT) – a network of devices connected to the internet on a global scale. The IoT is expanding rapidly, and it is increasingly critical for professionals to understand how it works and how to harness its power to improve business. This course will therefore enable you to apply technical knowledge across IoT-related functions in the workplace.

The course includes certification-based training with IT leaders. You'll graduate with the skills to expand the capabilities of networks already in place and to build new ones.

### Double degree

You can study a Bachelor of Technology (Computer Systems and Networking) as part of a double degree with Information Technology – see page 23.

### Professional recognition

Graduates meet Engineers Australia's Stage 1 Competency Standard for Engineering Technologists and can apply for relevant membership. This course has been formally endorsed by the Naval Shipbuilding College.

### Career information

#### Careers

- Industrial network engineer
- IT professional
- Network and system administrator
- Systems designer
- Telecommunications manager.

#### Industries

- Finance and insurance
- Government
- Mining and production operational technology
- Professional, scientific and technical services
- Public administration and safety.

## Computing

Match your computer career aspirations, with options in computer science, cyber security and software engineering.

### DEGREE

Bachelor of Computing

### GUARANTEED ATAR

80

### PREREQUISITES

- Cyber Security: Mathematics Methods ATAR
- Computer Science: Mathematics Methods ATAR
- Software Engineering: Mathematics Applications ATAR

### DESIRABLES

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE<sup>1</sup>

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth, Dubai, Malaysia, Sri Lanka

### CRICOS CODE

0100817

### LEARN MORE

[curtin.edu/bach-comp](http://curtin.edu/bach-comp)

*1. Perth intake shown.*

This course will equip you with high-level knowledge of computer systems and processes involved in software development and maintenance.

It covers aspects of modern computing, commencing with fundamental programming and theoretical knowledge; and followed by specialisation in computer science, cyber security or software engineering.

You'll use C and Java as the tools for learning core concepts such as object orientation and algorithms. Linux skills are taught throughout the course, starting with the basics and progressing to advanced topics.

This degree is designed to prepare you for careers in computing. As such, Curtin works closely with industry partners both to optimise course content and provide final-year placement opportunities to suitable students.

### DEGREE

Bachelor of Advanced Science (Hons) (Computing)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR

### DESIRABLES

None

### STAT

Not accepted

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-comp](http://curtin.edu/badvsci-comp)

## Computer Science

This major provides in-depth knowledge of software design, algorithm analysis, artificial intelligence, computer communications, databases and graphics.

You will gain the skills required to build operating systems and design new programming languages. Being mathematically based, computer science has a strong emphasis on logic and reasoning.

Strong performance in the first year of this major may allow transfer into the Bachelor of Advanced Science (Honours) course. (An interview is required.)

## Cyber Security

This major focuses on the key concepts and challenges in data protection and computer software security.

You will examine both the high- and low-level practical aspects of computer security. High-level aspects include cryptography theory, data access policy development and security program management. Low-level aspects include computer forensics, network intrusion detection and incident handling.

Graduates have the skills to identify and implement appropriate applications for specific scenarios, as well as an understanding of issues related to the protection of individual rights.

## Software Engineering

This major focuses on the software development life-cycle, but goes beyond programming to evaluate and meet customer needs, and to design and test software.

You'll develop design techniques and project management skills to solve real-world problems and build reliable, efficient large-scale software systems.

## Professional recognition

This course is accredited by the Australian Computer Society. The Cyber Security major meets the data and security standards of the Institute of Electrical and Electronic Engineers; Association for Computing Machinery; and Australian Computer Society.

## Career information

### Careers

- Computer programmer
- IT professional
- Computer security professional
- Software engineer/developer.

### Industries

- Applications and software development
- Game design and development
- Cyber security
- IT analysis.



## Data Science

Find the key to innovation, analysing big data to predict future trends and inform industry decisions

### DEGREE

Bachelor of Science (Data Science)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Methods ATAR

### DESIRABLES

Mathematics Specialist ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-datasc](http://curtin.edu/bach-datasc)

### DEGREE

Bachelor of Advanced Science (Hons) (Data Science)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR

### DESIRABLES

Mathematics Specialist ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-datasci](http://curtin.edu/badvsci-datasci)

This is a multidisciplinary major. It combines studies in computing, emerging internet technologies, media and statistics. You will gain a foundation in programming and statistics, which will form the basis of higher-level studies in data mining, data security and computer simulation.

This course builds your capacity to extract, analyse and visualise large volumes of data and communicate analytical outcomes to a range of audiences. You'll graduate equipped to enter a range of industries where data science is key to innovation.

In keeping with Curtin's strong links with industry, this course has an industry advisory group that provides guidance about the course content. The group comprises representatives from the resources sector, management consulting, data analytics services and spatial data product developers, and enterprises such as Optika Solutions and PwC.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

### Double degree

You can study a Bachelor of Science (Data Science) as part of a double degree. See page 22 for double degree combinations.

### Career information

#### Careers

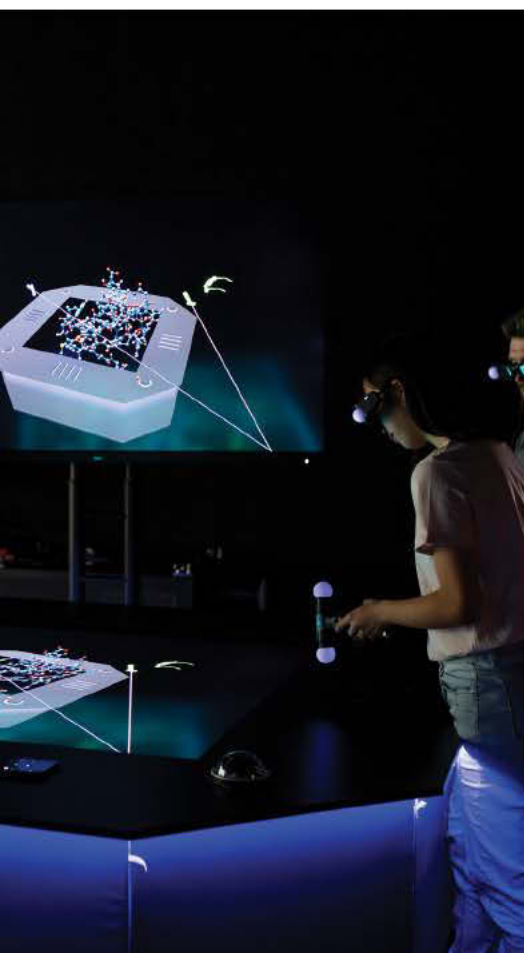
- Data analyst
- Data scientist.

#### Industries

- Agriculture and environment
- Arts
- Economics, business, banking and finance
- Geographic information science
- Government
- Health science
- Media
- Mining
- Oil and gas
- Supply chain logistics
- Technology.

Data scientists collate and analyse large volumes of data and communicate their findings to a range of audiences. Their ability to use big data to predict future trends is becoming an essential part of decision making in business and government.

Data is being generated at an unprecedented rate and its availability will continue to increase. Every industry is using large volumes of data – from predicting weather patterns and optimising harvesting in agriculture, to improving patient diagnosis in the health industry, to enhancing the management of remote infrastructure in mining.



## Earth Sciences

Gain the knowledge and skills for a career in industries involved in energy transitions, sustainable use of Earth resources, and climate and environmental challenges.

### DEGREE

Bachelor of Science (Earth Sciences)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR

### DESIRABLES

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-earth](http://curtin.edu/bach-earth)

### DEGREE

Bachelor of Advanced Science (Hons) (Earth Sciences)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR

### DESIRABLES

Chemistry ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-earthsci](http://curtin.edu/badvsci-earthsci)

Earth scientists are essential to meeting society's future challenges around climate and environmental change, the sustainable extraction of critical resources such as water, and minerals for new and emerging technologies.

Across a range of industries, Earth scientists use sophisticated instruments to determine the properties of Earth and planetary materials, and to help understand the evolution of the Earth and the controls and direction of its climate and biosphere.

In this course you will gain advanced knowledge in Earth sciences and learn how to apply that knowledge to scientific, social and ethical issues.

You'll also use digital technologies and learn to gather and interpret data that are relevant to Earth sciences applications and careers.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

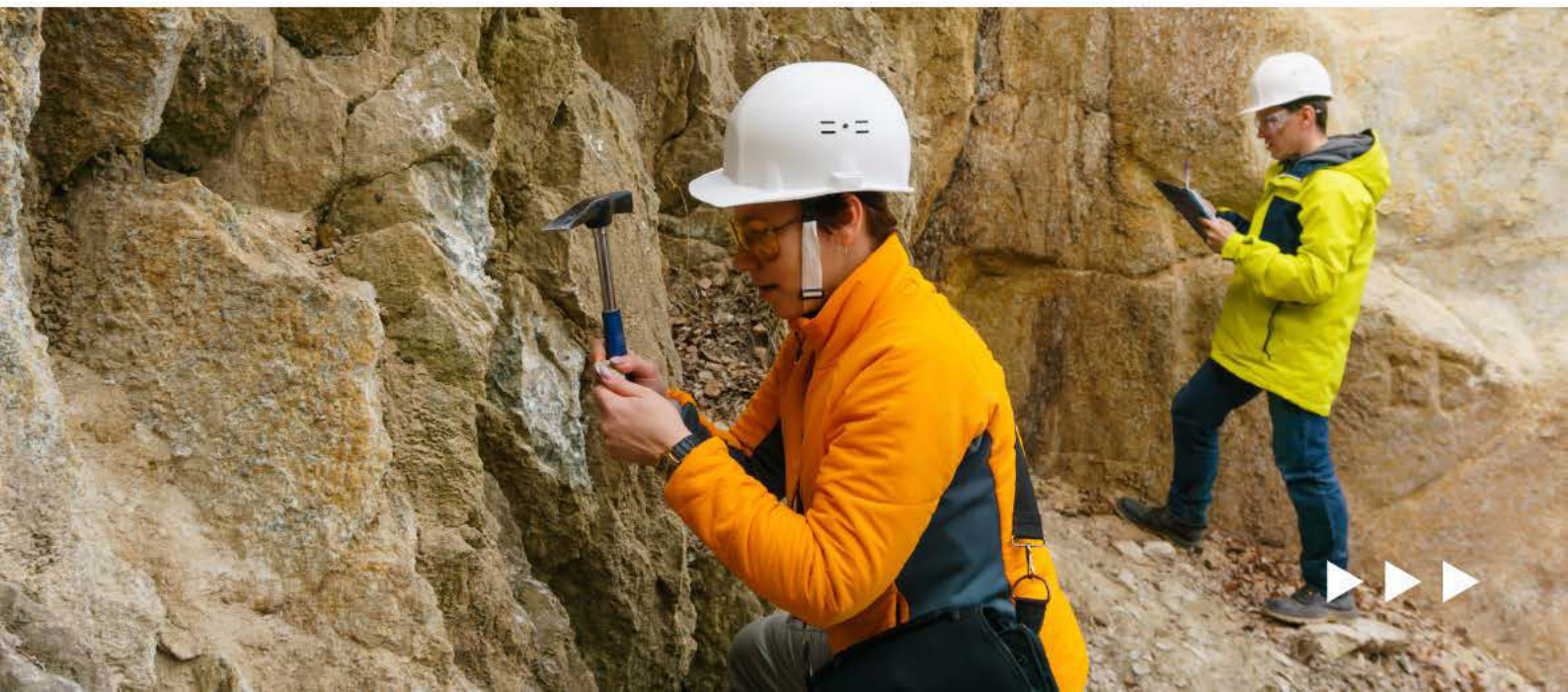
## Career information

### Careers

- Earth scientist
- Environmental geoscientist
- Geochemist
- Geologist
- Geotechnician
- Hydrogeologist.

### Industries

- Resources
- Environmental agencies
- Research
- Geological surveys.



## Environmental Science

Help to solve the issues related to urban and regional development, pollution, and the protection of global biodiversity.

### DEGREE

Bachelor of Science (Environmental Science)

### MINIMUM ATAR

70

### PREREQUISITES

None

### DESIRABLES

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-ensci](http://curtin.edu/bach-ensci)

Exploitation of the natural environment has taken a serious toll on the planet. Increasingly, environmental scientists are needed to apply their understanding of environmental functions and processes to challenges relating to land degradation and biodiversity loss; urban and regional development; mining, oil and gas extraction and processing; and pollution.

In this course you will gain expertise in zoology, botany, ecology, genetics, environmental management, conservation and sustainability. Throughout the course you'll also have opportunities to participate in field activities that develop environmental monitoring skills alongside laboratory and computer-based skills.

### DEGREE

Bachelor of Advanced Science (Hons) (Environmental Science)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR, Chemistry ATAR

### DESIRABLES

Biology ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

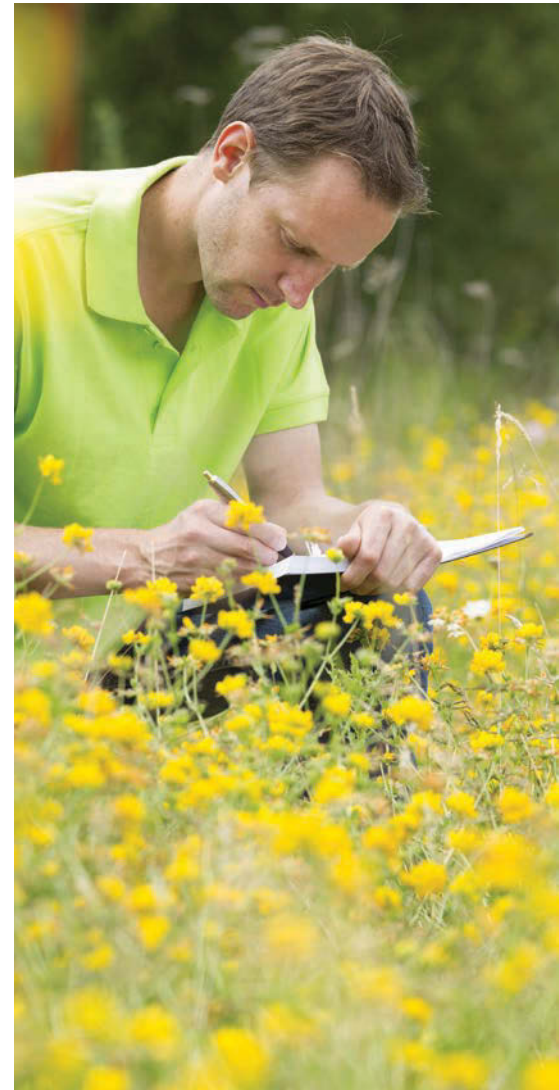
### LEARN MORE

[curtin.edu/badvsci-envsci](http://curtin.edu/badvsci-envsci)

You'll also gain skills in experimental design, statistics, critical thinking and communication that are necessary for environmental research; and complete a capstone research unit involving a week of field- or laboratory-data collection. This experience, together with a work-integrated learning unit, will ensure you can apply the skills gained during your studies to real-world environmental issues.

You can select from a large range of specialisations to study with this major. Combining this major with the Environmental Management specialisation and a selected minor will position you to help address current and future environmental challenges.

To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).



## Career information

### Careers

- Conservation scientist
- Environmental consultant
- Environmental scientist
- Mine restoration consultant
- Natural resource manager
- Remediated lands consultant.

### Industries

- Environmental
- Government policy and planning
- Research and development
- Urban and regional planning.



## Extractive Metallurgy

Learn to manage the operation of metallurgical processing plants in an economical and environmentally responsible way.

### DEGREE

Bachelor of Science (Extractive Metallurgy)

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR

### DESIRABLES

Physics ATAR or Chemistry ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth then Kalgoorlie

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-exmet](http://curtin.edu/bach-exmet)

Extractive metallurgists extract and purify metals and other products from ores obtained through mining operations. They have a strong understanding of chemistry, environmental science and mineralogy.

In this course you will learn to develop, optimise and manage the operation of metallurgical processing plants in an economical and environmentally responsible way. These plants transform low-value raw materials into useful, high-value mineral and metal products.

You will cover the chemical, physical, economic, environmental and sustainable principles and practices for the extraction of metals from ores.

Your first year will be taught at our main campus in Perth, the second year in either Perth or Kalgoorlie, and the final year in Kalgoorlie, which can help you maximise your exposure to industry and potential future employers.

You can select from a large range of specialisations to study with this Science major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## Double degree

You can study a Bachelor of Science (Extractive Metallurgy) as part of a double degree with Chemical Engineering – see page 21.

## Professional recognition

This course is recognised by the Australasian Institute of Mining and Metallurgy.

## Career information

### Careers

- Metallurgist
- Plant metallurgist
- Process metallurgist
- Processing consultant.

### Industries

- Banking and finance
- Minerals and mining
- Research and development.





## Financial Mathematics

Learn analytical and mathematical skills useful for a career in financial operations.

### DEGREE

Bachelor of Advanced Science (Hons)  
(Financial Mathematics)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Specialist ATAR

### DESIRABLES

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-finmaths](http://curtin.edu/badvsci-finmaths)

Financial mathematicians apply mathematical models and numerical tools to practical everyday applications, such as financial markets. They gather statistical data on the financial decisions that people make, which helps business and government make better informed decisions, especially in uncertain economic climates.

This course will provide you with a range of analytical and mathematical skills, with particular relevance to statistical modelling and operations research in finance.

You will gain a strong grounding in corporate finance, financial institutions, financial markets and various branches of the financial services industry, and you can select from units in accounting, economics and business.

In your final year you'll undertake a project where you'll put your skills into practice. Examples of previous projects include investigating the relationships between foreign exchange rates and Australian currency volatility; the effectiveness of using stochastic differential equations to model stock price; and statistical analysis of a portfolio strategy based on fluctuating prices.

### Professional recognition

Graduates can gain professional membership to the Statistical Society of Australia, Australian Society for Operations Research and the Australian Mathematical Society.

### Career information

#### Careers

- Commercial banker
- Finance/funds manager
- Financial analyst
- Financial planner
- Stockbroker
- Superannuation manager.

#### Industries

- Banking and finance
- Econometrics
- Education
- Government
- Insurance
- Investment banking
- Risk management.





## Food Science

Find your career in the expanding and diverse fields of food sciences and food securities.

### DEGREE

Bachelor of Science (Food Science)

### MINIMUM ATAR

70

### PREREQUISITES

Mathematics Applications ATAR

### DESIRABLES

Chemistry ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

061600D

### LEARN MORE

[curtin.edu/bach-fsci](http://curtin.edu/bach-fsci)

Careers in food science are diverse and challenging: one day you could be developing a new food product, and the next you could be solving technical issues on a processing line.

Food scientists develop and improve ways to process raw ingredients – including grains, meats, milk, fruit and vegetables – into safe, tasty and nutritious foods.

The study of food science is multidisciplinary. It involves biology, chemistry, nutrition, microbiology and engineering, as well as the latest research in the handling, processing and packaging of foods – from the farm to the consumer's plate.

This degree has been created to provide a pathway to a professional career or to further study in the expanding fields of food sciences and food securities. There are also career options in research related to food and nutrition in health and disease.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## Career information

### Careers

- Food scientist / technologist
- Food microbiologist
- Food product development
- Quality control technologist.

### Industries

- Agricultural research
- Airline and hospitality
- Analytical laboratories
- Education
- Food manufacturing and supply
- Food marketing and sales
- Hospitals and health agencies
- Research and development
- Supermarket and grocery
- Wine and viticulture.



## Industrial and Applied Mathematics

Gain industry-relevant maths skills applicable to STEM careers, finance and sociology.

### DEGREE

Bachelor of Advanced Science (Hons)  
(Industrial and Applied Mathematics)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Specialist ATAR

### DESIRABLES

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/badvsci-indmaths](http://curtin.edu/badvsci-indmaths)

Mathematics is the study of concepts such as quantity, structure, space and change; and the application of these concepts to model and describe the behaviour of real-world complex systems.

Mathematics is used in most fields, including technology, natural science, engineering, medicine, finance, sociology and psychology.

You will gain knowledge in advanced calculus, linear algebra, modelling and optimisation, network design and analysis, logistics, supply chain networks, transportation networks, computational mathematics, statistics and probability.

Our industry-based units and our ability to partner in work experience programs provide you with opportunities to engage with real-world applications. Upon completing the course, you'll have the knowledge and skills to improve the productivity of business and industry.

### Professional recognition

Graduates of this course may be eligible for membership to the Statistical Society of Australia, Australian Society for Operations Research, and Australian Mathematical Society. This course has been formally endorsed by the Naval Shipbuilding College.

### Career information

#### Careers

- Data analyst
- Industrial engineer
- Information technologist
- Logistician
- Statistical analyst
- Supply chain manager.

#### Industries

- Engineering
- Government
- Logistics and supply chain networks
- Risk management.



# Information and Communication Technology

Gain the advanced knowledge and skills to problem-solve issues in computers and computer networks.

**DEGREE**

Bachelor of Science (Information and Communication Technology)

**GUARANTEED ATAR**

70

**PREREQUISITES**

Mathematics Applications ATAR

**DESIRABLES**

None

**STAT**

May be used to demonstrate English proficiency only

**PORTFOLIO**

Not accepted

**INTAKE**

Semester 1, semester 2

**STUDY MODES**

Full-time, part-time

**DURATION**

3 years full-time

**LOCATION**

Perth

**CRICOS CODE**

061600D

**LEARN MORE**

[curtin.edu/bach-infocomm](http://curtin.edu/bach-infocomm)

Professional staff with ICT skills that complement a particular career discipline are increasingly advantageous to many industry and government sectors.

In this course you will learn how modern computer systems connect, operate and are programmed. You'll learn the setup and maintenance of wired and wireless networks, the configuration and hardening of networked computers, and general programming.

You'll gain the expertise to improve the efficiency of computer networks and solve network issues, particularly those relevant to small and medium enterprises (SMEs), and the automation and process control that underpin Internet of Things (IoT) innovations.

The skills you'll gain are ideal for SMEs that require agile professional staff with discipline expertise and network support skills. When you combine Information and Communications Technology with a major or a minor from a strong industry-related discipline, you'll be equipped with the skills to customise networks and develop proprietary industry and organisational systems.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

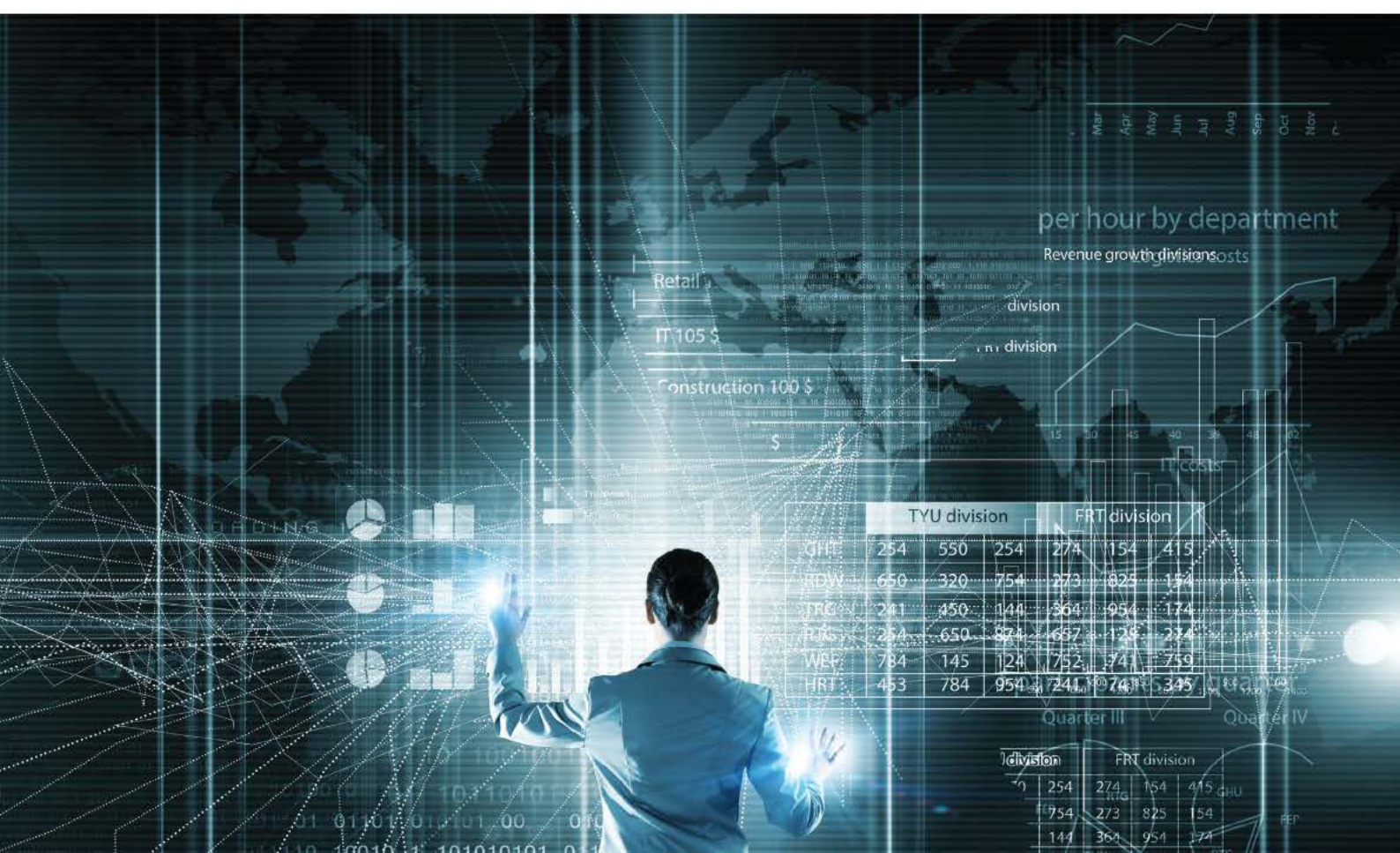
**Career information**

**Careers**

- ICT specialist
- Computer programmer
- Computer education
- Database design
- IoT (internet of things) engineer
- IT language development
- Network technician
- Software engineer/developer.

**Industries**

- Applications and software development
- Business and finance
- Education
- Cybersecurity
- Information technology
- Network engineering.





## Information Technology

This course covers fundamental programming and security skills of modern computing and computer networks.

### DEGREE

Bachelor of Information Technology

### GUARANTEED ATAR

70

### PREREQUISITES

Mathematics Applications ATAR, or equivalent

### DESIRABLES

Mathematics Methods ATAR, or equivalent.

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE<sup>1</sup>

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth, Malaysia, Sri Lanka

### CRICOS CODE

0100818

### LEARN MORE

[curtin.edu/bach-infotech](http://curtin.edu/bach-infotech)

<sup>1</sup> Perth intake shown.

This course covers fundamental programming and security skills of modern computing and computer networks, specialising in various aspects of distributed computing.

You will use Python as a tool for learning network and other programming. Linux skills are taught throughout the course, starting with the basics and progressing to advanced topics.

You'll develop a sound knowledge of computer systems and processes involved in software development and maintenance.

This degree is designed to prepare you for careers in high-demand areas of computing. Curtin works closely with industry partners both to optimise course content and provide final-year placement opportunities to suitable students.

If you perform well in the first year of this course you can apply to transfer to the Bachelor of Computing course. If you perform exceptionally well, you can apply to transfer to the Bachelor of Advanced Science (Computing) course, although acceptance is not automatic. In both cases, full credits will be transferred to the new course.

### Double degree

You can study a Bachelor of Information Technology as part of a double degree with Computer Systems and Networking – see page 23.

### Professional recognition

This course is accredited by the Australian Computer Society.

### Career information

#### Careers

- Computer programmer
- IT professional
- Computer security professional
- Software engineer/developer.

#### Industries

- Applications and software development
- Cyber security
- IT analysis.

# Mathematics

Learn how to apply mathematical concepts – such as quantity, structure, space and change – to model and describe the behaviour of real-world complex systems and improve their operations.

## DEGREE

Bachelor of Science (Mathematics)

## GUARANTEED ATAR

70

## PREREQUISITES

Mathematics Methods ATAR

## DESIRABLES

Mathematics Applications ATAR

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1, semester 2

## STUDY MODES

Full-time, part-time

## DURATION

3 years full-time

## LOCATION

Perth

## CRICOS CODE

061600D

## LEARN MORE

[curtin.edu/bach-maths](http://curtin.edu/bach-maths)

In this course you will gain the knowledge and skills for careers in optimisation and in financial, actuarial and industrial mathematics.

You'll learn how to apply mathematical and statistical principles and concepts in mathematics career areas – including operations research, statistics, numerical analysis and applied mathematical modelling – and to solve related problems in science, industry, commerce and government.

You'll develop skills in mathematics and statistical methods to analyse and resolve problems in science, engineering and finance; and learn to think creatively to generate innovative solutions.

In addition, you'll locate, extract and appraise evidence and scientific literature in relation to mathematical science, and use new technologies to gather data and communicate information.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

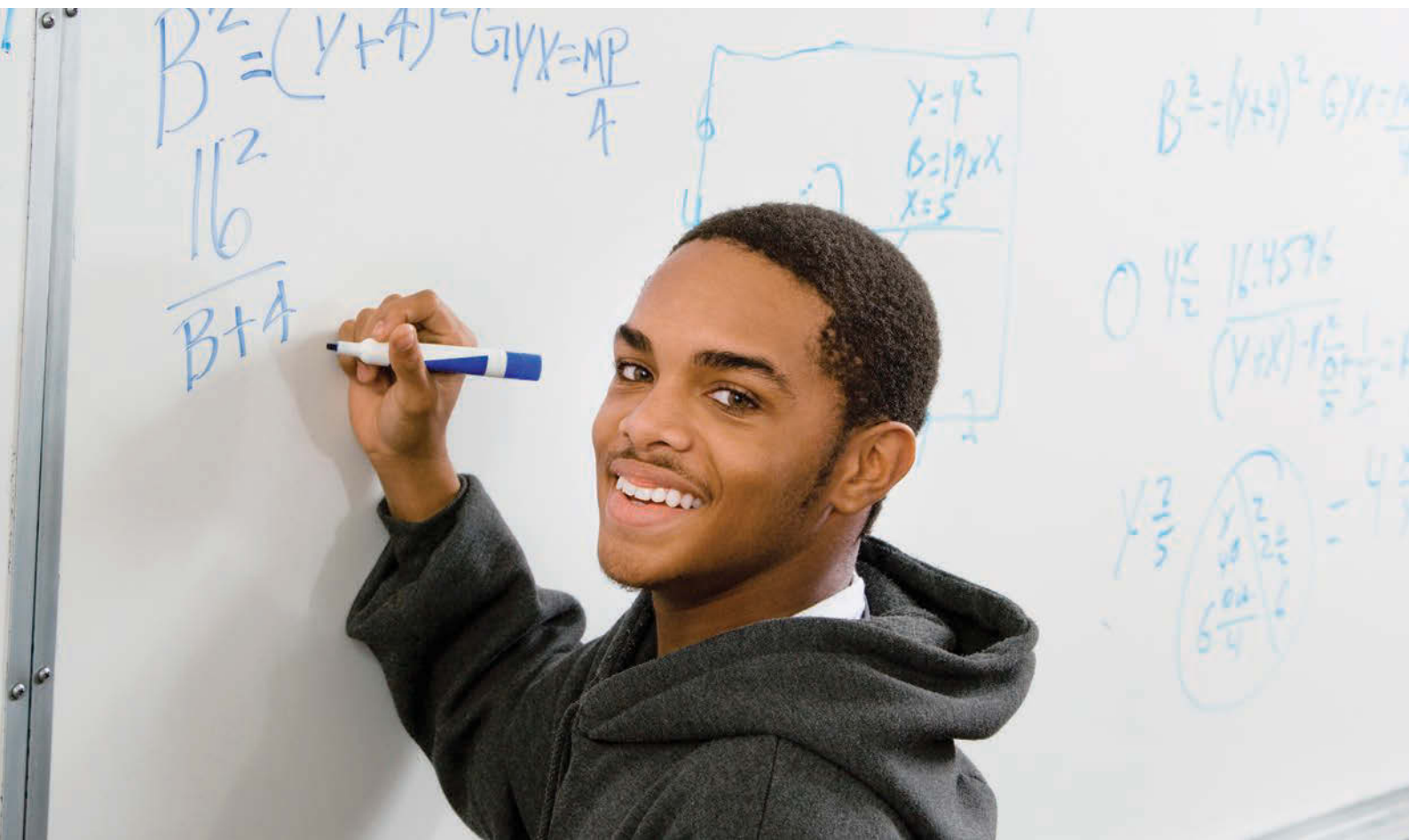
## Career information

### Careers

- Data analyst
- Information technologist
- Logistician
- Statistical analyst
- Supply chain management
- Financial analyst
- Fraud analyst
- Biostatistician
- Criminologist
- Communications specialist
- Cryptologist
- Market research
- Medical research
- Meteorologist
- Operations research analyst.

### Industries

- Business and commerce
- Finance
- Information technology
- Government
- Defence
- Transport
- Security
- Research.





## Mine and Engineering Surveying

Mine and engineering surveyors use a range of software and equipment, including GPS and drones, to acquire and process land and satellite data.

### DEGREE

Bachelor of Mine and Engineering Surveying

### MINIMUM ATAR

70

### PREREQUISITES

Mathematics Applications ATAR or equivalent

### DESIRABLES

Mathematics Methods ATAR or equivalent

### STAT

Accepted

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth, then Kalgoorlie

### CRICOS CODE

110733C

### LEARN MORE

[curtin.edu/bach-mineengsurv](http://curtin.edu/bach-mineengsurv)



Mine surveyors are responsible for the measurement, representation and management of data associated with a mining operation. Core responsibilities include the marking out, measurement and maintenance of direction for all surface and underground workings on a mine site. The mine surveyor is also legally responsible (under government regulations) for the preparation and updating of all mine surveying plans for open pit and underground workings.

Engineering surveyors have a key role in the construction industry to ensure that the locations, in three dimensions, of civil engineering works are in the correct position and orientation. Engineering surveying usually precedes construction of roads, bridges, tunnels, buildings, industrial plants and hydraulic engineering.

### Professional recognition

Graduates meet the education requirements of Western Australia's Department of Mines, Industry Regulation and Safety for certification as an underground or open pit mine surveyor.

### Career information

#### Careers

- Engineering surveyor
- Mining surveyor
- Surveyor.

#### Industries

- Construction
- Mining and resources.

# Mining

Study mining methods, rock mechanics, geology and mine planning.

## DEGREE

Bachelor of Science (Mining)

## GUARANTEED ATAR

70

## PREREQUISITES

Mathematics Applications ATAR

## DESIRABLES

Physics ATAR

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1, semester 2

## STUDY MODES

Full-time, part-time

## DURATION

3 years full-time

## LOCATION

Perth then Kalgoorlie

## CRICOS CODE

061600D

## LEARN MORE

[curtin.edu/bach-mngsc](http://curtin.edu/bach-mngsc)

Mining continues to enrich many communities in Australia and around the world. Mining professionals help plan and direct the extraction of minerals, petroleum and natural gas from the Earth.

In this course you will study mining methods, rock mechanics, geology and mine planning. You'll develop the skills necessary to work with mining engineers in the exploitation of minerals from underground or open-pit mines, safely and economically.

Your first year of study will be at Curtin Perth, your second year will be at Curtin Perth or Curtin Kalgoorlie, and your final year will be at Curtin Kalgoorlie, where you can engage with industry and potential future employers.

You'll also have the opportunity to undertake field trips to gain real-world experience in mining.

You can select from a large range of specialisations to study with this Science major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## Professional recognition

This course meets the education requirements of the Western Australian Department of Mines, Industry Regulation and Safety for certification as an underground or open-pit mine supervisor. You will also meet the educational requirements for the quarry manager's certificate of competency. It is also recognised by the Australasian Institute of Mining and Metallurgy.

## Career information

### Careers

- Engineering consultant
- Mine manager
- Mine ventilation officer
- Mining engineer
- Mining company director.

### Industries

- Mining and resources.



## Molecular Genetics (Advanced)

Molecular genetics is a rapidly expanding area that is contributing to solutions for human, animal and plant diseases; environmental degradation; food security and biosecurity; and other global challenges.

### DEGREE

Bachelor of Advanced Science (Hons)  
(Molecular Genetics)

### GUARANTEED ATAR

95

### PREREQUISITES

Mathematics Methods ATAR and Chemistry  
ATAR

### DESIRABLES

Mathematics Specialist ATAR or Biology  
ATAR

### STAT

May be used to demonstrate English  
proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

095949E

### LEARN MORE

[curtin.edu/bach-advvmgen](http://curtin.edu/bach-advvmgen)

This is a Bachelor of Advanced Science (Honours) course, designed for high-performing students to pursue their interest in science through a core of research, leadership and entrepreneurship.

Genetics is a rapidly growing science discipline and now underpins diverse jobs related to biology. Around the world, governments are investing heavily in genetics research to help improve the food supply, for example, which is increasingly reliant on genetically modifying the production of plants and animals.

Trace amounts of DNA in the environment (eDNA) are being used to provide more complete estimates of biodiversity in terrestrial and marine environments. Ancient DNA is being extracted from fossils to understand the evolution of life and the impacts of ancient climate and ecosystem change. DNA 'chips' can detect the expression of thousands of genes enabling rapid diagnosis of many diseases in a single test. Before long, individuals will have access to their own DNA sequence and learn their propensity to develop particular diseases.

The deep knowledge of genetic processes and bioinformatics you will gain in this course will provide opportunities for careers and research related to human, animal and plant health, environmental health and food security.

The course offers a flexible and personalised approach to studying genetics. You'll be able to explore this field through for-credit immersive research experiences, industry placement and/or interdisciplinary team-based projects. You'll also gain practical experience programming in both R and Python and through exposure to data science professionals.

In your second and third year you'll have the opportunity to source internal and external internships and immersive work experience that can be used for course credit. Your course will culminate in a capstone experience in which you can pursue genetics projects ranging from pure research through to translational (entrepreneurial) science.

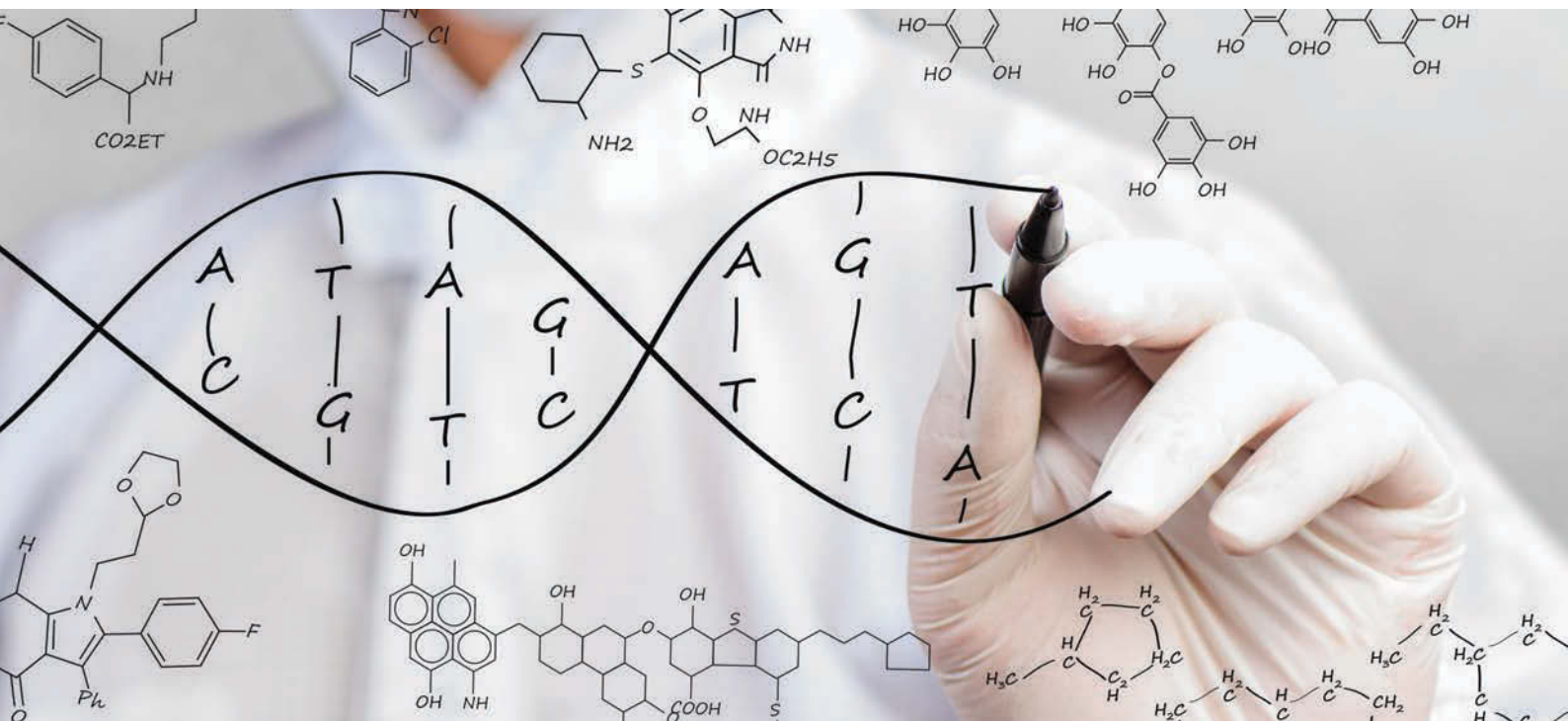
## Career information

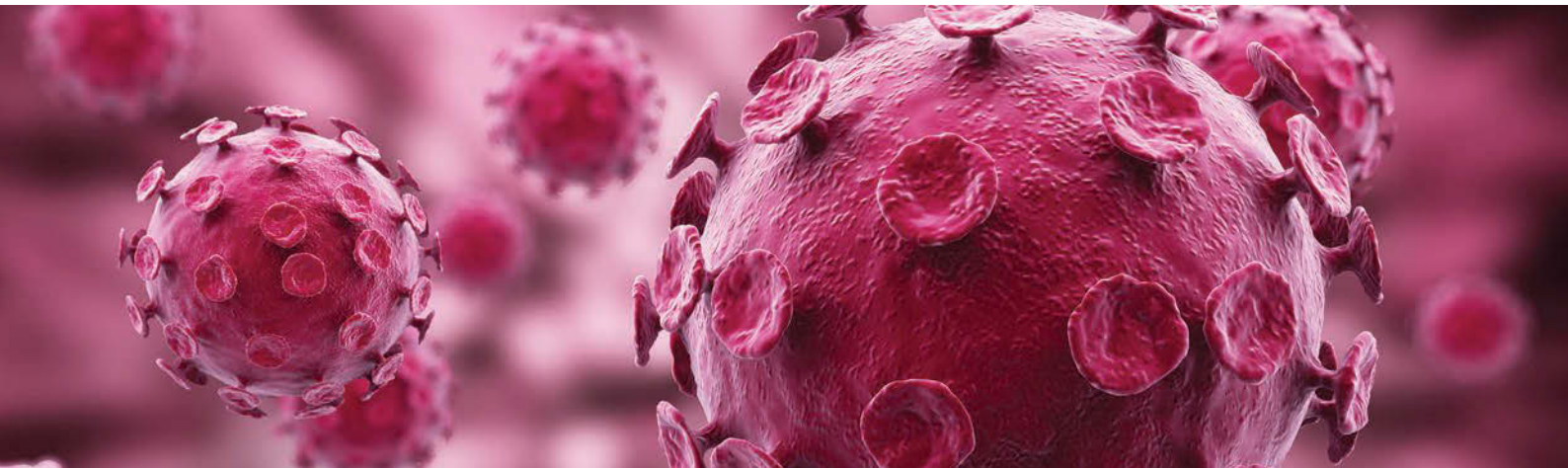
### Careers

- Agricultural and food scientist
- Bioinformatician
- Biotechnologist
- Ecologist
- Plant and animal geneticist.

### Industries

- Agriculture and agribusiness
- Environment and sustainability
- Food security
- Medical and healthcare
- Research and development.





## Multidisciplinary Science

As the world's scientific challenges become more complex, multidisciplinary science knowledge is increasingly important in our endeavours to address environmental and industry issues.

### DEGREE

Bachelor of Multidisciplinary Science

### GUARANTEED ATAR

70

### PREREQUISITES

None

### DESIRABLES

None

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

3 years full-time

### LOCATION

Perth

### CRICOS CODE

108988J

### LEARN MORE

[curtin.edu/bach-multidis](http://curtin.edu/bach-multidis)

In this course you can study more than one science discipline of your choice, so that you can gain comprehensive science knowledge and professional skills.

You will learn to apply scientific principles and concepts to real-world problems that are multidisciplinary in nature. You'll also learn the communication, creative, entrepreneurial and cultural-awareness skills that are important in multidisciplinary, collaborative careers throughout government and industry.

You have a choice of studying one of four majors:

#### Computational Sciences

In this major you will study various aspects of modern computing and gain the knowledge and practical skills that are sought by employers. The course covers fundamental programming and introduces C and Java as the tools for learning core concepts such as object orientation and algorithms. You'll also learn Linux skills and study the fundamental aspects of artificial intelligence, computer science, and cybersecurity.

#### Earth and Environmental Sciences

In this major you will study Earth dynamics and its relationships with environmental science. Earth scientists are essential to resources and environmental industries and use sophisticated techniques for the analysis of earth and planetary materials. Environmental scientists apply their expertise in physical and biological sciences to generate innovative and sustainable solutions to environmental issues. Upon graduating, you'll have the skillsets for careers involved in monitoring the impacts of industrial, urban, mining and agricultural development; measuring and analysing pollutants; and developing conservation and management plans.

#### Engineering Science

In this major you will gain the mathematical, practical and problem-solving skills to tackle various engineering challenges from a science perspective. This course has a cross-disciplinary focus so that you learn the fundamental principles of the various engineering fields, and gain the theoretical grounding and practical knowledge to devise solutions to complex societal challenges. It also provides a pathway to further discipline-specific engineering studies.

#### Physical Sciences

In this major you will study fundamental aspects of physics, astronomy, chemistry, mathematics and geology, and how these are drawn together to tackle emerging scientific challenges. Physics and astronomy utilise the four known forces to explain relationships among the smallest through to the largest structures; chemists explore the properties and behaviour of matter; whereas geologists study the solid Earth, the composition of rocks and how these change over time. These scientific fields are all underpinned by mathematics as a framework for explaining observations and predicting outcomes.

If you haven't studied science before or you don't meet the prerequisites to study our Science course majors, this course is also a pathway for admission to our Bachelor of Science majors and STEM courses – such as Computing, Engineering, Actuarial Science, Health Sciences and Medical Radiation Science. After you graduate, you may instead choose to study for a career in science education.

### Career information

#### Careers

- Scientist.

#### Industries

- Environment and sustainability
- Information technology
- Scientific equipment sales and support.

# Physics

Reach for the stars, studying matter and energy in all their forms.

## DEGREE

Bachelor of Science (Physics)

## GUARANTEED ATAR

70

## PREREQUISITES

Mathematics Methods ATAR and Physics ATAR, or equivalent

## DESIRABLES

Mathematics Specialist ATAR and Chemistry ATAR

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1, semester 2

## STUDY MODES

Full-time, part-time

## DURATION

3 years full-time

## LOCATION

Perth

## CRICOS CODE

061600D

## LEARN MORE

[curtin.edu/bach-physics](http://curtin.edu/bach-physics)

From the kinetic energy of a speeding car to nuclear fusion energy, from nearby stars to distant galaxies, physicists examine matter and energy in all their forms. Physics explains relationships between the smallest through to the largest structures, utilising the four known forces: strong, weak, electromagnetic and gravitational.

In this course you will study real-world problems through observation, measurement and theoretical analysis. You'll learn the core concepts of physics and gain experience using complex technical equipment such as those found at supercomputing facilities.

The extensive skills and knowledge that you'll gain in this course, through physical science experiments and solving real-world problems analytically or computationally, have application in a range of careers.

You can select from a range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## DEGREE

Bachelor of Advanced Science (Physics) (Hons)

## GUARANTEED ATAR

95

## PREREQUISITES

Mathematics Methods ATAR, Mathematics Specialist ATAR and Physics ATAR

## DESIRABLES

Chemistry ATAR

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1

## STUDY MODES

Full-time, part-time

## DURATION

4 years full-time

## LOCATION

Perth

## CRICOS CODE

095949E

## LEARN MORE

[curtin.edu/badvsci-physics](http://curtin.edu/badvsci-physics)

## Double degree

You can study a Bachelor of Science (Physics) as part of a double degree. See pages 21–22 for double degree combinations.

## Professional recognition

You will be eligible for membership of the Australian Institute of Physics (AIP). Many international equivalents of the AIP also accept graduates as members.

## Career information

### Careers

- Astrophysicist
- Computational physicist
- Environmental physicist
- Materials analyst
- Meteorologist
- Satellite remote-sensing scientist
- Financial analysts
- Medical physicists.

### Industries

- Astronomy
- Defence
- Environmental consultation
- Manufacturing.



# Software Development

Develop advanced knowledge and skills in software development for agile careers in industries ranging from agriculture to entertainment.

## DEGREE

Bachelor of Science (Software Development)

## GUARANTEED ATAR

70

## PREREQUISITES

Mathematics Applications ATAR

## DESIRABLES

Any ATAR mathematics or science course

## STAT

May be used to demonstrate English proficiency only

## PORTFOLIO

Not accepted

## INTAKE

Semester 1, semester 2

## STUDY MODES

Full-time, part-time

## DURATION

3 years full-time

## LOCATION

Perth

## CRICOS CODE

061600D

## LEARN MORE

[curtin.edu/bach-softdev](http://curtin.edu/bach-softdev)

Computing skills enhance employability in many areas of science, especially in the great majority of industries and organisations that rely on efficient and secure computer systems.

In this course you will learn all the core components required to develop complex computer applications for small-to-medium enterprises (SMEs) in particular. You'll learn about programming, algorithms, and the entire development cycle – from gathering requirements to testing. You'll also learn about application development for the Apple device ecosystem, and your learning will be informed by knowledge at the forefront of software development in general.

The skills you'll gain in this course are ideal for positions in SMEs where programming is valuable as a complementary science expertise. When you combine Software Development with a major or a minor from a strong industry-related discipline, you'll have the skills to customise or develop proprietary systems and software for that industry. For example, if you also major in Agriculture Science, you'll be well placed to contribute to the development of digital systems required for modern agriculture. Or, if you choose to major in Chemistry, your combined skill sets will be ideal for an organisation seeking a computational chemist or for roles requiring both chemistry and computing skills.

You can select from a large range of specialisations to study with this major. To see our full list of specialisations, visit [curtin.edu/sae-special](http://curtin.edu/sae-special).

## Career information

### Careers

- Application developer
- Software engineer and developer
- Game developer
- Cloud consultant
- IT language development
- Data scientists
- Geographical information system developer
- Programmer
- Science educator
- Software engineer
- Database design.

### Industries

- Applications and software development
- Business and commerce
- Education
- Finance
- Cybersecurity
- Entertainment and gaming
- Information technology
- Health informatics developer.





## Surveying

Surveying is a highly specialised professional discipline that involves measuring the surface of the Earth and its features.

### DEGREE

Bachelor of Surveying (Honours)

### MINIMUM ATAR

70

### PREREQUISITES

Mathematics Applications ATAR

### DESIRABLES

Mathematics Methods ATAR

### STAT

May be used to demonstrate English proficiency only

### PORTFOLIO

Not accepted

### INTAKE

Semester 1, semester 2

### STUDY MODES

Full-time, part-time

### DURATION

4 years full-time

### LOCATION

Perth

### CRICOS CODE

102612A

### LEARN MORE

[curtin.edu/bach-surv](http://curtin.edu/bach-surv)

Surveying is a highly specialised professional discipline that involves measuring the surface of the Earth and its features.

Curtin offers the only comprehensive honours degree in surveying in Western Australia. The course draws upon elements from a diversity of disciplines, including computing, engineering, environmental science, geography, geology, management, mathematics and physics.

You'll study specialist areas such as cadastral surveying, engineering surveying, geodesy and photogrammetry; and related areas such as hydrographic surveying, land development, mine surveying, planning and remote sensing.

You'll also become familiar with high-tech areas such as airborne and marine navigation, drone surveying, digital mapping, land and environmental management, laser scanning, satellite positioning and specialised alignment surveying.

See [curtin.edu/bach-minsur](http://curtin.edu/bach-minsur).

### Professional recognition

Graduates are eligible to apply for membership of the Surveying and Spatial Sciences Institute and the WA Institute of Surveyors. Graduates can apply to the Land Surveyors Licensing Board of Western Australia to enter a practical training agreement to become a licensed surveyor (which requires two years of further training). Further licensing in the fields of hydrographic surveying and mine surveying are available.

### Career information

#### Careers

- Engineering surveyor
- Hydrographic surveyor
- Licensed land surveyor
- Mine surveyor.

#### Industries

- Construction
- Mining
- Government (local, state and federal)
- Real estate
- Scientific and Technical Information Technology
- Multidisciplinary Science.

# How to apply



## 1. Find a course

Find your course in the guide or at [study.curtin.edu.au](http://study.curtin.edu.au).

## 2. Check the admission criteria

Admission is usually based on graduating from high school and achieving the following:

### ATAR OR CUT-OFF SCORE

**Domestic students:** You need to achieve the minimum or guaranteed ATAR for your chosen course.

**International students:** Cut-off scores for most countries are shown against each course at [study.curtin.edu.au](http://study.curtin.edu.au).

### ENGLISH

**Domestic students:** You need a scaled score of at least 50 in English ATAR, Literature ATAR or English as an Additional Language/Dialect ATAR.

**International students:** See [curtin.edu/english-criteria](http://curtin.edu/english-criteria) for your country's equivalent English competency criteria.

### PREREQUISITES

Some courses require completion of certain high school subjects. These are called prerequisites.

**Domestic students:** You need a scaled score of at least 50 in these subjects.

**International students:** You need your country's equivalent pass mark in these subjects.

### OTHER CRITERIA

Some courses have additional requirements, such as the submission of a portfolio.

## 3. Apply

### DOMESTIC STUDENTS

To apply, visit [curtin.edu/apply](http://curtin.edu/apply).

### INTERNATIONAL STUDENTS

First, get electronic copies of your qualifications and English language proficiency documents.

**Applying through an agent:** You may prefer to submit an application through a registered Curtin agent. To find an agent in your country, see [curtin.edu/agents](http://curtin.edu/agents).

**Applying online:** If you'd rather not apply through an agent, find your course at [study.curtin.edu.au](http://study.curtin.edu.au) and click APPLY NOW. From here, you can begin the online application process. Make sure your documents are ready to upload.

Successful applicants will receive an offer package, which explains how to accept Curtin's offer and how to enrol. When your enrolment has been completed, you'll receive your Confirmation of Enrolment.



# Curtin Early Offers for 2023

Are you in year 12 and keen to lock in your place at Curtin early?

Our Early Offers Program is available for most Curtin courses, and will help you secure a place in your chosen course before you even receive your ATAR.

We're also rewarding your hard work in year 12 with the new ATAR Achievement Scholarship. Simply apply for an early offer, and if your final ATAR is three or more points above your predicted ATAR score, you'll receive a \$3,000 scholarship to help you start your study journey at Curtin\*.

You can apply for an early offer through TISC until 2 December, 2022.



Visit [study.curtin.edu.au/early-offers](https://study.curtin.edu.au/early-offers).

*\*Conditions apply.*



## GETTING READY TO GO!

We want to make your transition to study in Australia as smooth as possible. Use our pre-departure resources to help you prepare for your move to Perth.

Visit [curtin.edu/pre-departure](https://curtin.edu/pre-departure).

## YOUR STUDENT VISA

Apply for your student visa after you receive your Confirmation of Enrolment.

If you will be under the age of 18 when you start your Curtin course, you must nominate a guardian.

You can find more information about applying for a student visa by searching for 'student visa' on the Department of Home Affairs website.

Visit [immi.homeaffairs.gov.au](https://immi.homeaffairs.gov.au).

## WE'RE HERE TO HELP

If you have any questions about admission, our team can help you.

### Domestic students

Tel: 1300 222 888

FAQ: [future.connect.curtin.edu.au](https://future.connect.curtin.edu.au)

Web: [study.curtin.edu.au](https://study.curtin.edu.au)

### International students

Tel: +61 8 9266 5888

Email: [study@curtin.edu.au](mailto:study@curtin.edu.au)

FAQ: [future.connect.curtin.edu.au](https://future.connect.curtin.edu.au)

Web: [international.curtin.edu.au](https://international.curtin.edu.au)

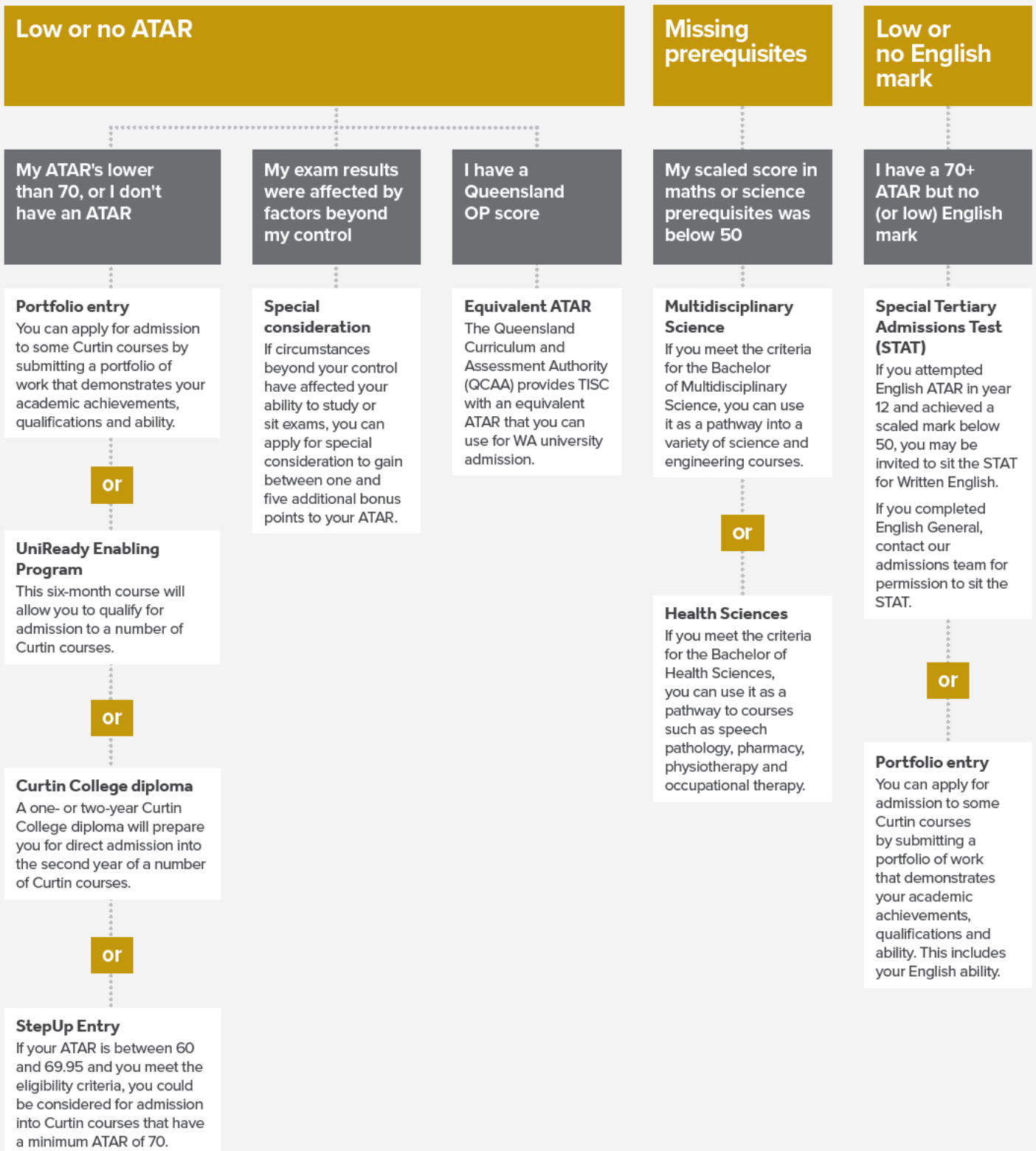
# Find your pathway

## There's more than one way to get into a Curtin course.



If you don't think you'll meet one or more criteria, there are many other pathways to Curtin. This diagram shows some common pathways that you can take, but there are more.

Visit [curtin.edu/pathways](https://www.curtin.edu/pathways) for all the ways you can gain entry to Curtin.



# Common uni words

## Course types

### Bachelor degree

The standard university award recognised worldwide for successfully completing an undergraduate course.

- **Double degree:** Studying two complementary bachelor degrees concurrently. For example, Bachelor of Laws and Bachelor of Arts.
- **Honours:** Additional research and coursework at an advanced level.

### Postgraduate degree

A higher degree qualification and subject specialisation that can be studied once you have completed a bachelor degree.

### Undergraduate study

Education that leads to your first university qualification, usually a bachelor degree.

## Course structure

### Major

A series of more than eight units in the same area within a bachelor degree. A major includes at least two units at final-year level.

- **Double major:** Studying two majors within a degree course. For example, Bachelor of Commerce (Economics and Finance).

### Minor or specialisation

A minor or specialisation is a set of four units in the same discipline. It may complement your bachelor degree or major, and can be from the same discipline as your bachelor degree or a different discipline. For example, you may study a Bachelor of Arts (Journalism) and complement this with a commerce specialisation such as Public Relations.

### Professional placement/internship

Working in a professional environment during your studies to extend your knowledge and practical skills.

### Stream

A series of six units in the same discipline.

### Unit

A component of a course that covers one subject area in detail. A unit may comprise lectures, tutorials, class presentations, group work, computer lab sessions, case studies, workplace assignments and exams.

- **Core unit:** A compulsory unit, which is specified in the course outline.
- **Elective unit:** A unit that can be chosen from any discipline as long as you meet the prerequisites.
- **Optional unit:** A unit that you choose from a specified list provided in the course outline.

## Course essentials

### ATAR

The Australian Tertiary Admission Rank, used for allocating places in university courses.

- **Guaranteed ATAR:** A rank that guarantees you a place on the course provided you meet the course prerequisites and English proficiency requirements.
- **Minimum ATAR:** The lowest rank you need to be considered for entry to a course.

### Desirable

A non-essential but recommended subject completed before starting a course.

### Duration

The time it will take to complete the course if you study full-time.

### Intake

The semester or trimester when you can begin studying the course.

### Location

Curtin campuses that offer the course.

### Prerequisite

A subject or unit you must complete before starting a course or taking a higher-level unit.

### STAT

The Special Tertiary Admissions Test (STAT) is a national test for those who don't meet university admission criteria. STAT can be used to meet entry criteria for some courses, or as a way to satisfy Curtin's English proficiency requirements if you haven't done so through year 12.

Visit [tisc.edu.au/static/guide/stat.tisc](http://tisc.edu.au/static/guide/stat.tisc).

### Study mode

How much study you undertake in a semester or a trimester.

- **Domestic students:** Full-time study is three or four units per semester. Part-time study is one or two units per semester. Studying part-time reduces your weekly workload but extends the duration of your course.
- **International students:** International students studying in Australia on a student visa must study four units per semester for most courses. A small number of courses allow a study load of three units.

## Other university terms

### Advanced standing / credit for recognised learning

Recognition of any previous study or work experience you have that may exempt you from having to study some units of your degree.

### Faculty

A teaching area comprising university schools and disciplines.

### OUA

Open Universities Australia.

### Semester

A 16-week study period. There are two semesters per calendar year.

### TISC

The Tertiary Institutions Service Centre processes university applications on behalf of the four public Western Australian universities. It also administers STAT.

### Trimester

A 14-week study period. There are three trimesters per calendar year.

### WACE

Western Australian Certificate of Education.

# Manage your finances



**Before you start your course, consider the financial implications, find out how much it will cost and look at ways to manage your budget.**

## Tuition fees

You will need to pay tuition fees for each unit you undertake at Curtin. The amount you pay will depend on the course you are studying, the units you enrol in and whether you are a domestic or international student.

Curtin offers Commonwealth-supported undergraduate places to students who are Australian citizens, New Zealand citizens, Australian permanent residents, and Australian permanent humanitarian visa holders.

A Commonwealth-supported place is a subsidised higher education enrolment. The Australian Government subsidises these student places by paying part of your tuition fees directly to Curtin. The subsidy amount is not a loan and you do not have to pay it back. You only pay the remainder of the fee, known as the student contribution amount for each unit in which you are enrolled.

Our fees and charges web page shows the required student contribution for every unit.

To apply for a Commonwealth-supported place, you must submit an electronic Commonwealth Assistance Form (eCAF) with a valid tax file number to Curtin before the due date.

You will also need to provide Curtin with your Unique Student Identifier (USI). Applying for a USI is fast and free, and you keep the same USI for life. Apply at [usi.gov.au](http://usi.gov.au).

As a Commonwealth-supported student, you have the option of paying your student contribution fee by the study period due date or deferring your payment via the HELP loan scheme.

Visit [curtin.edu/course-fees](http://curtin.edu/course-fees).

## HECS-HELP

HECS-HELP is a government loan scheme, which allows you to defer payment of your student contribution amount until you start earning an annual salary above the compulsory repayment threshold.

Once your salary exceeds the threshold, you will begin repaying your loan as a percentage of your wage to the Australian Tax Office.

HECS-HELP is available to all eligible students enrolled in a Commonwealth-supported place and it takes effect involuntarily if you have provided Curtin with your tax file number, and if you don't pay your student contribution up-front by the study period due date.

Visit [studyassist.gov.au/help-loans](http://studyassist.gov.au/help-loans).

*International students are not eligible for Commonwealth-supported places and should contact Curtin Global for fee information.*

## Student Services and Amenities Fee

The Student Services and Amenities Fee (SSAF) is a fee that universities and other approved higher education providers may charge for non-academic services and amenities, such as sporting and recreational activities, employment and career advice, child care, financial advice and food services. If you are eligible, you may choose to defer all or part of your fee for the relevant year through a HELP loan scheme, SA-HELP.

Visit [curtin.edu/ssaf](http://curtin.edu/ssaf).

## SA-HELP

Similar to HECS-HELP, SA-HELP is a loan scheme, which helps you pay for all or part of your Student Services Amenities Fee, provided you are an Australian citizen, permanent humanitarian visa holder, or eligible New Zealand special category visa holder.

If you use SA-HELP, the amount will be added to your HELP debt. You may opt to access the SA-HELP loan even if you don't wish to access any of the other HELP loan schemes.

Visit [studyassist.gov.au/help-loans/sa-help](http://studyassist.gov.au/help-loans/sa-help).

### Other expenses

Tuition fees do not cover the cost of some items required for studying a particular unit or course. Examples of these items include but are not limited to:

- art supplies
- field trips
- first aid courses
- lab coats
- textbooks
- Working With Children Check.

You may also incur day-to-day expenses, which include but are not limited to parking, transport, food and recreation costs.

### Centrelink

Centrelink may provide financial assistance to students who are Australian residents and studying full time, however each applicant is assessed on an individual basis and must meet other specific criteria. Services to students include:

- Abstudy
- Health Care Card
- rent assistance
- student financial supplement
- Youth Allowance.

Visit [servicesaustralia.gov.au/centrelink](http://servicesaustralia.gov.au/centrelink).

### Curtin Student Guild

The Guild provides comprehensive education, welfare and social services to its members. If you become a full Guild member, you can take advantage of discounts both on and off campus. In conjunction with the Curtin Bookshop, the Guild offers bookshop grants to students in need of financial assistance. The Guild also offers tax and budgeting advice.

### Elite athletes

Elite athletes may be eligible for funding support via:

- Elite Athlete Grant – awarded annually to student athletes in the Elite Athlete Program who display sound academic results while competing in their respective sports.
- Subsidies to assist student athletes in representing Curtin at the Australian University 'Nationals', World University Games/ Championships and other events.
- Free Curtin Stadium gym memberships.

Visit [stadium.curtin.edu.au/sport/academy](http://stadium.curtin.edu.au/sport/academy).



# Scholarships

**Scholarships offer financial, academic and career support, giving you more opportunities to gain new skills, expand your horizons and add to your portfolio of achievements.**

Scholarships are not loans – the money is given to you provided you fulfil key requirements such as academic performance, work experience or volunteer commitments.

There are many scholarships available. Some are offered for academic achievement, such as the Curtin Excellence Scholarship, while others are designed to make university possible for students who face financial hardship.

### Eligibility criteria

Scholarships are offered through a competitive process for students who are:

- from low-income backgrounds
- from Indigenous and Torres Strait Islander backgrounds
- high-achievers
- from regional areas
- studying specific courses.

Each scholarship has different eligibility criteria, application procedures and closing dates, so check these early.

### Further information

Visit our scholarships website for further information about each scholarship.

The scholarships website contains:

- up-to-date information and eligibility criteria for available scholarships
- tips for writing a good scholarship application
- a sign-up email alert service that lets you know when a scholarship matching your selection criteria is open for applications. You will also receive a reminder email one week before applications close.

Visit [scholarships.curtin.edu.au](http://scholarships.curtin.edu.au).

# Getting to Curtin Perth

**Curtin is located just six kilometres from the city centre. There are several easy, safe, affordable and environmentally friendly ways to get to and around campus.**

## Parking

Our pay-as-you-go parking system means you only pay for the time you park on campus. Download CelloPark from the App Store or Google Play and you'll be ready to park.

## Transperth buses

More than 500 buses stop at Curtin each weekday during semester. Curtin has two main bus terminals: Curtin Bus Station, which is located on the east side of campus, and the new Curtin Central Bus station, located on the campus' north-west side.

Two high-frequency bus routes – 100 and 101 – connect Curtin with the Canning Bridge train station. Routes 998 and 999 connect Curtin with Oats Street train station.

The CircleRoute buses, which run between Perth's universities, train stations and shopping centres, leave every 15 minutes between 6:30am and 8pm.

Transperth travel concessions are available on request to all full-time students.

## Curtin shuttle buses

We provide a free hail-and-ride bus service for students living in Waterford, Bentley, Victoria Park and South Perth. Known as Curtin Access Bus Service (CABS), it runs during semester on weekdays.

There's even a CABS smartphone app that provides live GPS tracking, route mapping and access to timetables.

## Trains

### Mandurah Line

Many Perth – Mandurah trains stop at the Canning Bridge train station, where you can catch a connecting Transperth bus to Curtin. Buses run every seven to eight minutes during peak times.

### Armadale Line

Many Perth – Armadale trains stop at Oats Street train station, where you can catch a connecting Transperth bus to Curtin.

### Cycling

In addition to the many bicycle racks, secure bicycle pods are an increasingly common feature on campus. Showers are available at some bicycle enclosures. Entry to the facilities is by swipe card access, available from Curtin Security.

## 1 Curtin Connect

This is the first point of contact for all queries from current and future Curtin students and parents. Here you can speak to experts on courses, admissions, housing, enrolment and careers.

## 2 Curtin Stadium

The stadium includes a fitness centre and facilities for tennis, basketball, volleyball, table tennis, badminton, netball, futsal, floorball and group fitness classes.

## 3 Exchange

Exchange is our new innovation precinct, home to our two new student accommodation buildings and the School of Design and the Built Environment.

## 4 Guild Precinct

The Curtin Student Guild provides educational, commercial and social services to its members. It also operates many services on campus including cafés and cafeterias, The Tav, second-hand bookshop, Curtin Concept store, and the Copy & Design Centre.

## 5 Health Services Centre and Counselling Service

The centre includes a medical centre where you can visit either a doctor or nurse. You'll also have access to psychologists and social workers.

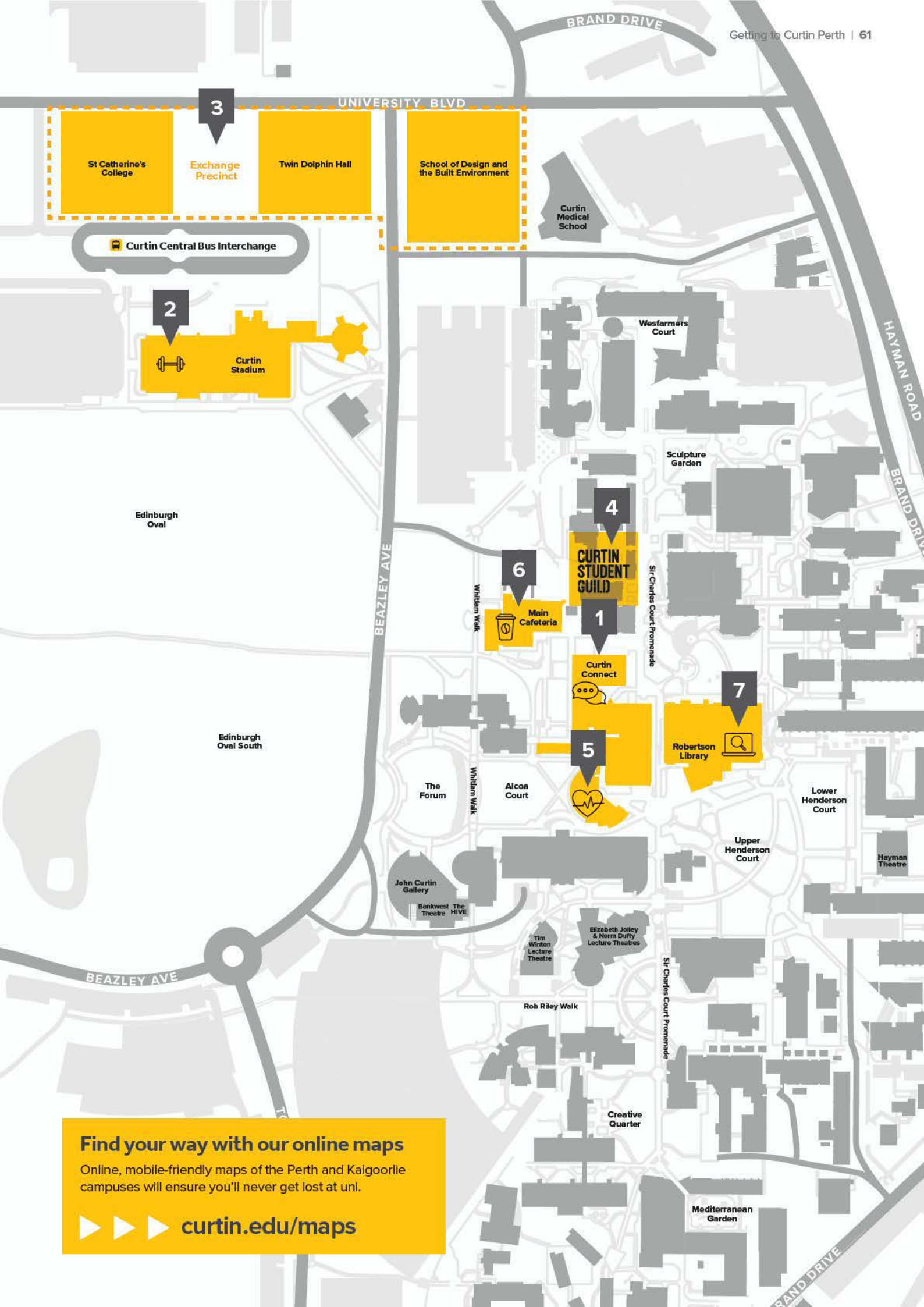
## 6 Main Café and Common Ground Café

There are 12 food outlets at the main campus and several food trucks that change locations daily throughout semester.

## 7 Robertson Library

The Robertson Library is spread over five levels and includes the Bookmark Café, Lounge, iZone and wireless internet. During semester, it's open 24/7.

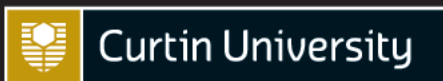




**Find your way with our online maps**

Online, mobile-friendly maps of the Perth and Kalgoorlie campuses will ensure you'll never get lost at uni.

▶▶▶ [curtin.edu/maps](http://curtin.edu/maps)



## For more information

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