



Australian  
National  
University



ANU College of  
Engineering and Computer Science

# Undergraduate guide 2023

## Study Engineering & Computing



# Join Australia's only national university



**Ranked #1 in Australia and #30 globally**

(QS 2023 rankings)



**Ranked #1 in Australia and #20 in the world for graduate employability**

(Times Higher Education 2021)



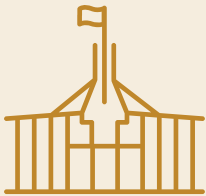
**We have students from 75 countries including Singapore, Indonesia, Malaysia, China, India, Japan, South Korea, USA and Canada**

(ANU Insight)



**5-star rating for staff-to-student ratio**

(Good Universities Guide 2020)



## Canberra at a glance



**#35 best student city in the world**

(QS best student cities 2023)



**25% of the city's population are students**

(Study Canberra)



**Canberra has the highest average earnings in Australia**

(Australia Bureau of Statistics)

# Welcome to ANU College of Engineering & Computer Science!



**Ranked #64 in the world  
in the area of Engineering & Technology**

**Ranked #51 in the world  
in Computer Science & Information Systems courses**

**Ranked #55 in the world  
for Electrical and Electronic engineering**

You will be joining a vibrant and diverse community, with more than three thousand students, staff and visitors from across the globe.

As part of an aspirational group of high-achieving and creative individuals you will be inspired to become a problem finder, comfortable with ambiguity and complexity as it applies to engineering, computing, and the use of technology in the world. The College's strong community fosters proactive and mindful professionals who want to make a difference, and we aim to provide you with the tools and skills to achieve this.

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## Reach your potential — join us to reimagine the impact of technology in the world

- You will take on the global challenges of tomorrow and make a difference in people's lives using technology.
- You will join a vibrant, inter-disciplinary community that values diversity and inclusion.
- You will work with leading experts, industry and communities to solve real world problems.

A



**“Lean into the experience, the whole experience, and all of the things that sit on the edge of it. Some of the best parts of my degree have come not from the formal coursework elements, but from things like being involved in student societies, with my cohort, with my peers, taking opportunities to do those extra things.”**

**Ruth Kravis**  
BEng R&D (Hons), BA '21

# Flexible Double Degree

ANU has pioneered the Flexible Double Degree so you can satisfy your intellectual curiosity, and tailor your studies to prepare for your dream career.

You can study two Bachelor degrees at the same time and graduate with two qualifications just by adding on one additional year. The ANU College of Engineering & Computer Science Research & Development degrees can also be combined as part of a Flexible Double Degree.



“Working alongside students completing varying degree combinations improved group-work and problem-solving during assessments.

**Getting a different or unique perspective on an issue gave us an advantage when we were mired down in something we couldn't fix, or a solution that didn't feel quite creative.**

This was even more critical when we had client-facing projects such as the Capstone Project, where we needed to balance a series of competing requirements from technical to business-centric — having expertise from science, business, arts and communications was invaluable!”

**Matilda Dowse**  
BEng (Hons) & BSc



“Whatever path you choose through ANU and through the College of Engineering and Computer Science, you will benefit by being taught by leading researchers, creative thinkers and innovative educators.

Being the number one university in Australia doesn't come easily, it comes by being the best at what you do, by pushing the boundaries of what you do and by being creative and innovative.

**It's not about the number, it's about the people that are here and what we do here.”**

**Associate Professor Natalie Lloyd**  
Associate Dean of Education



# Learn from leaders in their field

Our researchers and academics are the best and brightest in their field, solving the world's most complex challenges.

At ANU College of Engineering & Computer Science, we foster creativity and help you discover what you are passionate about and how to channel your skills to solve some of the world's biggest problems.

No matter which program you choose, you will graduate a well-rounded individual with the skill-set and attitude to tackle the challenges of today and tomorrow.

## Real-world experience

In the final year of your degree, you will choose one major project to work on throughout the year. The projects will emphasise collaboration, communication skills, team and personal management, and a professional approach to completing tasks.

You will be introduced to a network of potential employers while developing research and professional skills to bring great ideas to life.

**TechLauncher:** TechLauncher is an initiative which enables you to develop the research and professional skills to use technology to bring great ideas to life and have a positive impact on society.

**Capstone:** In the Capstone Design Project you will work as part of a team to deliver value on a real-world project. Teams will work to define and scope their project in consultation with project clients, and tailor and manage the project to final delivery.

As a student you will have access to:

- Global exchange opportunities
- Internships and career support
- Humanitarian Design Summit with Engineers without Borders (EWB)
- ANU Maker Space
- A range of student clubs, societies and affiliate organisations



# Your study options — undergraduate programs

## Bachelor of Engineering (Honours)

Selection Rank	IB	Duration
85	31	4 years full-time

If you're creative, enjoy teamwork and mathematics or science — then engineering could be for you!

Our Bachelor of Engineering (Honours) degree teaches students to become problem finders in fast-growing industries, where design solutions and innovative thinking are vital. This degree boasts many unique characteristics, but best of all, it is built on a 'systems engineering' framework, where you will learn how engineering disciplines work together. Using state-of-the-art facilities you will design, analyse and manage the complex systems of the future.

## Bachelor of Engineering (Research & Development) (Honours)

Selection Rank	IB	Duration
98	4	4 years full-time

Stand out with your capacity for innovation. In this program you will undertake advanced courses and receive unique opportunities to complete research projects alongside our world-class academics.

You will study engineering fundamentals while being immersed in a research area of your choice. Excel in your career, make a tangible difference to society and help solve some of the world's largest problems.

## Bachelor of Engineering (Hons) in Software Eng

Selection Rank	IB	Duration
85	31	4 years full-time

Build software systems that address complex problems faced every day and channel your creativity with a Bachelor of Engineering (Hons) in Software Engineering.

This degree will prepare you for a variety of roles across a range of professions and industries. You might want to become a software engineer, developer, consultant, architect, programmer, analyst or product manager. Or apply your creative skills to design video games, work in marketing, animation, digital production, web design and development. The possible career opportunities are endless.

## Bachelor of Information Technology

Selection Rank	IB	Duration
80	29	3 years full-time

If you are interested in driving the technology revolution, in a truly globalised and fast changing industry, this program is for you.

You will receive a strong grounding in computing fundamentals to tackle the progressive nature of technology. With IT an intrinsic part of all industries, knowledge of software development and information systems is highly sought after by the best employers.



## Bachelor of Advanced Computing (Honours)

Selection Rank	IB	Duration
85	31	4 years full-time

Some of the biggest challenges we face today will be solved with an ICT component, whether it is in predicting efficiencies in renewable energy systems or using machine learning to diagnose illnesses.

This interdisciplinary program will prepare you to be a future leader of the ICT revolution. You will study advanced computing techniques and specialise in an area of your choice as well as develop exceptional professional skills for the workplace.

## Bachelor of Advanced Computing (Research & Development) (Honours)

Selection Rank	IB	Duration
98	40	4 years full-time

Building on the foundations of the Bachelor of Advanced Computing (Honours) you will stretch your skills into advanced computing techniques and research.

This program features an accelerated mode of learning, with advanced courses. You will develop exceptional professional skills including communication and teamwork, and the program can be a great pathway to a PhD.

## Bachelor of Applied Data Analytics

Selection Rank	IB	Duration
90	33	3 years full-time

Developed to meet the demands for a workforce with skills in data analytics, this inter-disciplinary program will enable you to build knowledge across computing, statistics and social science in this interdisciplinary program. This reflects a wider challenge to business, government and community in terms of the effective use of public and commercial data for decision-making.

You will learn to inform high-quality, data-informed decision-making. These highly sought-after skills can be applied in careers across business, government, and community – including finance, health, and national security.

## Majors, minors, specialisations

### Engineering Majors

- Electronic and Communication Systems
- Mechatronic Systems
- Renewable Energy Systems
- Environmental Systems
- Aerospace Systems

### Engineering Minors

- Sustainable Systems
- Humanitarian engineering

### Computing Majors

- Advanced Intelligent Systems
- Computer Systems
- Cyber Security
- Data Science
- Information Systems
- Intelligent Systems
- Software Development

### Computing Specialisations

- Artificial Intelligence
- Machine Learning
- Systems and Architecture
- Theoretical Computer Science

Program specific information can be found at [programsandcourses.anu.edu.au](https://programsandcourses.anu.edu.au)

## Prerequisites

Our programs have some mathematics prerequisites. To find the exact level of mathematics required for your program visit [programsandcourses.anu.edu.au](https://programsandcourses.anu.edu.au)





# Scholarship support available to you

Engineering and Computer Science disciplines need a diversity of experiences, backgrounds and contexts, to come at problems in different ways. ANU has a commitment to ensuring that every student with the ability should be able to gain a world-class education.

There are a number of scholarships on offer for all students at the ANU College of Engineering & Computer Science. You can apply for scholarships while applying to the University and at various stages throughout your degree.

You can find further details on our College specific scholarships on our website.

You can also check your eligibility for University-wide opportunities on the Scholarships website: [anu.edu.au/study/scholarships](https://anu.edu.au/study/scholarships)



“When one university is kind of offering you that little hand outstretched, it’s hard to pass up such a great opportunity, not only financially, but also the networks and the people that I would be able to meet through it.”

**Josie Bates**  
CECS Engineering Advantage  
Scholarship recipient





# Your future impact — Alumni and career outcomes

An engineering or computing undergraduate degree can set you up for endless opportunities. Our graduates are located all over the world, in diverse and exciting roles. From designers, musicians, entrepreneurs and consultants. As an ANU College of Engineering & Computer Science alum, you will join an exclusive community with opportunities to network and connect with like-minded people globally.



“My time at ANU was a period of me building a breadth of knowledge — fundamentals, how engineering and electronics work, as well as markets, motivations and economics.

I learned the work ethic and passion for solving problems at ANU, and now at Okra, I work with many of those lifelong friends who are ANU graduates too.”

**Afnan Hannan**  
BEng, BEc 2014  
CEO and Co-founder, Okra Solar





“ANU gave me a lot of opportunities to try new things when I wasn’t really sure what I wanted to do. It was through ANU that I got my internship with IBM which hugely influenced my career decisions and gave me real-life experience working in industry.

Thanks to ANU, I was able to try a number of different options before I found what I was passionate about — user experience.

I recommend trying lots of different areas and applying for internships to try fields early. It can be really eye-opening working in industry, compared to studying in it. I ended up in UX research, which I love, through trying things out, but there is no UX research degree or even major!”

**Leana Copeland**  
BIT, BSc 2012, PhD 2016  
User Experience Researcher, Google



# How to apply



## Domestic undergraduate

You are a domestic applicant if you:

- are an Australian or New Zealand citizen
- hold an Australian Permanent Residency Visa
- hold an Australian Humanitarian Visa.

### ANU Direct application:

You can apply direct to the university if you:

- have completed Australian Year 11 studies or the International Baccalaureate program for Year 11
- will complete Australian Year 12 studies with an ATAR or an International Baccalaureate Diploma in November 2022.

ASA Applications are taken in March to May, to begin studies in February the following year. Your direct application will cover admissions, scholarships and campus accommodation.

If your Year 11 results don't meet entry requirements, we will put you on our waiting list and automatically consider your application again based on your Year 12 results in the December/January offer round.

See [anu.edu.au/study/apply](https://anu.edu.au/study/apply) for further information.

### Applying through UAC:

You can apply to study at The Australian National University through the Universities Admissions Centre (UAC). Through UAC you can submit your preferences and provide any required documents to support your applications.

Visit the UAC website for further information [uac.edu.au](https://uac.edu.au).



## International undergraduate

You can apply direct to ANU through the online application portal.

To be considered for an offer, you must meet the prerequisite and cognate requirements for your preferred program, as well as the [English language requirements](#).

Your application will be ranked against other candidates applying for the same program.

You can apply at any time throughout the year. Most applications submitted before the 15th day of each month will be considered for an offer on the 1st day of the following month.

You can change your degree preference between the 9th and 15th day of each month.

You will have two months to accept your offer from ANU.

You can also consider seeking support from one of our [educational agents](#).



### English language requirements



### Educational agents



## Contact us

### **ANU College of Engineering and Computer Science**

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