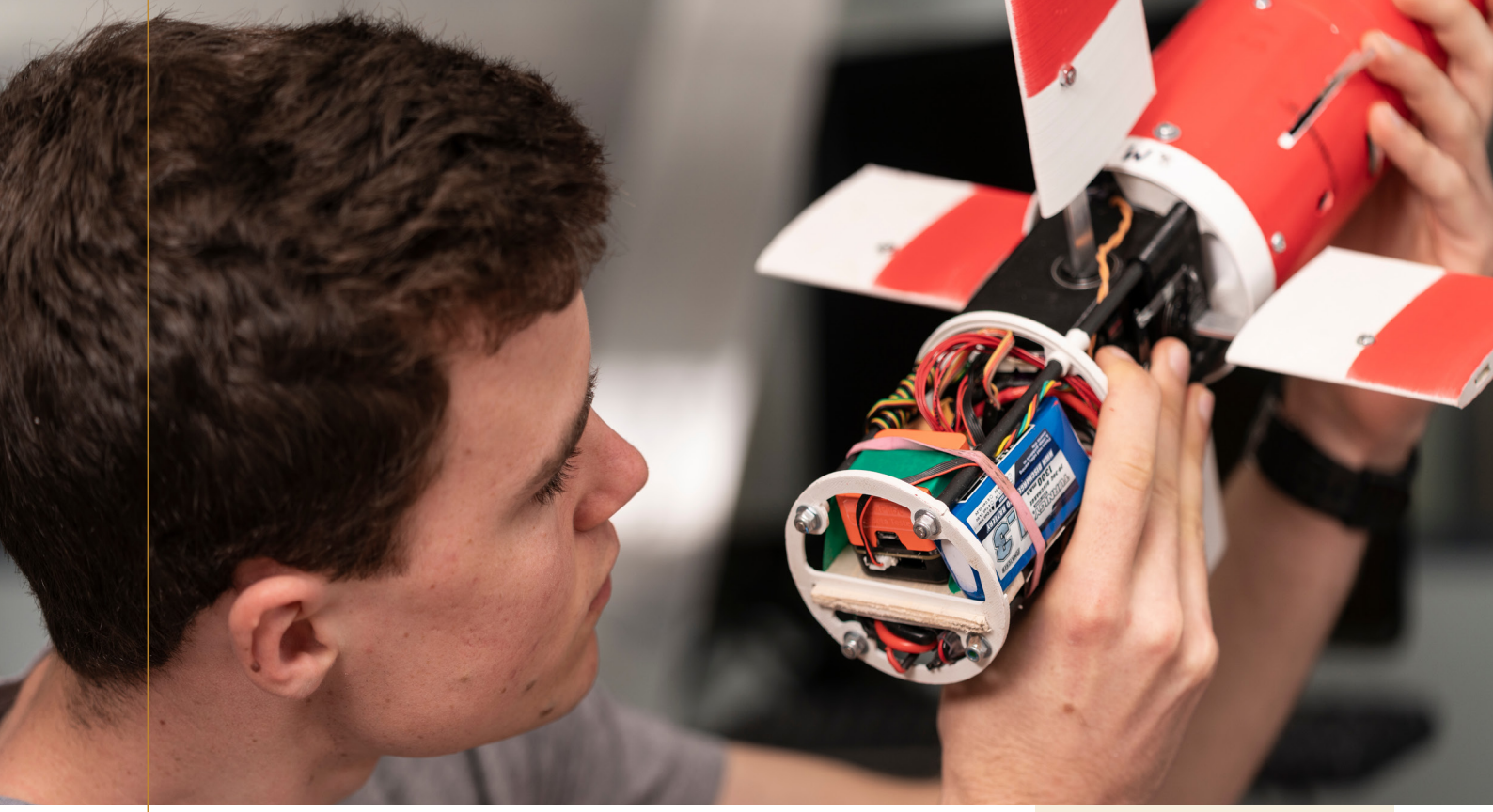

Australian National University

Selection Rank: **85**
UAC Code: **135004**
Prerequisites: **Mathematics**
Duration: **4 years full-time**
CRICOS Code: **077943E**

Bachelor of Engineering (Honours)

ANU College of Engineering, Computing and Cybernetics

Built on a Systems Engineering framework, the Bachelor of Engineering (Honours) will teach you how engineering disciplines work together. It's an engineering degree designed for the future.

Want to make a difference to society, or solve some of the world's largest problems? Would you like to make solar energy technology more efficient, invent the next generation of smartphones or create materials that support the growth of human cells?

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

Our Bachelor of Engineering (Honours) teaches students to become problem finders in a fast-growing industry, 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. Our state-of-the-art education experience ensures you will be able to design, analyse and manage the complex systems of the future.

The first 18 months is common for all students. You'll be exposed to many engineering disciplines, before specialising in your chosen field. After that, you can choose to specialise in anything from renewable energy systems to mechatronics.

Accredited by Engineers Australia [1]

Degree structure

Elective course Major course

Year	Semester 1	Semester 2
1	Discovering Engineering	Mathematics & Applications 2
	Physics of Materials	Introduction to Mechanics
	Mathematics & Applications 1	Introduction to Electronics
	Elective course	Programming for Scientists
2	Engineering Design 2: Systems Approaches for Design	Engineering Design 3: Systems Approaches for Analysis
	Mechanical Systems & Design	Engineering Thermodynamics
	Electronic Systems & Design	Signals & Systems
	Computer Architecture & Simulation	Elective course
3	Engineering Design 4A: Systems Approaches for Management	Engineering Design 4B: Systems Approaches for Operations
	Engineering Major	Engineering Major
	Elective course	Engineering Major
	Elective course	Elective course
4	Capstone Design Project	Capstone Design Project
	Engineering Major	Engineering Major
	Engineering Major	Elective course
	Elective course	Elective course

[1] Engineers Australia accreditation current as at the time of publication.

Yafet

Bachelor of Engineering (Honours)

"This world-class, personalised degree gives me the opportunity to study up to two majors within a unique systems engineering program. I can experience the different aspects and applications of my field, and when I graduate I'll have multiple pathways open to me."

Engineering Majors

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

Careers

Engineering careers are diverse and in demand in Australia and overseas. At ANU, you will develop skills and abilities that are highly sought after in engineering and other organisations. Thanks to the unique interdisciplinary approach, many of our graduates quickly progress to senior roles.

For the latest admission information and program requirements, visit **programsandcourses.anu.edu.au**

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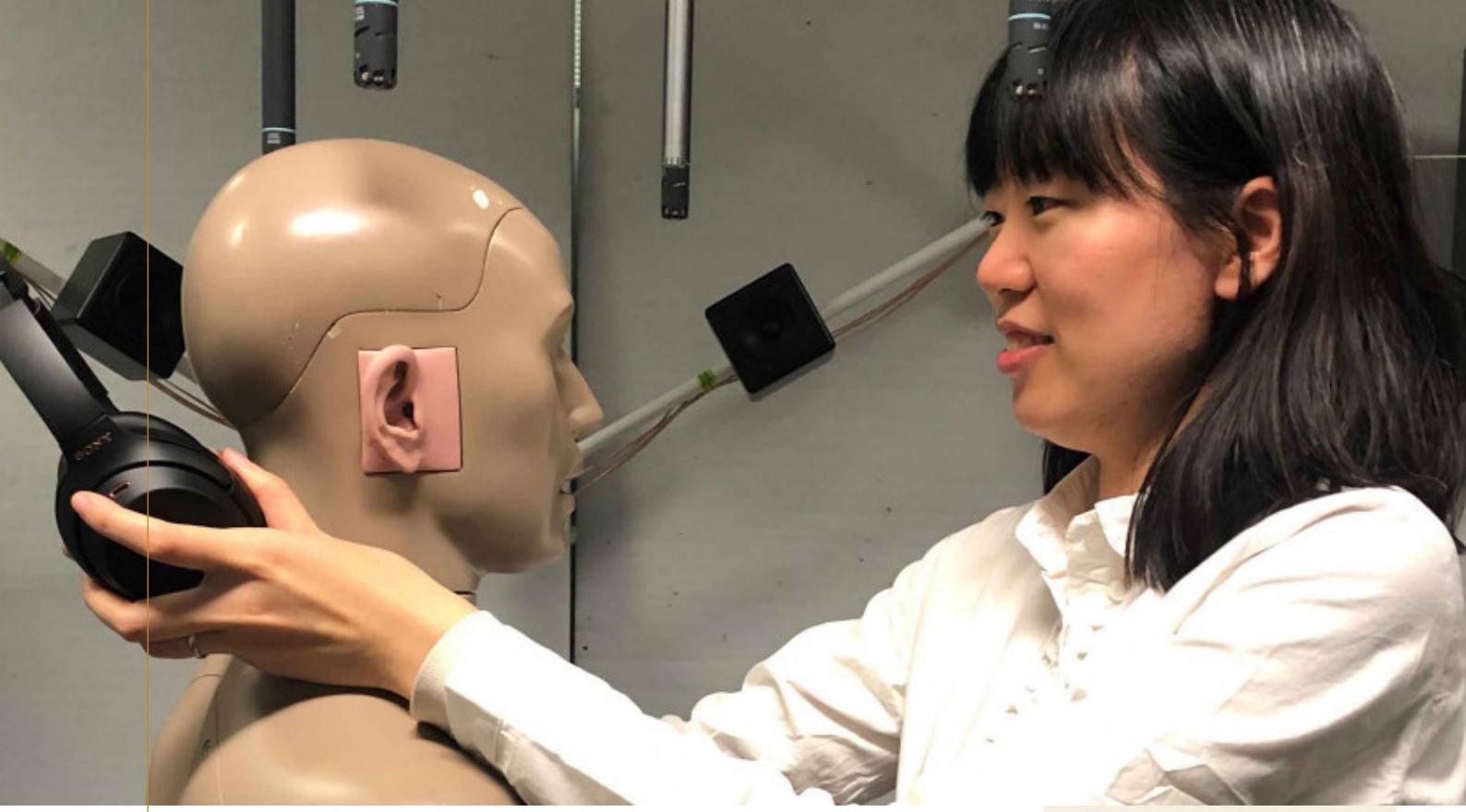

Australian National University

Selection Rank: **98**
UAC Code: **135000**
Prerequisites: **Mathematics**
Duration: **4 years full-time**
CRICOS Code: **060542F**

Bachelor of Engineering

(Research & Development) (Honours)

ANU College of Engineering, Computing and Cybernetics

Our Research & Development (R&D) programs have an innovative structure, allowing you to conduct research projects throughout your degree.

Stand out with your capacity for innovation. You will study engineering fundamentals while being immersed in a research area of your choice. This degree is designed for high achieving students. It will allow you to excel in your career, make a tangible difference to society and help solve some of the world's largest problems.

In this program you will undertake advanced courses. You will receive unique opportunities to complete research projects alongside our world-class academics.

From the second year, these research projects will form part of your coursework, exposing you to cutting edge research.

You'll get a taste for what it's like to undertake research while completing a degree that will also perfectly position you for work in industry. We are the only university that offers undergraduate Research and Development programs in Australia.

- You can combine a Research and Development program in a Flexible Double Degree.
- We offer pathways into Research and Development. If you commence in a Bachelor of Engineering (Honours) and achieve a High Distinction average in your first year, you may be eligible to transfer into a Research and Development degree for second year.
- Students interested in research can also undertake Summer Research Scholarships or voluntary work with academics.

Accredited by Engineers Australia [1]

Degree structure

Elective course · Major course · Research course

Year	Semester 1	Semester 2
1	Discovering Engineering	Mathematics & Applications 2
	Physics of Materials	Introduction to Mechanics
	Mathematics & Applications 1	Introduction to Electronics
	Elective course	Programming for Scientists
2	Engineering Design 2: Systems Approaches for Design	Engineering Design 3: Systems Approaches for Analysis
	Mechanical Systems & Design	Engineering Thermodynamics
	Electronic Systems & Design	Signals & Systems
	Engineering Research & Development Project (Methods)	Elective course
3	Engineering Design 4A: Systems Approaches for Management	Engineering Design 4B: Systems Approaches for Operations
	Engineering Research & Development Project	Engineering Research & Development Project
	Engineering Major	Engineering Major
	Engineering Major	Elective course
4	Engineering Research & Development Project	Engineering Research & Development Project
	Engineering Major	Engineering Major
	Engineering Major	Elective course
	Elective course	Elective course

[1] Engineers Australia accreditation current as at the time of publication (August 2021).

Nicola

Bachelor of Engineering (Research & Development) (Honours)

Our Research and Development (R&D) degrees have a strong professional focus leading to an easy transition into an R&D role as an Accredited Engineer in industry. Equally, the advanced nature of the program ensures those looking to undertake postgraduate research can move into academia.

Engineering Majors

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

Careers

Our Research and Development (R&D) degrees have a strong professional focus leading to an easy transition into an R&D role as an Accredited Engineer in industry. Equally, the advanced nature of the program ensures those looking to undertake postgraduate research can move into academia.

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Australian National University

Selection Rank: **85**
UAC Code: **135005**
Prerequisites: **Assumed mathematics knowledge**
Duration: **4 years full-time**
CRICOS Code: **108316E**

Bachelor of Engineering (Honours) in Software Engineering

Built on a multidisciplinary systems approach, the Bachelor of Engineering (Honours) in Software Engineering will prepare you to design and build systems that influence everyday life.

The unique systems engineering approach covers both the technical aspects of professional practice, innovation and research, as well as the complex socio-technical context of everyday applications.

You will apply your lived experience and knowledge to explore approaches ranging from uncertainty and risk, design, modern management practices, ethics and communication.

As part of this program you will:

Build software systems that address complex problems faced every day in a number of fields, including transport, communications, finance, medicine, science, entertainment, and the arts.

Gain first-hand industry experience in your final year research project and build a toolkit of problem solving, analysis and design skills.

Access experts in the field and develop your own startup to further enhance your innovation and entrepreneurial skills.

ANU College of Engineering, Computing and Cybernetics

Degree structure

Elective course

Year	Semester 1	Semester 2
1	Mathematics and Applications	Foundations of Computing
	Discovering Engineering	Structured Programming
	Programming as Problem Solving	Choose from, Introduction to Mechanics, Introduction to Electronics or Relational Databases
	Discrete Mathematical Models	Elective course
2	Engineering Design 2: Systems Approaches for Design	Engineering Design 3: Systems Approaches for Analysis
	Introduction to Data Management, Analysis and Security	Software Engineering
	Computer Organisation and Program Execution	Systems, Network, and Concurrency
	Software Design Methodologies	Elective course
3	Engineering Design 4A: Systems Approaches for Management	Engineering Design 4B: Systems Approaches for Operations
	Software Engineering Project	Software Engineering Project
	Elective course	Algorithms
	Elective course	Elective course
4	Final Year Project	Final Year Project
	Managing Software Quality and Process	Human-Computer Interaction
	Digital Systems and Microprocessors	Elective Course
	Elective Course	Elective Course

Matilda

Bachelor of Engineering (Honours) & Bachelor of Science – Flexible Double Degree

"During my studies I had the opportunity to work with Project Everest Ventures in Timor-Lest on a solar-panel project in the rural and urban community. Getting to work with other engineering and business students from across Australian universities on a project in a different country gave me so much knowledge and really changed my perspective on what I want from a career in engineering."

Careers

Our unique systems engineering approach will equip you with sought after skills. As a qualified Software Engineer, you will be able to apply your expertise across a diverse range of professions and organisations such as Defence and Government, Tech and Startups, Finance, Consulting, Communications and Media, and many more.

Contact us

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Selection Rank: **80**

UAC Code: **136062**

Prerequisites: **Mathematics**

Duration: **3 years full-time**

Australian National University

Bachelor of Computing

ANU College of Engineering, Computing and Cybernetics

Join the revolution, in a truly globalised and fast changing industry.

Technology is everywhere – from your entertainment to your gadgets. It is changing the way we live, learn, work and even socialise. If you are interested in driving this exciting 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 Computing as an intrinsic part of all industries, knowledge of software development and information systems is highly sought after by the best employers.

The Bachelor of Computing is a new program that, from 2024 onwards, will replace the Bachelor of Information Technology. This name change was made in response to student feedback and the changing nature of the technology industry.

Honours

An honours year of the Bachelor of Computing is available for eligible students. The honours program includes advanced coursework and a major individual project. For ANU students, admission is by invitation based on performance. External students may apply directly to the University.

Degree structure

Elective course · Specialisation/Degree specific course

Year	Semester 1	Semester 2
1	Programming as Problem Solving	Structured Programming
	Discrete Mathematical Models	Foundations of Computing
	Elective course	Elective course
	Elective course	Elective course
2	Software Design Methodologies	Computing elective
	Computer Organisation & Program Execution	Computing elective
	Introduction to Data Management, Analysis & Security	Computing elective
	Elective course	Elective course
3	Computing elective	Computing elective
	Computing course	Computing course
	Computing course	Computing course
	Elective course	Elective course

Septian

Bachelor of Computing

"The Bachelor of Computing has opened my eyes to the multiple pathways in the field of computing, from the typical programming side to the business side of it. Combined with the flexibility of this degree, it has allowed me to explore and pursue what I truly want to learn."

Computing Majors

- Advanced Intelligent Systems
- Computer Systems
- Cyber Security[1]
- Data Science
- Human-Centred and Creative Computing
- Information Systems[1]
- Intelligent Systems
- Software Development[1]

1 The following Computing majors are accredited by the Australian Computer Society; Cyber Security, Information Systems and Software Development. Accreditation current as at the time of publication (January 2022)

Careers

Career options for ANU graduates in Computing, and particularly students who have completed a combined degree, are wide and varied. Computing skills are a real competitive advantage and all organisations need people to work on and understand their systems.

For the latest admission information and program requirements, visit **programsandcourses.anu.edu.au**

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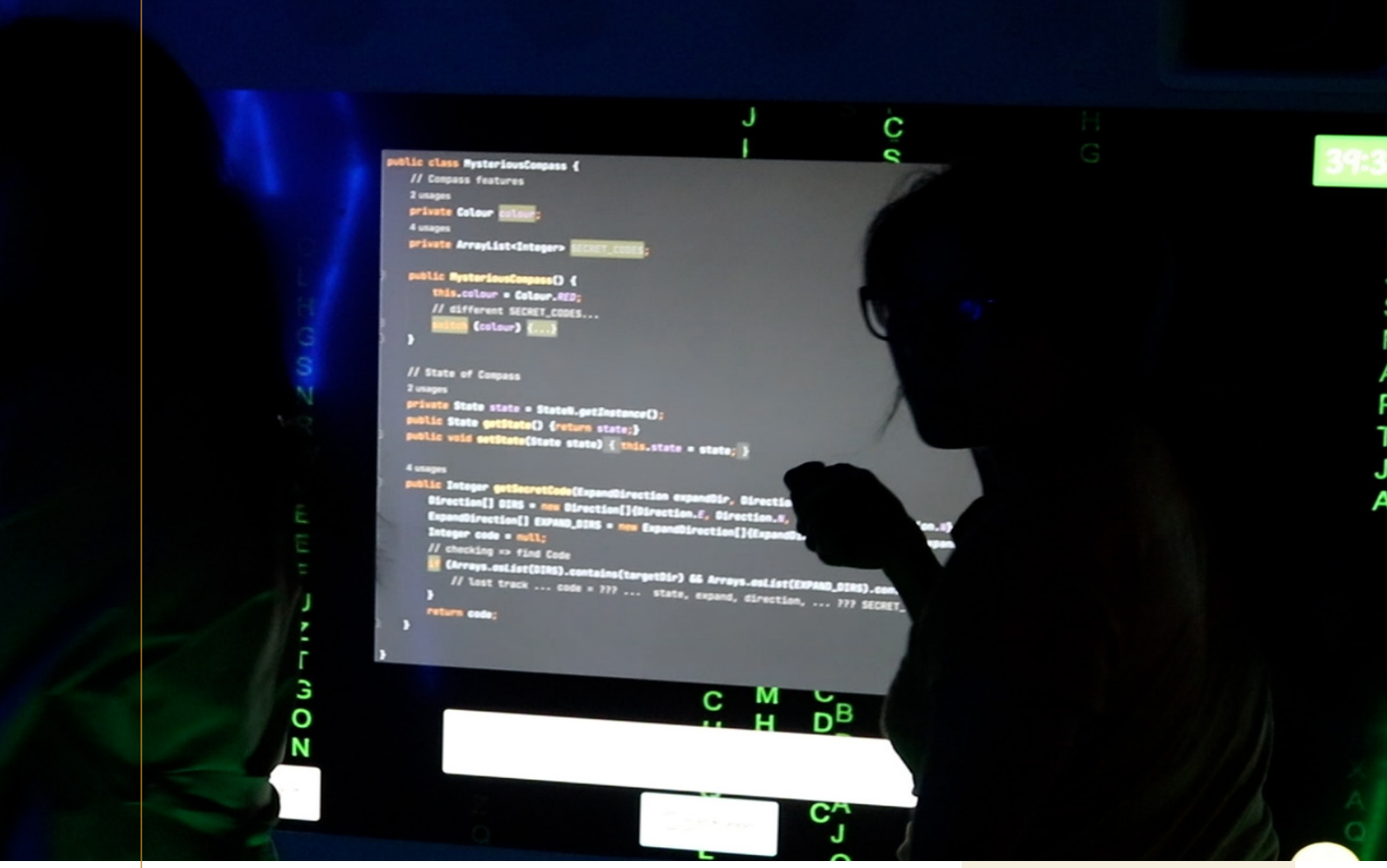

Australian National University

Selection Rank: **85**
UAC Code: **135705**
Prerequisites: **Mathematics**
Duration: **4 years full-time**
CRICOS Code: **077939A**

ANU College of Engineering, Computing and Cybernetics

Bachelor of Advanced Computing (Honours)

This is a unique, interdisciplinary program that will prepare you to be a future leader of the information and communications technology (ICT) revolution.

There is hardly any aspect of modern society untouched by the computing revolution. Some of the biggest challenges we face today will all be solved with an ICT component, whether it is in predicting efficiencies in renewable energy systems or using machine learning to diagnose illnesses.

In this program you will study advanced computing techniques and complete a unique specialisation. You will learn advanced computing techniques and develop exceptional professional skills including communication and teamwork.

Accredited by the Australian Computer Society [1]

Degree structure

Elective course · Specialisation/Degree specific course · Research course

Year	Semester 1	Semester 2
1	Programming as Problem Solving	Structured Programming
	Discrete Mathematical Models	Foundations of Computing
	Computing elective	Computing elective
	Elective course	Elective course
2	Software Design Methodologies	Software Engineering
	Computer Organisation & Program Execution	Systems, Networks & Concurrency
	Introduction to Data Management	Algorithms
	Elective course	Elective course
3	Advanced Computing Research Methods	Computing Specialisation
	Computing Specialisation	Computing elective
	Computing elective	Computing elective
	Elective course	Elective course
4	Computing Specialisation	Computing Specialisation
	Advanced Computing Research Project	Advanced Computing Research Methods
	Advanced Computing Research Project	Advanced Computing Research Project
	Elective course	Elective course

Tina

Bachelor of Advanced Computing (Honour)
Bachelor of Science

"At ANU there's a real multidisciplinary and big picture research focus, I think there's actually a lot of humanity in computer science, which you don't realise until you look beneath it."

Advanced Computing Specialisations

- Artificial Intelligence
- Machine Learning
- Human-Centred and Creative Computing
- Systems and Architecture
- Theoretical Computer Science

Careers

The best computing professionals often have knowledge in fields wider than computing alone. There are many innovative ways to use skills from this program in a range of disciplines. Our graduates will be ideally positioned to launch a dynamic career and acquire the skills and knowledge to become leaders in the ICT industry.

[1] Australian Computer Society accreditation current as at the time of publication.

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Australian National University

Selection Rank: **98**
UAC Code: **135700**
Prerequisites: **Mathematics**
Duration: **4 years full-time**
CRICOS Code: **085359K**

Bachelor of Advanced Computing

(Research & Development) (Honours)

Our Research & Development (R&D) programs have an innovative structure, allowing you to conduct research projects throughout your degree.

Be unique and get innovative. This interdisciplinary program is designed for high achieving students and will prepare you to be a future leader of the information and communications technology revolution.

In this program you will learn advanced computing techniques and have the opportunity to complete a unique specialisation. You will develop exceptional professional skills including communication and teamwork, and the program can be a great pathway to a PhD.

This program features an accelerated mode of learning, with advanced courses. You will receive unique opportunities to complete research projects alongside our world-class academics.

From the second year, these research projects will form part of your coursework, exposing you to cutting edge research. You'll get a taste for what it's like to undertake research while completing a degree that will also perfectly position you for work in industry. We are the only university that offers undergraduate Research and Development programs in Australia.

- You can combine a Research and Development program in a Flexible Double Degree.
- We offer pathways into Research and Development. If you commence in a Bachelor of Advanced Computing (Honours) and achieve a High Distinction average in your first year, you may be eligible to transfer into a Research and Development degree for second year.
- Students interested in research can also undertake Summer Research Scholarships or voluntary work with academics.

Accredited by the Australian Computer Society [1]

ANU College of Engineering, Computing and Cybernetics

Degree structure

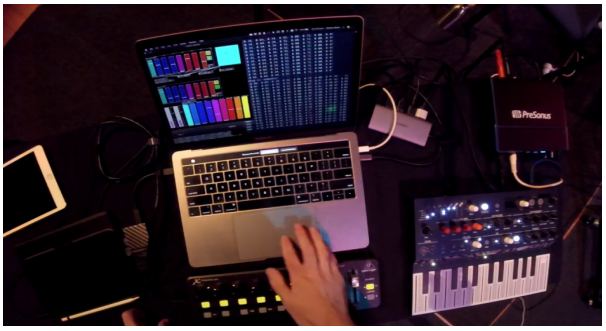
Elective course · Specialisation/Degree specific course · Research course

Year	Semester 1	Semester 2
1	Programming as Problem Solving	Structured Programming
	Discrete Mathematical Models	Foundations of Computing
	Mathematics & Applications 1	Mathematics & Applications 2
	Elective course	Elective course
2	Software Design Methodologies	Software Engineering
	Computer Organisation & Program Execution	Systems, Networks & Concurrency
	Introduction to Data Management, Analysis & Security	Studies in Advanced Computing R&D
	Advanced Computing Research Methods	Algorithms
3	Computing Specialisation	Computing Specialisation
	Individual Research Project	individual Research Project
	Elective course	Elective course
	Elective course	Elective course
4	Computing Specialisation	Computing Specialisation
	Advanced Computing Research Project	Advanced Computing Research Project
	Advanced Computing Research Project	Advanced Computing Research Project
	Elective course	Elective course

Ethan

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

"My degree enables me to try a lot of different research fields before choosing my honours. This is great for me, because I'm interested in multiple disciplines, like artificial intelligence, machine learning, cyber, data science and logic. You get the opportunity to explore what interests you!"



Careers

Our Research and Development (R&D) degrees have a strong professional focus leading to an easy transition into an R&D role in industry. Equally, the advanced nature of the program ensures those looking to undertake postgraduate research can move into academia.

[1] Australian Computer Society accreditation current as at the time of publication.

For the latest admission information and program requirements, visit **programsandcourses.anu.edu.au**

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Australian National University

Selection Rank: **90**
UAC Code: **135801**
Prerequisites: **Assumed mathematics knowledge**
Duration: **3 years full-time**
CRICOS Code: **094621D**

Bachelor of Applied Data Analytics

ANU College of Engineering, Computing and Cybernetics

Data skills are in demand. Develop interdisciplinary knowledge across computing, statistics and social science.

The Bachelor of Applied Data Analytics is an interdisciplinary degree designed to meet the demand in the modern workforce for data analytics. You will learn to inform high-quality, data-informed decision-making. This multi-disciplinary degree includes courses in computing, statistics, and social science. These highly sought-after skills can be applied in careers across business, government, and community – including finance, health, and national security.

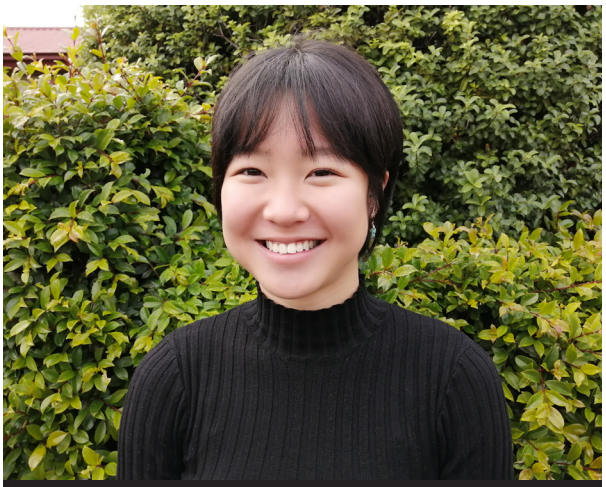
Honours

An honours year for the Bachelor of Applied Data Analytics is available for eligible students. The honours year will provide you with high-level skills for life as a practitioner, or for undertaking further study. You will receive research methods and principles training, undertake advanced coursework, and complete a major research project.

Degree structure

Elective course

Year	Semester 1	Semester 2
1	Programming as Problem Solving	Structured Programming
	Mathematics & Applications 1	Relational Databases
	Foundations of Social Research	Mathematics & Applications 2
	Elective course	Elective course
2	Data Mining	Data Wrangling
	Regression Modelling	Introductory Mathematical Statistics
	Population Analysis	Online Research Methods
	Elective course	Elective course
3	Social Science of the Internet	Graphical Data Analysis
	Statistical Learning	Data for Decision Making
	Elective course	Elective course
	Elective course	Elective course



Naomi

Bachelor of Applied Data Analytics

"Applied data analytics is perfect for people who are eager to learn and have broad interests. It combines sciences with arts to solve problems. The versatility of my degree has allowed me to discover what really sparks my passion, which is solving societal issues using holistic approaches. I'm combining the study of cultural background, qualitative data collection, and analytical statistic programming skills."

Careers

This interdisciplinary degree is designed to address a global shortage of graduates with skills in data analytics applied to high quality, data-informed decision making. Our graduates will be ideally positioned to enter jobs such as a Technology Entrepreneur, Database Administrator and Developer, Policy Analyst, Information and Data Analyst and Data Scientist.

For the latest admission information and program requirements, visit **programsandcourses.anu.edu.au**

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