



Charles Sturt
University

Shape a better world with our Bachelor of Engineering (Honours)



Find out more

→ study.csu.edu.au/engineering-honours

Electrical engineering

Innovate with
cutting-edge technology.



Make an impact with
civil, electrical or
mechanical engineering.

Mechanical engineering

Explore the fascinating world of machines.



Civil engineering

Design the infrastructure of tomorrow.

Build the future with engineering

Prepare to change the world
with our Bachelor of Engineering
(Honours) – it's your ticket to an
electrifying engineering career.

- Choose from civil, electrical or mechanical engineering.
- Get real-world experience through paid industry cadetships and engineering projects.
- Kick-start your career with a \$20,000 Transgrid engineering scholarship.
- Get more paid industry experience than any other uni in Australia!





How our engineering course works

1. Apply for a \$20K engineering scholarship.
Learn more: csu.edu.au/transgrid-scholarship
2. Learn more about the course and apply for our Bachelor of Engineering (Honours) online at study.csu.edu.au/engineering-honours
3. Accept your offer to start your journey!
4. Your first year: Get a taste of civil, electrical and mechanical engineering before selecting your preferred area.
5. End of first year: Choose your major from civil, electrical or mechanical engineering.
6. Third and fourth year: Learn hands-on through two years of paid industry cadetships.
7. Acquire the skills and industry experience necessary to build a rewarding career in your chosen field of engineering.
8. Graduate industry ready with skills, experience and connections!

5

reasons why Charles Sturt engineering is your best choice

1. Paid industry cadetships

Embark on two years of paid industry cadetships – more than any other university in the country! From local government to organisations like Essential Energy and Transgrid, get practical experience with diverse employment options and locations. Best of all, you'll graduate with a strong head start towards becoming chartered – essential for professional engineers. On average, students earn more than \$90,000 on cadetship!

4. Score a \$20,000 engineering scholarship

Don't miss your chance to start strong in engineering – with a massive \$20K to help cover the cost of study. We have 25 \$20,000 Transgrid engineering scholarships available each year. Be sure to apply for our next round of scholarships! You don't need to have an offer to apply. Learn more: csu.edu.au/transgrid-scholarship

2. Become the engineer you want to be

If you wish to pursue a career as a civil, electrical or mechanical engineer, our versatile course allows you to choose your preferred path. Still unsure about the type of engineer you want to be? No worries! You'll study a common first year to understand the foundations of civil, electrical and mechanical engineering before choosing your major in your second year. To help you decide, you'll study two engineering design challenge subjects and experience what it's like to be a civil, electrical and mechanical engineer. Then, select the right major that aligns with your interests and career goals.

3. Industry connections from the start

Build your professional network from day one. We've collaborated with our engineering partners and industry advisory committee – so you'll get to engage in project-based learning from the start. Be guided by our industry experts and guest speakers through workshops and site visits. Get hands-on through real engineering industry design projects, like wind farms, electric vehicle test stations and intermodal rail hubs.

5. Support at every step

Our expert academics are here to support you in becoming the engineer you aspire to be. Small class sizes and personalised study put you at the centre of your engineering degree. Engage in real-world projects and build your portfolio. Enjoy flexible online study while completing your cadetship. It's engineering done your way!



“It was the course structure that really drew me in – it’s unique compared to other universities. The mix of on-campus learning and practical industry experience made a real difference. I worked on projects like the Estella Primary School construction, Riverina Water design work, and redevelopment of Northeast Health Wangaratta. These experiences gave me insights I wouldn’t have gained in a classroom alone and connected me with industry. Because of my cadetships, I had the confidence and knowledge to step into a project management role not long after finishing my degree.”

Emmeline Rocks

Charles Sturt engineering graduate

2024 Women in Building Award recipient, Master Builders Association of New South Wales and 2024 Young Alumni of the Year, Charles Sturt University.



Choose how you'll
make an impact

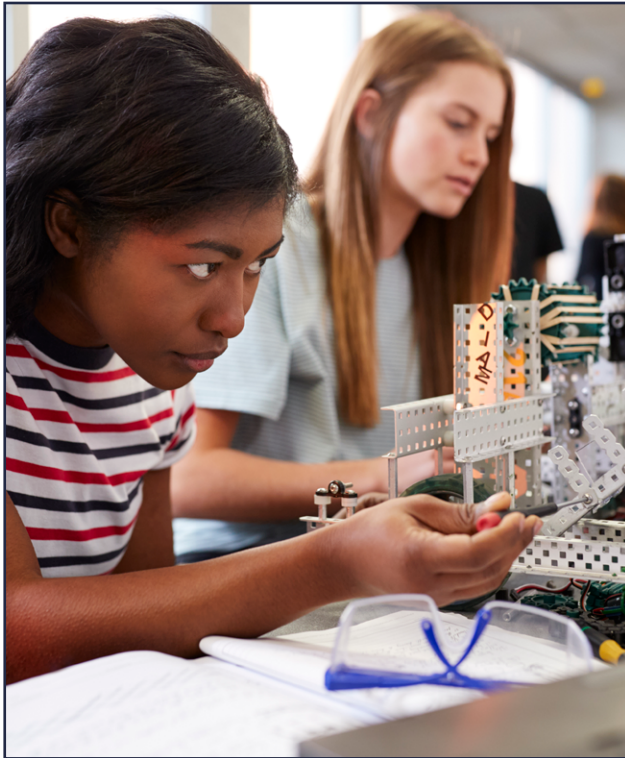


Civil engineering

Design the infrastructure of tomorrow.

Civil engineers provide the design and infrastructure that builds and forms communities. Improve the state of the world. Amplify human capability. And make people's lives safer and easier.

Our civil engineering major prepares you to make crucial and tangible improvements. Drive innovation by designing infrastructure that builds and forms communities. You'll be equipped to construct safe water supply systems, as well as manage bridges, gas and transportation systems. Construct high-rise buildings and flood management systems to protect cities. Design dams for water supply and tunnels for hydroelectric power, like Snowy Hydro 2.0. Analyse soil and rock properties to ensure stable foundations for buildings and roads. Work anywhere with progressive careers including civil, environmental, geotechnical, structural or water engineering.



Electrical engineering

Innovate with cutting-edge technology.

Help power the world as an electrical engineer. Electrical engineers are problem solvers who create, design and manage electrical systems and equipment. From robotics and renewable energies to appliances and lighting to power stations and satellite communications – choose how far you'll go with an electrical engineering career.

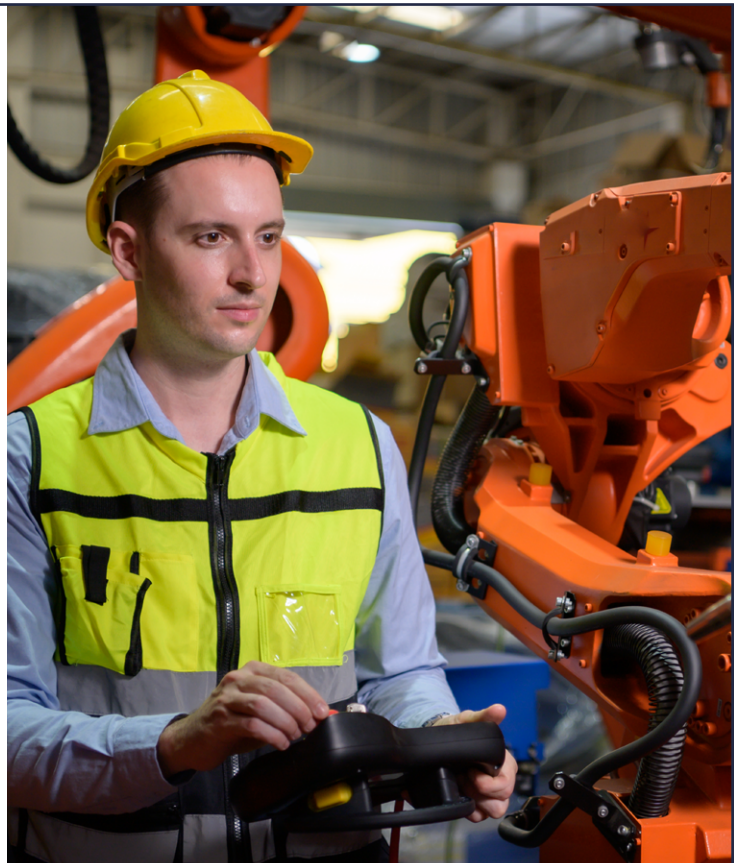
Electrical engineering is all about designing appliances and equipment that utilise electricity. It also covers telecommunication, computer engineering, electronics, and photonics. You could consider exciting engineering career opportunities in renewable energy, control, power, or robotics.

Mechanical engineering

Explore the fascinating world of mechanics.

Study mechanical engineering to join one of the most diverse and versatile fields. Mechanical engineers work in industry design systems, mechatronics and machinery that generate power, produce products, move things, and contribute to building construction.

Our mechanical engineering major is perfect for you if you're mechanically minded and driven to innovate. Explore careers in chemical processing, power generation, the automotive industry, manufacturing and building services. You could also work in the aeronautical industry, defence technology, food processing or public utilities.



Find out more

→ study.csu.edu.au/engineering-honours

Bachelor of Engineering (Honours)

2 + 2 = your engineering career has begun!

That's two years of on-campus study and two years of paid cadetships. In your final two years, study subjects related to your chosen major only (civil, electrical or mechanical engineering).

Civil engineering major

First year

Session 1	Session 2
ENG110 Engineering Design Challenge 1 (12)	ENG111 Engineering Design Challenge 2 (12)
ENG190 Mathematics for Engineers 1 (4)	ENG191 Mathematics for Engineers 2 (4)
ENG120 Engineering Mechanics - Statics (4)	ENG114 Engineering Mechanics - Dynamics (4)
ENG140 Introduction to Energy (4)	ENG130 Electrical Systems (4)
ENG117 Physics for Engineers (4)	ENG112 Engineering Materials (4)
ENG116 Introduction to CAD and Computing (4)	ENG192 Principles of Engineering Programming (4)

Second year

Session 1	Session 2
ENG211 Engineering Design Challenge 3 (12)	ENG226 Civil Engineering Design Challenge (12)
ENG293 Mathematics for Engineers 3 (4)	ENG212 Workplace Performance Planning and Review (4) - workplace preparation
ENG224 Mechanics of Materials (4)	ENG221 Introductory Structural Analysis (4)
ENG225 Fluid Mechanics (4)	ENG223 Fundamentals of Water Resources and Environmental Engineering (4)
IKC101 - First Nations Foundations (8)	ENG220 Soil and Rock Mechanics (4)
	ENG222 Introduction to Surveying (4)

Third year

Session 1	Session 2
ENG310 Engineering residency 1 (16) WPL subject	ENG311 Engineering residency 2 (16) WPL subject
ENG322 Introduction to Transport Engineering (4)	ENG312 Engineering Project management (4)
ENG324 Engineering Construction (4)	ENG320 Applied Geotechnical Engineering (4)
ENG321 Advanced Structural Design (4)	ENG326 Civil Engineering Experimentation (4)
ENG390 Numerical Methods for Civil Engineers (4)	ENG323 Water and Wastewater Engineering (4)

Final year

Session 1	Session 2
ENG412 Engineering residency 3 (12) WPL subject	ENG413 Engineering residency 4 (12)
ENG410 Engineering Capstone Thesis – Part A (12) WPL subject	ENG411 Engineering Capstone Thesis – Part B (12)
Restricted Elective (8)	Restricted Elective (8)

Restricted Electives – pick two

- SPA555 – Spatial Modelling
- ENM422 – Environmental Assessment and Auditing
- ENG414 – Renewable Energy Engineering
- ENG440 Applied Computer-Aided Engineering

Subject key

Core subject

Major subject

Major and shared with another discipline

Restricted elective



Graduate with a Bachelor of Engineering (Honours)

Please note: The course structure is correct at the time of printing and is subject to change.

For up-to-date course information, visit:
study.csu.edu.au/engineering-honours

Bachelor of Engineering (Honours)

Electrical engineering major

First year

Session 1	Session 2
ENG110 Engineering Design Challenge 1 (12)	ENG111 Engineering Design Challenge 2 (12)
ENG190 Mathematics for Engineers 1 (4)	ENG191 Mathematics for Engineers 2 (4)
ENG120 Engineering Mechanics – Statics (4)	ENG114 Engineering Mechanics – Dynamics (4)
ENG140 Introduction to Energy (4)	ENG130 Electrical Systems (4)
ENG117 Physics for Engineers (4)	ENG112 Engineering Materials (4)
ENG116 Introduction to CAD and Computing (4)	ENG192 Principles of Engineering Programming (4)

Second year

Session 1	Session 2
ENG211 Engineering Design Challenge 3 (12)	ENG236 Electrical Engineering Design Challenge (12)
ENG293 Mathematics for Engineers 3 (4)	ENG212 Workplace Performance Planning and Review (4) – workplace preparation
ENG230 Analogue Electronics (4)	ENG233 Mechatronics and Embedded Systems (4)
ENG234 Electrical Machines (4)	ENG235 Power Electronics (4)
IKC101 – First Nations Foundations (8)	ENG232 Communications Systems (4)
	ENG231 Circuit Theory (4)

Course CRICOS 117609F

Third year

Session 1	Session 2
ENG310 Engineering Residency 1 (16)	ENG311 Engineering Residency 2 (16)
ENG332 Signals and Systems (4)	ENG333 Wireless Networks (4)
ENG331 Power Systems (4)	ENG330 Digital Signal Processing (4)
ENG392 Numerical Methods for Electrical Engineers (4)	ENG334 Control Systems (4)
ENG335 Electrical Engineering Experimentation (4)	ENG312 Engineering Project management (4)

Final year

Session 1	Session 2
ENG412 Engineering Residency 3 (12)	ENG413 Engineering Residency 4 (12)
ENG410 Engineering Capstone Thesis – Part A (12)	ENG411 Engineering Capstone Thesis – Part B (12)
Restricted Elective (8)	Restricted Elective (8)

Restricted Electives – pick two

- ITC513 – Wireless Communication
- ITC560 – Internet of Things
- ITC576 – Artificial Intelligence and Machine Learning
- ENG430 – Applied Photovoltaics
- ENG414 – Renewable Energy Engineering

Subject key

Core subject

Major subject

Major and shared with another discipline

Restricted elective



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Bachelor of Engineering (Honours)

Mechanical engineering major

First year

Session 1	Session 2
ENG110 Engineering Design Challenge 1 (12)	ENG111 Engineering Design Challenge 2 (12)
ENG190 Mathematics for Engineers 1 (4)	ENG191 Mathematics for Engineers 2 (4)
ENG120 Engineering Mechanics – Statics (4)	ENG114 Engineering Mechanics – Dynamics (4)
ENG140 Introduction to Energy (4)	ENG130 Electrical Systems (4)
ENG117 Physics for Engineers (4)	ENG112 Engineering Materials (4)
ENG116 Introduction to CAD and Computing (4)	ENG192 Principles of Engineering Programming (4)

Second year

Session 1	Session 2
ENG211 Engineering Design Challenge 3 (12)	ENG242 Mechanical Engineering Design Challenge (12)
ENG293 Mathematics for Engineers 3 (4)	ENG212 Workplace Performance Planning and Review (4)
ENG224 Mechanics of Materials (4)	ENG243 Thermodynamics (4)
ENG225 Fluid Mechanics (4)	ENG233 Mechatronics and Embedded Systems (4)
IKC101 – First Nations Foundations (8)	ENG241 Manufacturing Engineering (4)
	ENG240 Advanced Dynamics (4)

Course CRICOS 117609F

Third year

Session 1	Session 2
ENG310 Engineering Residency 1 (16)	ENG311 Engineering Residency 2 (16)
ENG342 Strength of Materials (4)	ENG312 Engineering Project management (4)
ENG346 Mech Engineering Experimentation (4)	ENG340 Heat Transfer (4)
ENG391 Numerical Methods for Mechanical Engineers (4)	ENG334 Control Systems (4)
ENG341 Mechanics of Machines (4)	ENG343 Vibration analysis (4)

Final year

Session 1	Session 2
ENG412 Engineering Residency 3 (12)	ENG413 Engineering Residency 4 (12)
ENG410 Engineering Capstone Thesis – Part A (12)	ENG411 Engineering Capstone Thesis – Part B (12)
Restricted Elective (8)	Restricted Elective (8)

Restricted Electives – pick two

- ENG430 – Applied Photovoltaics
- ENG414 – Renewable Energy Engineering
- ENG440 – Applied Computer-Aided Engineering

Subject key

Core subject

Major subject

Major and shared with another discipline

Elective support



Graduate with a **Bachelor of Engineering (Honours)**

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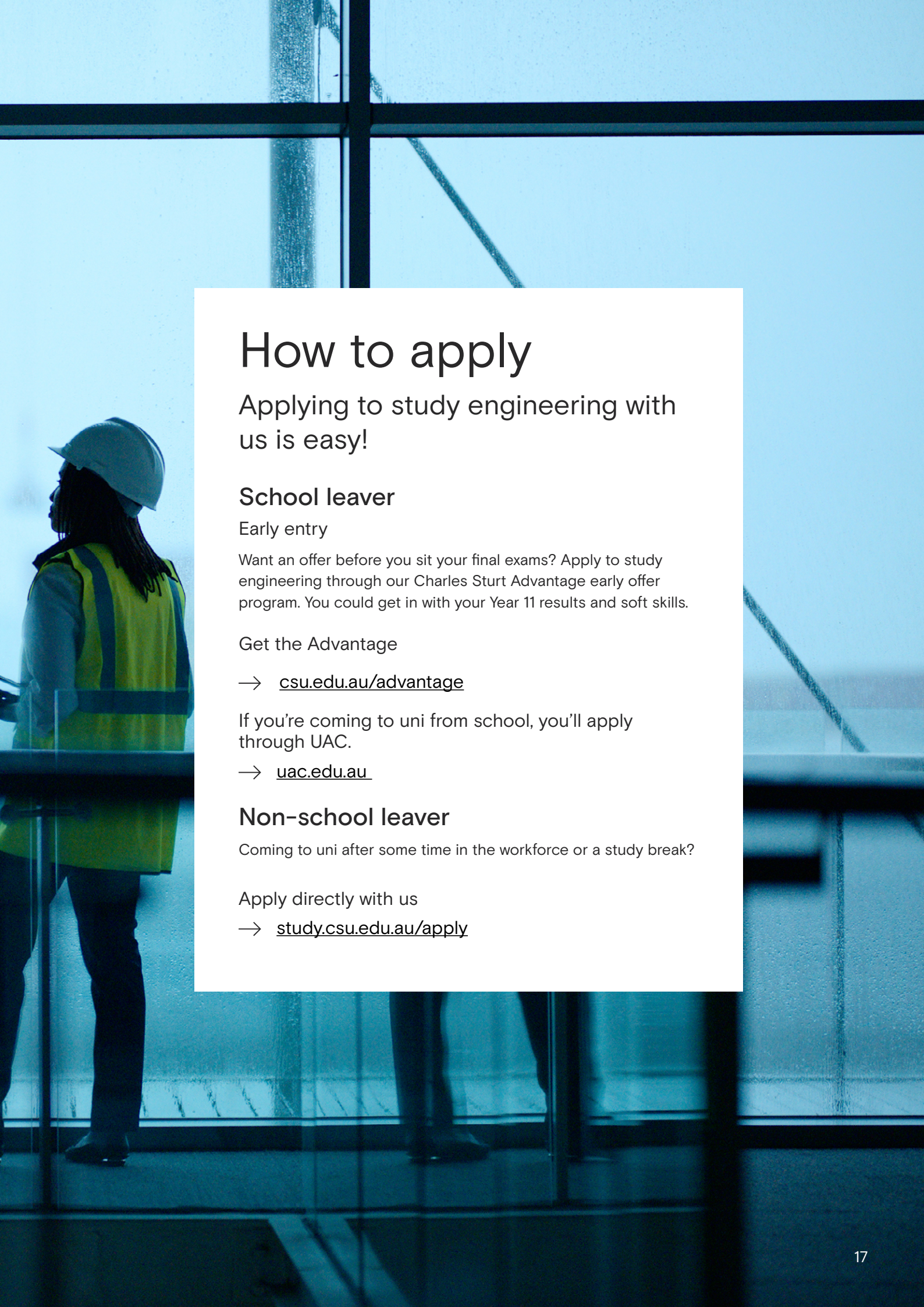
“Charles Sturt’s engineering course enables students to gain a depth of understanding and exposure to the industry through the cadetships. I was placed on-site in a regional area to assist construction of a water treatment plant upgrade. I was exposed to a variety of engineering construction-relevant experiences, including site management and quality assurance.

“Workplace learning allowed me to accelerate my career, as the industry considered my pre-graduation placement as relevant postgraduate experience. This allowed me to speed up my progression compared to a traditionally formatted degree. The ability to work while studying has enabled me to accelerate not only my career but my financial position.”

Ethan Carter

Charles Sturt engineering graduate





How to apply

Applying to study engineering with us is easy!

School leaver

Early entry

Want an offer before you sit your final exams? Apply to study engineering through our Charles Sturt Advantage early offer program. You could get in with your Year 11 results and soft skills.

Get the Advantage

→ csu.edu.au/advantage

If you're coming to uni from school, you'll apply through UAC.

→ uac.edu.au

Non-school leaver

Coming to uni after some time in the workforce or a study break?

Apply directly with us

→ study.csu.edu.au/apply

Frequently asked questions

What is a paid cadetship?

Paid cadetships involve working in industry and government alongside practising engineers to build your practical knowledge in the real world. Our course includes two one-year cadetships as part of your degree.

How many hours of cadetships will I be required to undertake?

Typically, you can expect to work approximately 30 hours per week during your cadetships.

Can I organise my cadetships?

Yes, you can make your cadetships arrangements, which will undergo quality assurance. You can also apply through our workplace learning team to work for a range of metropolitan, regional and international engineering organisations.

How will I be paid?

You'll be employed as a cadet engineer by your host organisation. Your salary will depend on your experience. For more information, visit: bjbs.csu.edu.au/workplace-learning/engineering

How do I balance study and work?

While completing your paid cadetship, you'll study online. You can expect to work full-time across four days and study online for around 15 hours each week.

Do I have to do my cadetship at different organisations?

The choice is yours. You can undertake your cadetships at different organisations if you prefer, or you can complete both cadetships with the same host organisation. In this case, we recommend that you hold various roles, responsibilities and skill sets.

Do I need the highest levels of maths and physics to enrol?

No. While maths and science principles form the basis of engineering, modern engineers also need skills in other areas. Studying subjects like geography, design and technology, agriculture, and any of the sciences are also great preparation.

When can I start studying?

Study starts in the first session of each year, in February.



How do I apply?

- If you're completing Year 12 this year, you'll apply through UAC. Visit uac.edu.au to find out more.
- Want an offer before you sit your final exams? Apply for engineering via our Charles Sturt Advantage early offer program. Visit: csu.edu.au/advantage
- If you're coming to uni after some time in the workforce, you'll apply directly with us via csu.edu.au/apply to apply

Is there a minimum ATAR?

Yes, if you're a school leaver. The minimum ATAR required for the Bachelor of Engineering (Honours) can be found on UAC's website and our online course brochure. We automatically adjust your selection rank by five points if you live in a regional area.

What are the non-ATAR entry options?

There are still ways to enrol if you're a non-school leaver or don't have an ATAR. Prior education, such as trade qualifications, diplomas, and pathway courses, is also taken into consideration, along with previous work experience. Apply directly today! Explore pathways to uni: study.csu.edu.au/pathways

Are there any scholarships I can apply for?

Yes, you can apply for one of our exclusive Transgrid engineering scholarships. We offer 25 x \$20,000 scholarships each year.

Learn more:

csu.edu.au/engineering/transgrid-scholarship

Explore our full range of scholarships and apply for as many as you're eligible for at study.csu.edu.au/scholarships

What are the contact hours on campus?

Your contact hours are calculated based on the subjects you enrol in each session.

Can I study part-time?

Yes!

Can I complete my work placement in a different state or overseas?

Yes, you can!

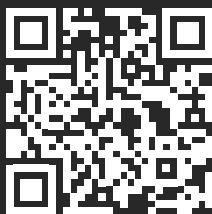
Can international students apply?

Yes, this course is offered to international students.



Find out more

→ study.csu.edu.au/engineering-honours



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+61 1800 275 278 (callers outside Australia)



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