POSTGRADUATE DOMESTIC STUDENT GUIDE 2025

Australian National University

ANU College of Engineering, Computing & Cybernetics

CHALLENGE YOURSELF TO DRIVE CHANGE

Australian National University (ANU) is driven by a culture of excellence in everything we do. ANU leads in Australia for the best staff qualifiactions[1] and graduate employability[2].

"Cybernetics aims to blend education, research and engagement to create a new generation of critical thinkers and critical doers who are ready to tackle the challenges of the 21st century," Vice-Chancellor and President Genevieve Bell.

The ANU College of Engineering, Computing and Cybernetics (CECC) implements our disciplines through education and research, necessary to help us design, build, regulate and secure the future.

CECC brings together expertise in social, technical, computational, ecological and scientific systems to build a new approach to systems design and build new national capabilities. Our researchers and academics are solving the world's most complex challenges. You will be inspired to become a problem finder, comfortable with ambiguity and complexity as it applies to engineering, computing, and cybernetics.
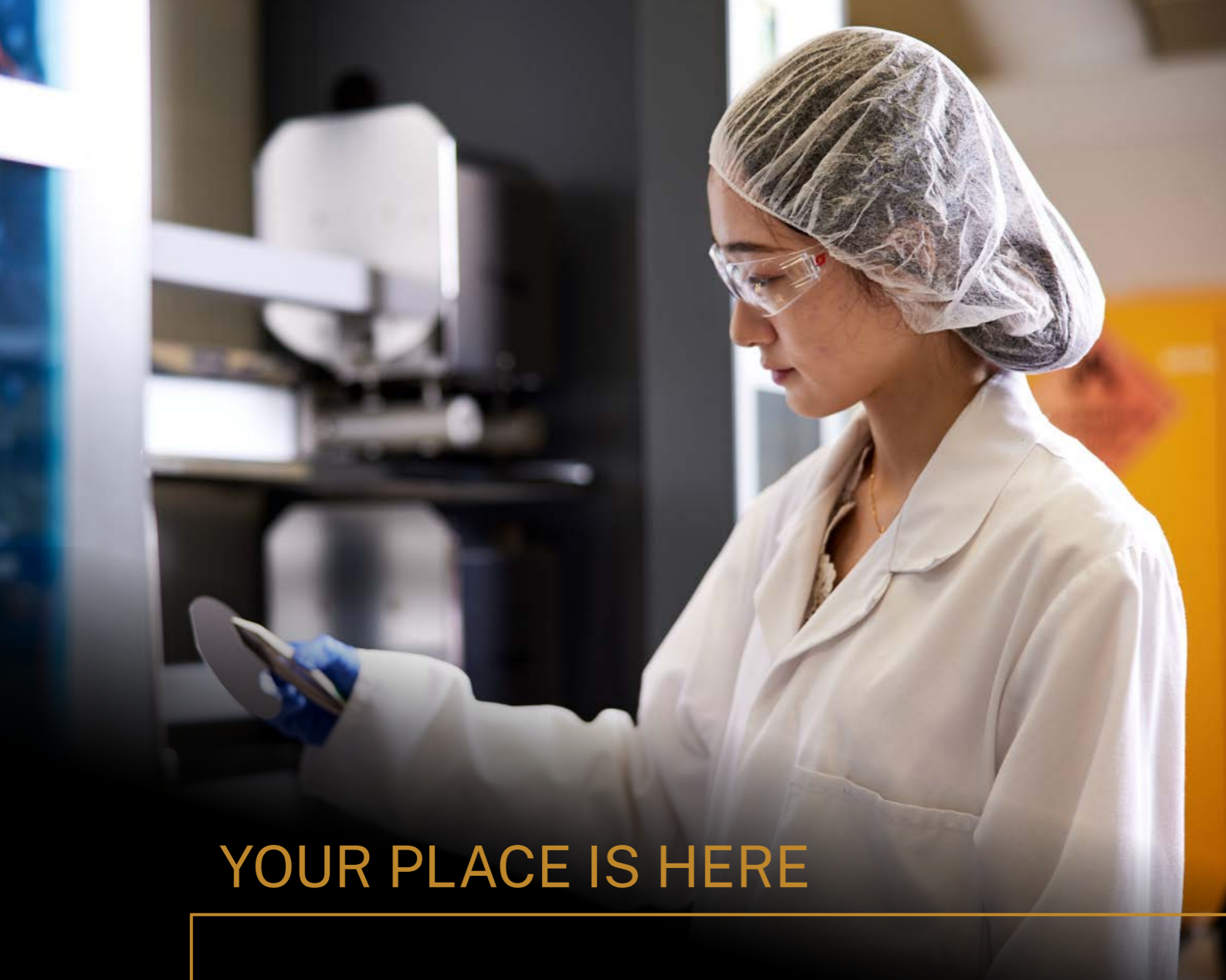
1. Good Universities Guide 2023
2. THE Global University Employability Rankings 2023-2024

Acknowledge of Country

The Australian National University acknowledges, celebrates and pays our respects to the Ngunnawal and Ngambri people of the Canberra region and to all First Nations Australians on whose traditional lands we meet and work, and whose cultures are among the oldest continuing cultures in human history.

YOUR PLACE IS HERE

5 REASONS WHY ANU IS FOR YOU

1 Learn in new and exciting ways

Our leading academics encourage you to channel your creativity, critical thinking and problem solving when approaching all tasks. Through our practical and hands on courses you will learn to think differently and tackle problems in innovative ways.

2 Small, interactive classes taught by world-leading academics

ANU encourages open communication and collaboration between students, lecturers and tutors.

Our student-teacher ratios are among the best in Australia and our staff are also ranked 1st for Staff Qualifications in Australia (Good Universities Guide 2023).

3 World-class facilities

At CECC we believe the best learning is done by doing. Design, print and experiment in one of our many ANU MakerSpaces. You will have access to world-class equipment and resources to help you through your studies. ANU is also home to the most powerful supercomputers in the Southern Hemisphere, a high-flux solar simulator, and the 'Big Dish' solar concentrator.

4 We're the #1 most international university in Australia[1]

With students from all over the globe living and studying on campus, you'll feel welcome here. At ANU will have access to a range of resources, student groups and services to help you build lifelong friendships and make the most of your time here.
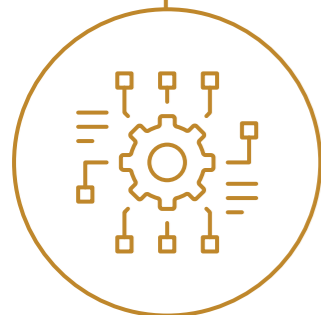
[1] Times Higher Education Rankings 2023

5 Supportive community

There are a wide range of academic, and wellbeing resources and services to help you adjust to university and postgraduate study. There is also a range of career events, services and resources to help you build a professional career after graduation.
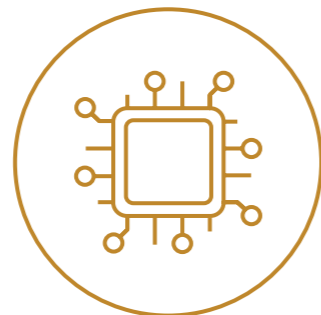
WORLD RANKINGS

#38
in the world in Automation and Control
(Global Ranking of Academic Subjects 2023)

#58
in the world in Electrical and Electronic Engineering
(QS 2023 rankings)

#56
in the world in Computer Science & Information Systems
(QS 2023 rankings)

BRONZE WINNER
for the Developing Emerging Skills and Competencies Award
(QS Reimagine Education 2023)

"
ANU provided me with a world-class university education, the prestige of the finest university in Australia and the opportunity of working with experts in the renewable energy space. I am still in touch with teachers and other friends I have made during my time at university.
"

Samuel Fernandes
Program Manager, Lawrence Berkeley National Laboratory
Master of Engineering (Renewable Energy) '11

REAL-WORLD EXPERIENCE

School of Computing - TechLauncher

TechLauncher is an initiative which enables students at ANU to develop and exhibit research and professional skills while bringing great ideas to life and positively impacting society. Industry, non-profits and government organisations collaborate with CECC students and researchers to develop, prototype and launch solutions to real world problems.

Students practice and develop competences in the context of their discipline (such as computer science) but they also gain experience such as working collaboratively on projects, communications and stakeholder management, critical thinking, design, teamwork and time management. These are all skills valued by investors, colleagues and employers.

Find out more
cecc.anu.edu.au/engage/techlauncher

School of Engineering - Capstone

In the Capstone Design Project, you will work with fellow students as an independent team to deliver a real-world project.

Capstone exposes you to an authentic engineering experience, allowing you to display the systems engineering, technical engineering, and professional knowledge and skills that you have developed during your degree.

This course prepares you to have the autonomy required to be professionals in your field and gives students the practical experience and skills you need as a engineer.

Find out more
cecc.anu.edu.au/engage/capstone

School of Cybernetics - Demo Day

Our Demo Day is an exciting day for everyone at the School of Cybernetics, most of all for our Master of Applied Cybernetics cohort. Students exhibit the skills they've learned and developed throughout the year, along with their previous backgrounds and expertise. The students explain how they conceptualised, designed and created cyber-physical systems which may corporate artificial intelligence, feedback loops, sensors and actuators, and the potential these have to scale in the real-world.

WORK INTEGRATED LEARNING

Cybernetics Professional Placement

The Cybernetics Professional Placement gives students exposure in applying the skills and approaches learned throughout their coursework to a professional environment.

Students who undertake our professional placement program will be embedded within an industry, community, government, start-up, or academic organisation as a practitioner of Applied Cybernetics. Through this placement students contribute to a project related to cybernetic systems including carefully examining new and emerging technological systems, the building blocks they are made from, and the questions they raise for human society and our ecosystems.

By undertaking professional placements as a cybernetic practitioner you will gain experience in framing questions, analysing data, applying a systems-level approach, communication and collaboration skills. It also provides opportunities to build on your professional network and experience.

Engineering Internship Program

The ANU Engineering Internship Program is designed for both Undergraduate and Postgraduate engineering students to experience a real-life engineering workplace.

The aim of this course is to use the internship to develop your engineering skills and practice whilst embedded within the industry. This industry placement will be assessed for academic credit.

The internship will be aligned with the aims of the engineering program and your areas of specialisation. You will be able to demonstrate functioning engineering knowledge, and identify areas of further development for your future career. Internships also allow you to build your network within the industry preparing you for future employment opportunities.

> "I found the internship to be very rewarding since I got to apply my machine learning skills to the specific problem of image harmonisation. I got to extend research demonstrations into real-world applications."
>
> **Andrea Do**
>
> Master of Computing

Computing Internship Program

The ANU Computing Internship Program provides Masters students the opportunity to undertake a one semester internship in a technology industry environment to apply technical skills and build professional aptitude. The placements with local, interstate, and international industry and government organisations are an assessable part of the student's degree.

Students are matched with hosts to allow them the opportunity to work with industry, applying knowledge and skills learnt in their courses to solve real world challenges. This valuable work experience connects students with future employers and helps students demonstrate initiative and adaptability while growing their communication and networking skills.

WORLD-CLASS FACILITIES
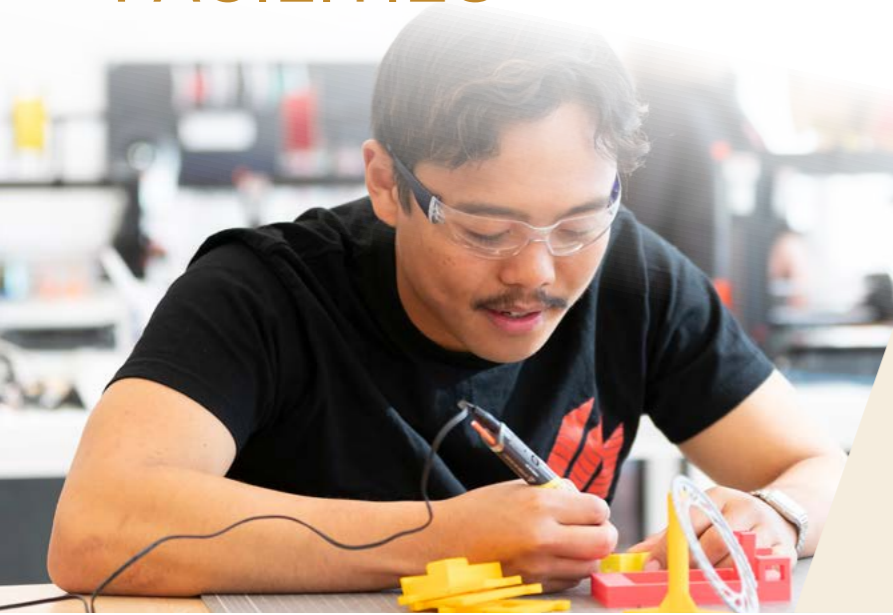
ANU MakerSpace

The ANU MakerSpace has a wide range of tools and appliances available, including power tools, 3D printers, laser cutters, soldering and testing equipment.

The space can be used for education, research, and even personal hobbies.

MakerSpace is available to all our students to experiment, investigate, prototype and solve problems.

Find out more
makerspace.anu.edu.au

Solar reserach facilities

Solar photovoltaics (PV) research at ANU is at the global cutting edge. It spans the entire spectrum of solar electricity technologies — from solar forecasting, to fabricating high-efficiency PV cells, to integrating renewables with storage capacity into the grid. Our world-leading silicon solar cell research includes advanced defect characterisation, surface passivation, optoelectronics and manufacturing.

ANU solar laboratories and facilities enable the fabrication and characterisation of high-efficiency silicon and perovskite solar cells. We also maintain tools for state-of-the-art laser processing, industrial solar cell manufacturing and rapid-throughput characterisation.

Big Dish

The ANU Generation II Big Dish solar concentrator is the world's largest paraboloidal dish solar concentrator, with 489m2 of mirror aperture area.

It produces an average concentration of 2,100 suns over a disk with diameter 530mm, with a peak concentration of 14,000 suns.

The ANU prototype delivers experimental data to investigate energy conversion processes, inform design improvements, and support efforts to licence and commercialise the technology.

Robotics and drones

We conduct fundamental research for unmanned vehicle technologies, particularly aerial robots.

We are co-located with the Computer Vision, Networked Systems and Quantum Cybernetics research areas, creating a dynamic environment that supports breakthrough interdisciplinary research.

We have cutting-edge flying facilities and rapid prototyping equipment.

Solar simulator

This high-flux solar simulator is ideally suited for laboratory scale testing of high-temperature solar thermal and thermochemical components and systems.

It supports research in radiating reactive flows and provides up to 20kW of radiation with peak heat flux up to about 10 MW/m2. The flux can be further augmented with secondary optics.

The solar thermal capability and expertise at ANU can simulate similar heat flux conditions for high-speed spacecraft entry. Think of the Moon, Mars and beyond!

Gadi

ANU is home to Gadi, a high-powered supercomputer at the National Computational Infrastructure (NCI) that is used by researchers across the university and country.

It comes in at number 24 in the global ranking of supercomputers, and the most powerful in the southern hemisphere.

The machine is named 'Gadi' [pronounced Gar-dee], a word of the Ngunnawal people meaning 'to search for'.

Gadi contains 145,152 CPU cores, 567 Terabytes of memory, and 640 GPUs, and is capable of performing nine quadrillion operations per second.

YOUR EXPERIENCE

Clubs and Societies

ANU Solar Racing

Be a part of the worlds most watched innovation challenge. Help build ANU solar car for the Bridgestone World Solar Challenge (BWSC).

The ANU Solar Racing team are a group of passionate students dedicated to promoting sustainable innovation and renewables in our community and beyond. Their primary objective is centred around designing and constructing a solar-powered vehicle for participation in the BWSC.

This biennial competition sees teams from across the globe pushing the limits of innovation as they attempt to drive their solar-powered cars over a 3,000km stretch through the Australian desert, from Darwin to Adelaide.

ANU Women* in STEM Leadership Conference

ANU Women in STEM host a three-day conference to bring together the community at ANU. They welcome all female, femme-aligned and non-binary undergraduate students to join. They are a growing society that is committed to keeping members up to date on upcoming opportunities in STEM as well as hosting coffee catch-ups, talks and social events throughout the year.

Computer Science Students' Association

The ANU Computer Science Students' Association (CSSA) is a society for students interested in all aspects of computer science, software engineering, digital humanities and related fields!

They organise regular academic and social events, run events with industry partners, and conduct a variety of activities for the benefit of our members and the wider ANU community.

Engineering Students Association (ESA)

The Engineering Students Association (ESA) is a non-profit student organisation run by the students, for the students. They have three key ambitions: enable a stronger sense of community among engineering students and the wider STEM community, act as an interface for course and degree-relevant guidance between old and new students, and help students connect with industry and academic personnel to help kickstart their careers.

Robogals Canberra

Robogals is an international, not for profit, student-led organisation which aims to inspire, engage and empower young women to pursue careers in STEM fields. The Robogals deliver fun, engaging workshops for local and regional primary, high school and college students. As a member of Robogals you gain hands on experience with robotics with the added benefit of helping young kids discover how fun studying STEM can be.

ANU Rocketry

ANU Rocketry is a student-led initiative that provides ANU students with hands-on experience in large scale engineering projects in the aerospace industry.

Their ongoing mission is to design, simulate, develop and produce high-powered rockets that will launch to 10,000ft and 30,000ft in a safe and accurate manner.

ANU Rocketry's goal is to attempt a space launch in 2025 and become the first Australian university to complete a space flight.

ANU Formula Sport

ANU Formula Sport is an interdisciplinary team driven by the goal of designing, building, and racing a formula-style car for the annual Formula Society of Automotive Engineers (FSAE) Competition.

The competition attracts a variety of both domestic and international student teams who compete in a diverse range of technical and business events filled with strategising and quick problem solving.

Engineers Without Borders

Engineers Without Borders (EWB)'s vision is to harness the potential of Engineering to create an equitable reality for the planet and its people. Through partnership and collaboration, EWB focus on developing skills, knowledge and appropriate technology solutions.

Anyone can contribute – you don't need to be an engineer – and there are plenty of ways to be involved within the ACT Chapter; from Youth Outreach programs, to regular knowledge sharing events.

ANU Fifty50

Fifty50 is a student-led organisation at ANU that strives to close the gender gap in STEM, focusing on mentoring, increasing the visibility of role models and engaging the wider ANU community in STEM gender equity. They engage all genders in promoting gender equity and run social, educational and career-focused events, as well as a mentoring program for first year students.

SCHOOL OF ENGINEERING

139K
Senior Electrical Engineer
average salary in Canberra
(Indeed report 2024)

134K
Project Manager
average salary in Canberra
(Indeed report 2024)

146K
Environmental Engineer
average salary in Canberra
(Indeed report 2024)

The School of Engineering at ANU brings together a diverse and welcoming community motivated to change the world.

Our Postgraduate programs in Electrical Engineering, Robotics, Automation and Control, and Energy Systems address areas that are in high demand, both in Australia and globally, as we automate our systems and rapidly transform our energy systems to decarbonise our economy.

Our unique systems engineering focus is embedded in our educational programs. Not only do our graduates attain depth of expertise in their chosen discipline, they also learn to analyse and design complex systems that are grounded in their social, environmental, and economic contexts. We have world-class

research and teaching laboratories as well as state-of-the-art facilities, including our MakerSpace and Workshop facilities, that are available to students, staff, and other collaborative partners.

Our students compete in national and international competitions including the World Solar Car Challenge, Formula SAE, Rocketry, and Maritime RobotX. We host a student chapter of Engineers Without Borders and we work closely with ANU Fifty50 in support of gender equity in STEM across the ANU.

Studying Engineering at ANU will provide you with outstanding opportunities to help you to both excel in your career, and to make a real difference to solving some of the world's most significant challenges.

Careers in Engineering

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 across many industries.

Thanks to the unique interdisciplinary approach taught in systems engineering, many of our graduates quickly progress to senior roles. The advanced nature of our specialised and Research and Development programs ensures those looking to undertake Postgraduate research are equipped to move into academia after graduating.

Our Engineering degrees have a strong professional focus leading to roles as an Accredited Engineer in industry. Due to this, Engineering at ANU is often considered as a springboard into the wider professional world and our graduates find work in many leading organisations including Airbus, Accenture, Department of Defence, CEA Technologies, Cochlear Limited, Energy Australia, Ford, GHD, IBM, Northrop Consulting Engineers, Qantas, Telstra, Thales, Toyota as well as pursuing careers in academia and designing their own through start-ups.

Research led education

The ANU School of Engineering focuses on world leading traditional and interdisciplinary research in electrical engineering, energy, robotics and control. Engineering students at ANU are exposed to research led education in multiple ways:

- Our systems courses are built around engineering design principle and provide repeated exposure to world-leading research methods and projects.

- Our technical courses provide exposure to research led teaching, where lectures feature examples from recently published papers by the lecturer or guest lecturers.

- Our group and project courses enable students to draw on the advanced knowledge and research methods they have gained throughout the degree and apply them to their own project.

"

The solar photovoltaic group at the Australian National University is one of the best groups in the world. The cutting-edge research they are doing prompted me to apply here.
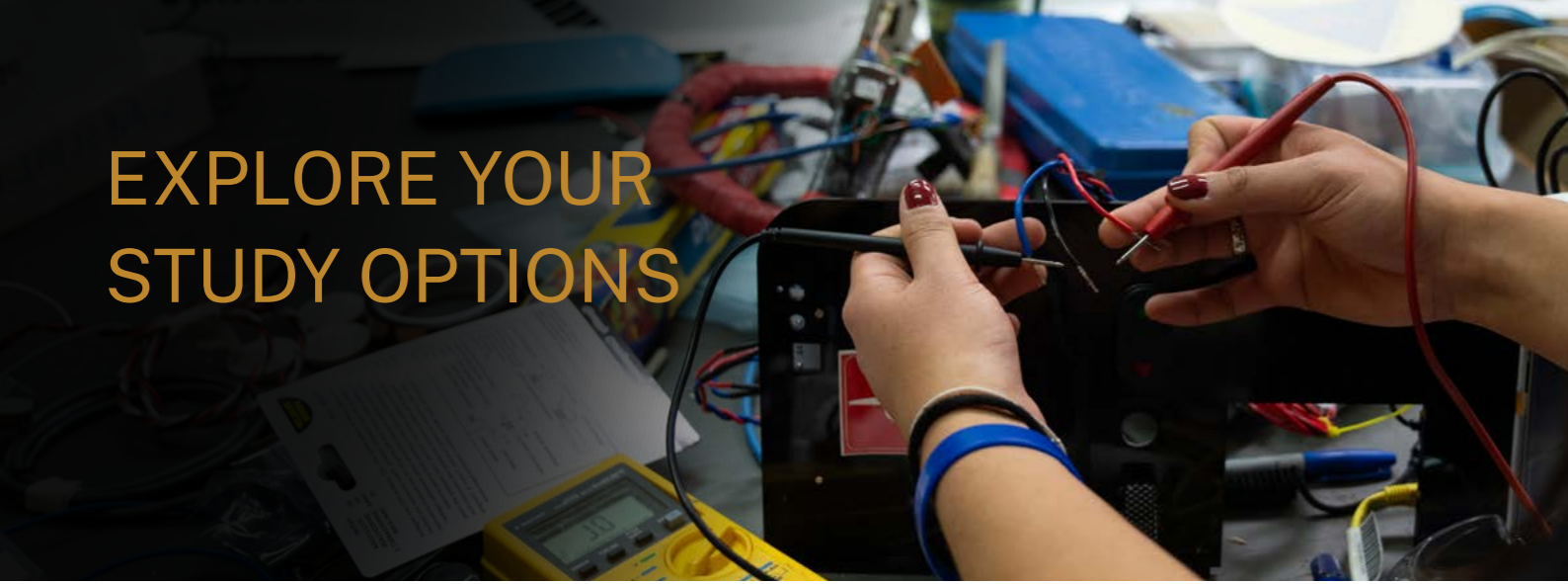
It's not just about the lab or the research, but also about the people around you, the kind of involvement you get, the kind of people you live with. I definitely made the right decision in coming here.

"

Dr Astha Sharma

Research Fellow
ANU School of Engineering

EXPLORE YOUR STUDY OPTIONS

Master of Engineering in Electrical Engineering

Duration: 2 years full-time I CRICOS: 077326G

Do you want to specialise in an area that is in high demand in industry and offers a multitude of opportunities? Do you want to deepen your knowledge in Electrical Engineering to take leading roles in industry and research projects? Then the two-year master qualification in the ANU School of Engineering is your opportunity.

The program covers a spectrum of compulsory topics, including power systems and power electronics, decision making and control, information processing, and systems engineering. The flexibility of the degree additionally allows you to engage with renowned faculty in the ANU School of Engineering through specialised elective courses covering

robotic systems, optimisation, signal processing, telecommunications, or energy systems.

Through hands-on projects with researchers and industry partners you can elevate your career, amplify your impact, and become a catalyst for technological innovation. The network of industry partners and renowned researchers at ANU will give you the opportunity of a smooth transition to take leading roles in industry or to embark on your journey as a scientist, starting your PhD, and becoming an independent leading researcher.

	Year 1	Year 2
Semester 1	Professional Practice: Holistic Thinking and Communication	Group Project
	Introduction to Systems Engineering	Group Project
	Compulsory Courses	Compulsory Courses
	Compulsory Courses	Compulsory Courses
Semester 2	Professional Practice: Responsible Innovation and Leadership	Elective Course
	Systems Modelling	Elective Course
	Control Systems	Compulsory Courses
	Power Systems and Power Electronics	Compulsory Courses

○ Compulsory course ● Systems Engineering ○ Electives

Master of Engineering in Robotics, Automation and Control

Duration: 2 years full-time I CRICOS: 114603C

Recent advancements in AI show both the potential and risks of using smart machines that rely on big data and advanced software and hardware solutions. In a world of rapid evolution of smart interconnected devices, industry and academia are in need of curious minds, who enjoy problem solving and are not afraid of mathematical and engineering challenges that require out of the box thinking.

In the two-year Master of Engineering in Robotics, Automation and Control, discover how to apply interdisciplinary knowledge in fields like robotics, mechanical and electrical engineering, computer science, and control, to push the boundaries in AI-related technologies. In addition to compulsory courses on robotics, digital systems and

microprocessors, decision making and control, and systems engineering, you will have the chance to interact with renowned researchers in the field through elective courses specialising on optimisation and control, stochastic processes or computer vision, among others.

Through hands-on projects with researchers and industry partners you can elevate your career, amplify your impact, and become highly competitive in the ever-growing AI industry. The network of industry partners and renowned researchers at ANU will give you the opportunity of a smooth transition to take leading roles in industry or to embark on your journey as a scientist at a top university.

	Year 1	Year 2
Semester 1	Professional Practice: Holistic Thinking and Communication	Group Project
	Introduction to Systems Engineering	Group Project
	Compulsory Courses	Compulsory Courses
	Compulsory Courses	Compulsory Courses
Semester 2	Professional Practice: Responsible Innovation and Leadership	Elective Course
	Systems Modelling	Elective Course
	Control Systems	Compulsory Courses
	Robotics	Compulsory Courses

○ Compulsory course ● Systems Engineering ○ Electives

Master of Engineering in Energy Systems

Duration: 2 years full-time | CRICOS: 114602D

The way the world is generating and using energy is undergoing massive changes, with clean technologies like photovoltaics, wind energy, hydrogen and batteries rapidly displacing fossil fuels. This massive change creates a strong demand for highly skilled professionals who are able to navigate the complex technical, environmental and social challenges and to build innovative technologies to help countries around the world to to become less reliant on fossil fuels.

You will obtain a comprehensive understanding key technologies like wind and solar, as well as learning about the design of low-carbon buildings, how to decarbonise industrial processes and transport, and options for energy storage.

You will be taught by leading researchers in the field who have contributed substantially to the development of clean energy technologies and are working at the cutting edge of their research fields.

The program includes a compulsory set of subjects that will equip you with advanced professional engineering skills needed to work effectively in multi-disciplinary teams in the workplace to achieve engineering outcomes at a high standard.

Throughout the degree industry professionals will bring their first-hand experience and projects to share current industry challenges, trends and opportunities. These professionals can also provide you with the opportunity to make valuable contacts for your professional career.

Year 1		Year 2
Professional Practice: Holistic Thinking and Communication		**Group Project**
Introduction to Systems Engineering		**Group Project**
Fluid Mechanics and Heat Transfer		Integration of Renewable Energy into Power Systems and Microgrids
Photovoltaic Technologies		Industrial Energy Efficiency and Decarbonisation
Professional Practice: Responsible Innovation and Leadership		Elective Course
Systems Modelling		Elective Course
Energy Resources and Renewable Technologies		Wind Energy
Urban Energy and Energy Efficiency		Photovoltaic Power Plants

(Semester 1 / Semester 2)

○ Compulsory course ● Systems Engineering ○ Electives

BANDALANG STUDIO

Bandalang Studio is a First Nations designed and led Indigenous Engineering Design Studio that fosters transdisciplinary collaborations and supports Indigenous individuals, enterprises, start-ups and their allies.

Located on Ngunnawal and Ngambri land, 'Bandalang' is a Wiradyuri language name which means 'joining' or 'junction'. The name is chosen to symbolise a place of connections and transdisciplinary collaboration.

The Bandalang Studio provides a supportive environment for First Nations students, researchers, innovators, leaders and their non-Indigenous allies to learn and collaborate.

We offer space, resources and opportunities to First Nations researchers, entrepreneurs, ANU students and staff.

The Bandalang Studio creates opportunities to embed Indigenous science and technologies into core ANU Engineering modules.

Our studio drives two major programs. The first is the Bandalang Residencies which support Indigenous practitioners and researchers to continue to make important contributions to engineering as a discipline. The second program is the National Indigenous Engineering Autumn School which supports Indigenous high school students to visit our Canberra campus and learn about the courses offered at the ANU School of Engineering and to gain insights about life on campus and studying at university.

Bandalang Studio is a critically important initiative towards changing perspectives in engineering. Understanding transdisciplinary systems and whole-of-life responsibilities are at the heart of sustainable practices. This understanding is foundational in Indigenous knowledge systems and the work that is happening at Bandalang Studio.

Find out more
eng.anu.edu.au/bandalang

SCHOOL OF COMPUTING

106K
Software Engineer
average salary in Australia
(indeed report 2024)

111K
Developer
average salary in Australia
(indeed report 2024)

136K
Machine Learning Engineer
average salary in Australia
(indeed report 2024)

The School of Computing has a strong foundation in computing and information sciences at ANU. We are a transformative centre for research in artificial intelligence and machine learning, computer systems and software, and theoretical foundations of computing. We span canonical and leading-edge computing, connecting decades of computer science methodologies with modern data and computational science. Our mission is motivated by the need to design, drive and sustain strategic activities via five broad focus areas: Computing Foundations, Computational Science, Intelligent Systems, Data Science and Analytics, and the Software Innovation Institute.

Work Integrated Learning is a embedded throughout the programs ensuring that students have opportunities to meet potential employers while developing research and professional skills to bring great ideas to life.

Careers in computing

Your graduate degree in computing will build upon your previous study and/or work experience to increase your job opportunities. You can utilise the skills you develop in the degree to work in the computer industry, other corporate roles, create your own start up or as a step toward a PhD.

Graduates are ideally positioned to take on challenging roles in their chosen sectors and become leaders in the ICT industry. They can work across a range of industries in a variety of roles, including Data Mining Specialist, Big Data Analyst, Human-Computer Interaction Specialist, Software Developer, Embedded systems developer, Network Architect, Systems Analyst, Computer Engineer, Advanced Software Solutions Engineer and Software Architect.

Our graduates work in many organisations including IBM, Google, Microsoft, Yahoo, Intel, Price Waterhouse Coopers, Accenture Australia, Bloomberg, National Australia Bank, Citigroup, Deloitte, Unisys and the Australian Government, as well as in academia and start-ups.

EXPLORE YOUR STUDY OPTIONS

Master of Computing

Duration: 2 years full-time | CRICOS: 078940M

The Master of Computing is a 2-year full-time (or equivalent part-time) degree with two target audiences: graduates without a computing background who wish to acquire a solid knowledge of computing, and graduates with a computing or information technology background who wish to broaden and deepen or refresh their knowledge. The program is professionally accredited by the Australian Computer Society.

Master of Computing graduates will develop a deep knowledge and understanding of professional software development and computing practices. Students have the opportunity to participate in many cutting edge courses and, depending upon their background and interests, may choose to specialise in Artificial Intelligence, Machine Learning, Computer Architecture and Systems, Theoretical Computational Foundations, Data Science, Human Centered Design & Creative Computing, or Software Development. The program culminates in a capstone project: either completing an Internship, working in small groups to solve a clients problem via TechLauncher or by completing a research project supervised by an ANU academic.

Industrial experience

Computing internship

The Master of Computing gives you an opportunity to take an internship with one of the ANU industry partners. During this internship, you will be able to apply your knowledge to real world problems, refine your skills and learn some new ones, all while working alongside professionals.

TechLauncher

TechLauncher lets you apply your skills to practical and challenging problems as part of a group. This gives you an opportunity to express your ideas and passions, work on exciting projects, and practice and develop the competences required for collaboration within a team of peers.

Master of Computing (Advanced)

Duration: 2 years full-time | CRICOS: 085934F

The Master of Computing (Advanced) is a 2-year full-time (or equivalent part-time) degree targeting students who wish to enter industry in an R&D or leadership role or who wish to pursue a PhD.

Master of Computing (Advanced) graduates will build upon their existing knowledge and understanding of professional software development and computing practices. Students will be exposed to best practice research methods and have an opportunity to explore a specialisation area in more depth. In the final year they will complete a thesis on an intensive research project under the supervision of one of the university's leading researchers.

" This program has allowed me to explore my interests in various domains and I am fortunate enough to have had the opportunity to work on a research project this semester. ANU has provided me with the golden platform to enhance my skills and abilities, not only professionally but also on a personal level, and I feel extremely grateful for this opportunity. "

Vidhu
Master of Computing (Advanced)

Master of Applied Data Analytics

Duration: 1.5 years full-time | CRICOS: 097058B

The Master of Applied Data Analytics is a 1.5 year full-time (or equivalent part-time) degree that trains students from foundational to deep data analytics skills and enables experts from other domains to learn the advanced data skills to become a data scientist in their domain knowledge area. We offer a unique blend of data science, statistics and social science to teach the techniques from each of those fields, and provide advanced electives in each field to allow students to specialise.

The program is taught in semester mode, and for domestic students some courses within the program can be taken in intensive blended mode.

Students studying in intensive blended mode are expected to be enrolled part-time. The intensive blended course delivery mode is designed to suit working students who take leave from work (or other commitments) to attend an intensive 1 week of full time learning on campus in the middle of the course, and study remotely for the rest of the course. The intensive blended course delivery mode comprises: 4 weeks of online study, 1 full time week of face to face learning on campus, followed by a further 4 weeks of online study.

There is a global shortage of graduates with skills in data analytics, which is vital to the development of high-quality, data-informed decision-making. Graduates can be involved in wide-ranging applications for the Australian government, Australian businesses and the broader community, all of which are facing the challenge of how to use public data effectively and informatively.

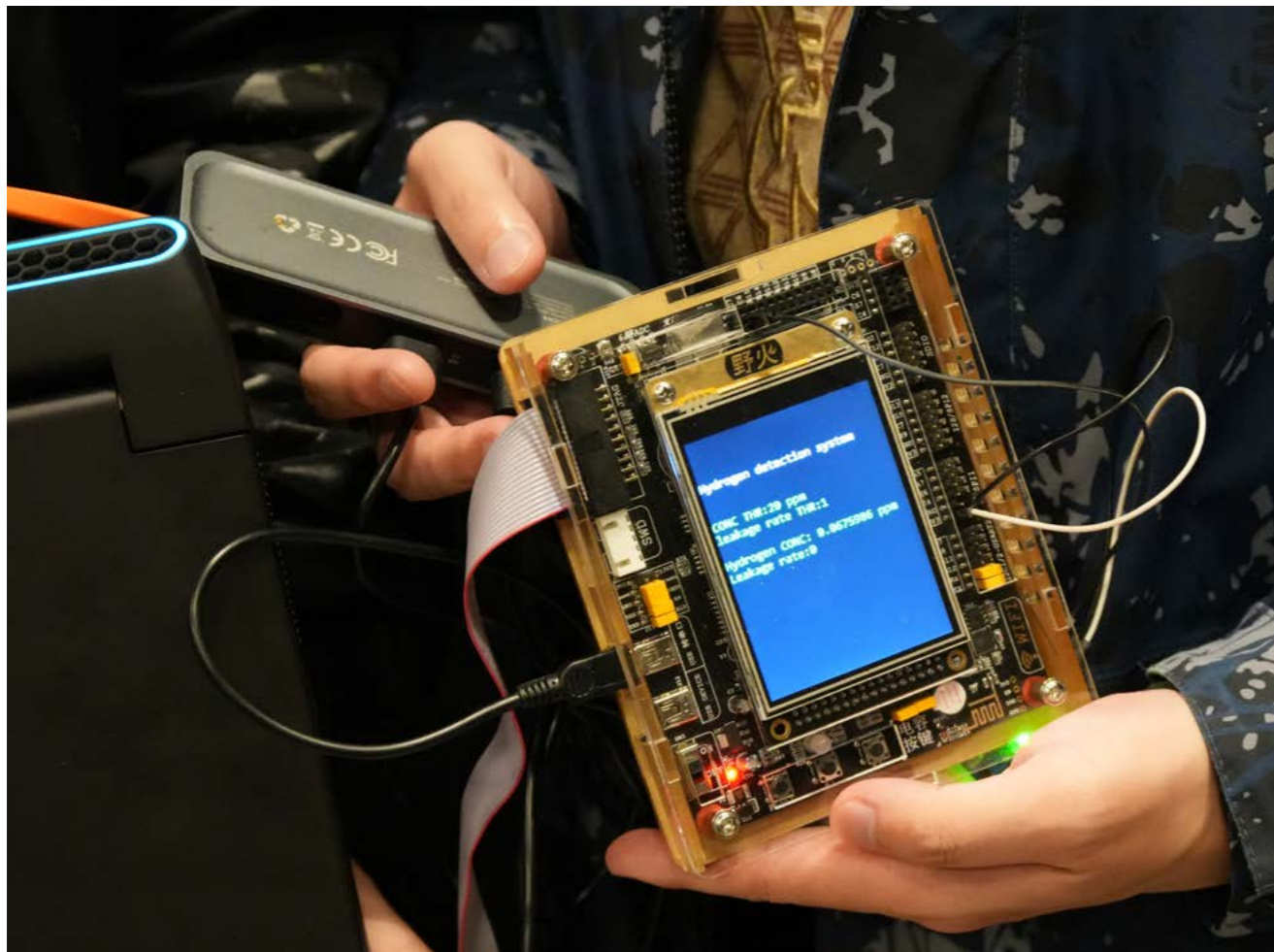# Master of Machine Learning and Computer Vision

Duration: 2 years full-time | CRICOS: 099247C

This two-year Master of Machine Learning and Computer Vision (MMLCV) program provides students with theoretical knowledge, technical skills and hands-on experience that will prepare you for a career in the field of machine learning and computer vision.

ANU is one of the finest research universities in Australia, and hosts the ARC Centre of Excellence for robotic vision. This program is taught by world-class professors and award winning researchers in the fields of computer vision, machine learning and artificial intelligence. It also allows students to explore their interests by completing an internship or undertaking a research project which can be a potential pathway to a PhD.

Graduates of MMLCV will be able to help develop future technologies like self-driving cars, artificial intelligence mirrors that 'try on' clothes, technology to detect illnesses and using drones to monitor crops.

Industrial experience

The Master of Machine Learning and Computer Vision gives you an opportunity to take an internship in one of the ANU industry partners.

During this internship, you will be able to apply your knowledge to real world problems and to refine your skills while working alongside machine learning and computer vision professionals.

Research experience

Students can build on their knowledge and skills developed in course work by completing a thesis on a research project in an area of interest, supervised by an ANU academic.

Find out more
comp.anu.edu.au/research

Graduate Diploma of Computing

Duration: 1 year full-time | CRICOS: 078938E

The Graduate Diploma of Computing is a 1-year full-time (or equivalent part-time) degree for graduates from any discipline who wish to up-skill, or for computing graduates who wish to refresh and enhance existing computing skills in the shortest time possible. The Graduate Diploma of Computing provides its graduates with a pathway into the IT industry or to more advanced study in the computing discipline.

Students completing the Graduate Diploma in Computing with a high credit average may be granted up to one year of credit in the Master of Computing program.

Graduate Diploma in Applied Data Analytics

Duration: 1 year full-time | CRICOS: 097201M

The Graduate Diploma of Applied Data Analytics is a 1 year full-time (or equivalent part-time) degree that provides you with:

- Exposure to best practice in data analytics.
- Cutting edge courses in areas of relevance to data analytics practitioners.
- An opportunity to deepen knowledge in one of the three areas of computation, statistics, or social science.
- Professional development for practicing data analytics professionals.
- The opportunity to undertake research of professional relevance.


Graduate Certificate in Applied Data Analytics

Duration: 6 months full-time

You will gain the analytical skills you need to drive informed and strategic decision-making in one of the fastest growing occupations of our time. Learn from industry-leading data experts who are harnessing the potential of data to solve real-world problems.

This Graduate Certificate can be completed as a standalone postgraduate qualification or used as a pathway to the Master of Applied Data Analytics.

This program is available for direct admission for domestic students only.
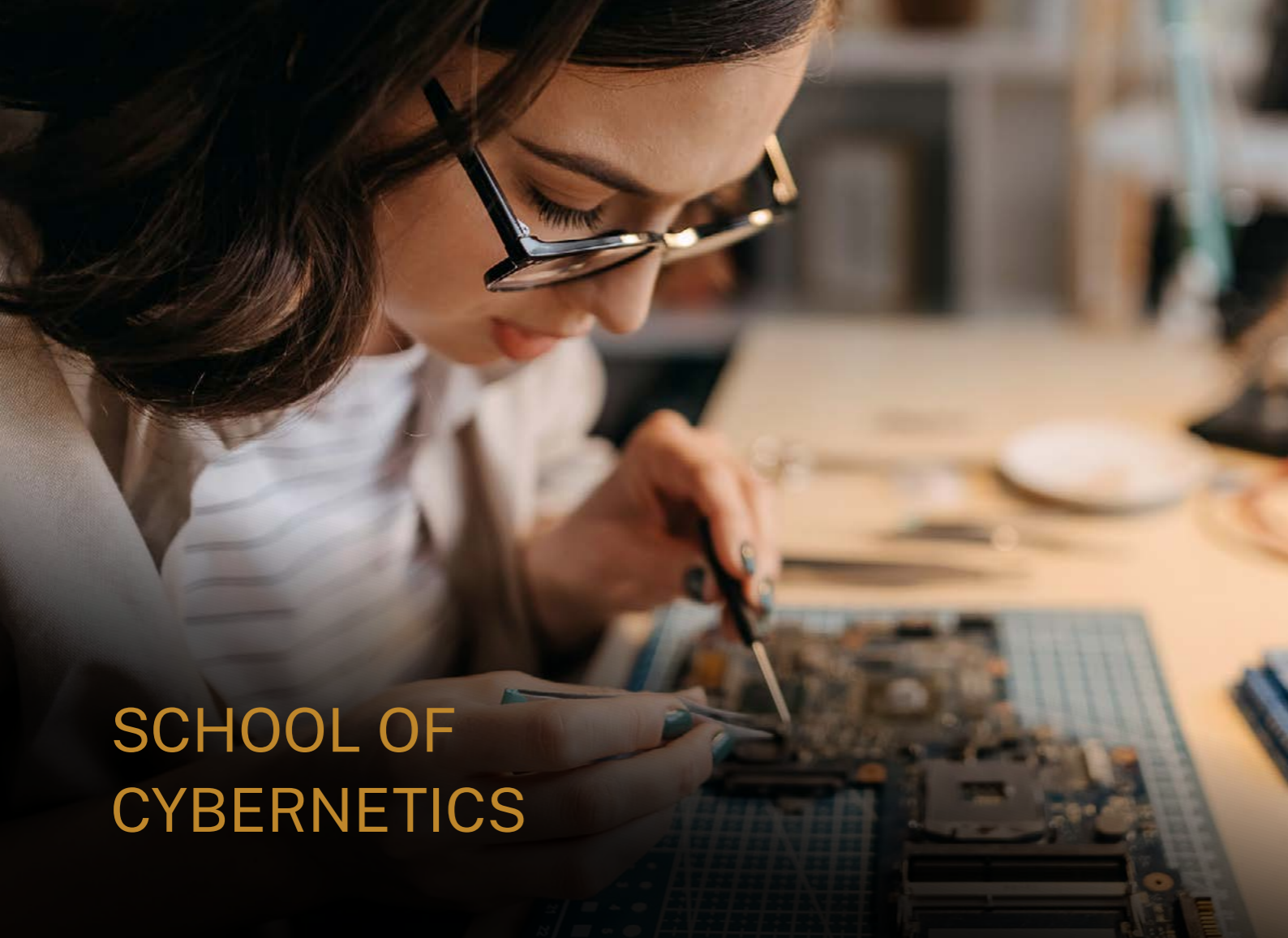
SCHOOL OF CYBERNETICS

At the ANU School of Cybernetics we draw on the history of cybernetics and reimagine it for our 21st century challenges. We are a non-traditional school making space for different futures that consider the environment, the people within it, and how technology can help, rather than harm. Futures that are safe, sustainable, and responsible.

Cybernetics is the science of control and communication in complex systems such as information and computing, the human body, ecological systems, government, and human cultures.

The ANU School of Cybernetics is establishing cybernetics as an important tool for navigating major societal transformations through capability building, policy development, and safe, sustainable, and responsible approaches to new technological systems, such as Artificial Intelligence and the metaverse.

We are building a new generation of practitioners who will shape a future that we want, both through and with technology.

"

Through the master's degree, I was able to further develop my own thinking about the challenges we face in relation to technology and the unique opportunities Applied Cybernetics provides to make meaningful contributions to this work.

Julian Vido

Master of Applied Cybernetics

"

EXPLORE YOUR STUDY OPTIONS

Master of Applied Cybernetics

Duration: 1 years full-time | CRICOS: 103368M | Scholarships are available

The ANU Master of Applied Cybernetics is the first of its kind and the only Master's program in applied cybernetics in the world. We offer a once-in-a-lifetime opportunity to be a part of a new generation of practitioners creating the skills and knowledge our world needs to ensure new technological systems are safe, sustainable, and responsible.

The Master of Applied Cybernetics is a

1-year full-time degree, comprised of four courses that interact and reinforce each other. Entry is by competitive application only, and the number of students is strictly limited. We welcome candidates who have pursued non-traditional academic pathways. Our past students come from diverse backgrounds, including lawyers, policymakers, start-up founders, activists, journalists, and artists.

Master of Applied Cybernetics (Advanced)

Duration: 1.5 years full-time | CRICOS: 103369K

The Master of Applied Cybernetics (Advanced) program allows for students to become cybernetic practitioners through coursework whilst enhancing these skills in completing a longer independent or outside organisation based research industry project.

This program extends the Masters of Applied Cybernetics to 1.5 years full time study (or part-time equivalent), giving the student the opportunity to conduct an independent or external organisation-based research project and produce a research paper.
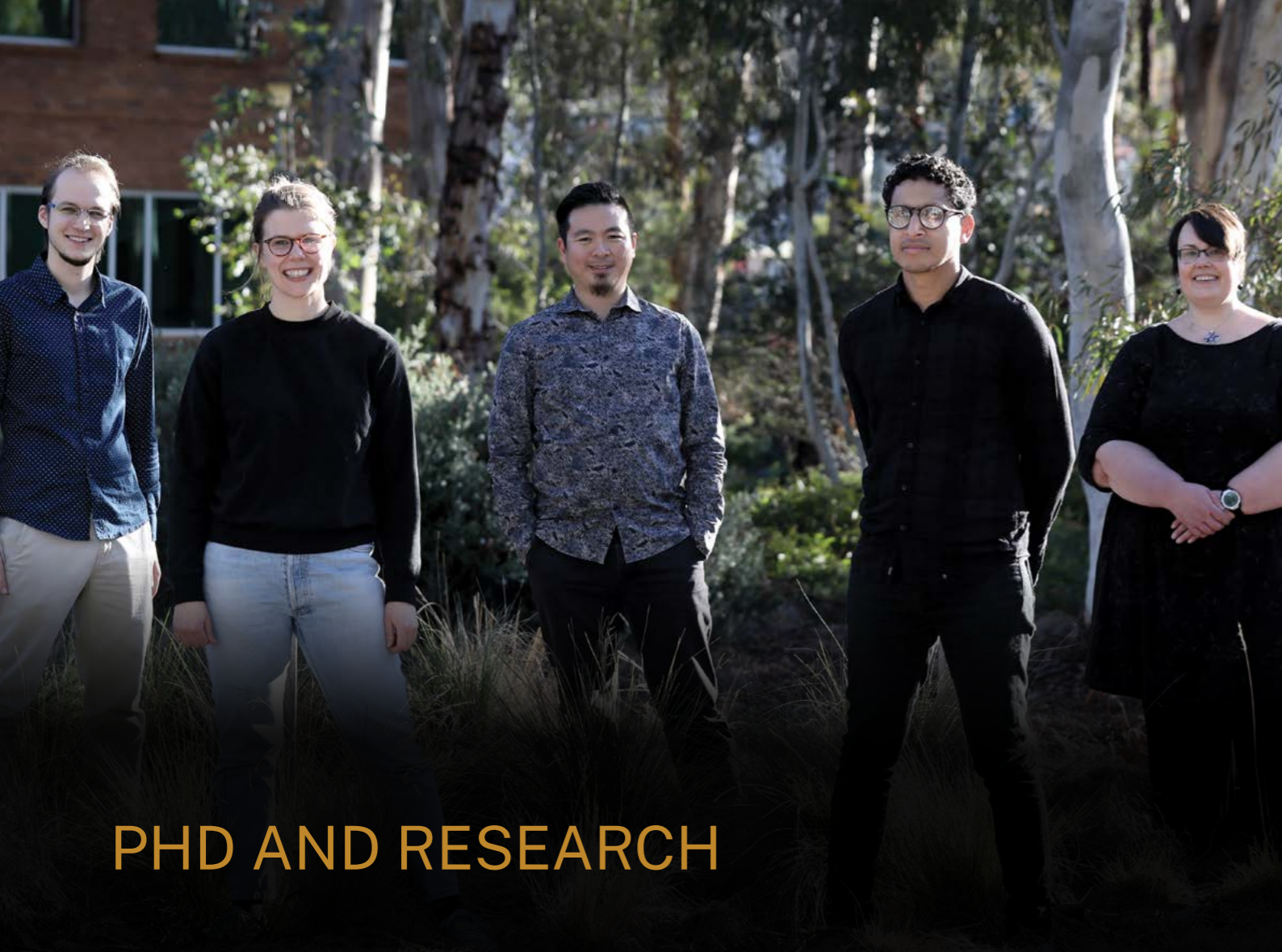
PHD AND RESEARCH

Future fellows

As a Future Fellow at the ANU College of Engineering, Computing and Cybernetics, you will join a dynamic and pioneering research environment where you can pursue your interests alongside some of the world's brightest and most innovative researchers. You'll get an opportunity to collaborate with an extensive network of academic, government, and industry partners in Australia and worldwide, and gain the skills to enable change in today's complex world.

Come and join our research community!

PhD

The School of Cybernetics PhD Program continues the innovation of our Master of Applied Cybernetics in pioneering a new approach to engineering and technology design, development, adoption, and regulation that combines technological, human and ecological systems towards creating a better world. The program is also a standard-bearer for equity and inclusion in research training. PhD candidates contribute to the generation of knowledge in defining and shaping systems cybernetically in the 21st century. Graduates are skilled in cybernetic analysis of complex open systems, in generating potential future states for such systems, and in how we may create conditions, relationships, and dynamics to realise them. The 3.5 year program is cohort-based, and team taught.

Find out more
cybernetics.anu.edu.au/education/phd

“
I thought laws were the best point of intervention to address social harm, then I realised technological systems are equally, and increasingly, important. Bias and marginalisation are not created by technology, but they can be amplified or accelerated by technology. My focus shifted, and the trajectory of my life transformed.
”

Ned Cooper
Master of Applied Cybernetics
PhD Candidate School of Cybernetics

“
As a Te Aitanga a Hauiti, Ngati Porou, Te Arawa woman from Aotearoa I was drawn to the Master of Applied Cybernetics as I'm interested in disrupting conventional innovation practices and exploring how the intersection between technology and First Nations knowledge and practice could achieve this.
”

Michelle Jasper
Master of Applied Cybernetics
PhD Candidate School of Cybernetics

LEARNING EXPERIENCES

"We can't predict all the technologies of the future. But we can give people the skills to lead through them." – Maia Gould, Cybernetic Engagement Lead.

The School of Cybernetics also offers short one-day or week long custom Learning Experiences (LX) helping individuals and organisations to navigate major societal transformations as emerging technologies scale.

Our LX series offers a new way of learning aimed at preparing today's leaders, creatives,

and change-makers for an increasingly fast paced technological world. The Navigating Cybernetic Futures series offers more than a technical understanding of emerging technologies – it equips participants with a critical awareness of how these technologies interact with wider cultural, social, economic, political, and ecological systems.

> " The session prompted me to reflect on some of the ways I interact with various stakeholders, from technical IT personnel to broad systems thinkers. The course gave space to consider the unintended nature of activities and the four cybernetic principles will be a useful tool in my job. "

Cybernetic Leadership In-Person Learning Experience Participant from Australian Government Research Organisation

> " The course provided a fresh perspective to my previous learnings in leadership. The tools presented will be especially useful in my current role which is aiming to inspire, educate, inform and lead our organisational exploration of emerging and disruptive technology. "
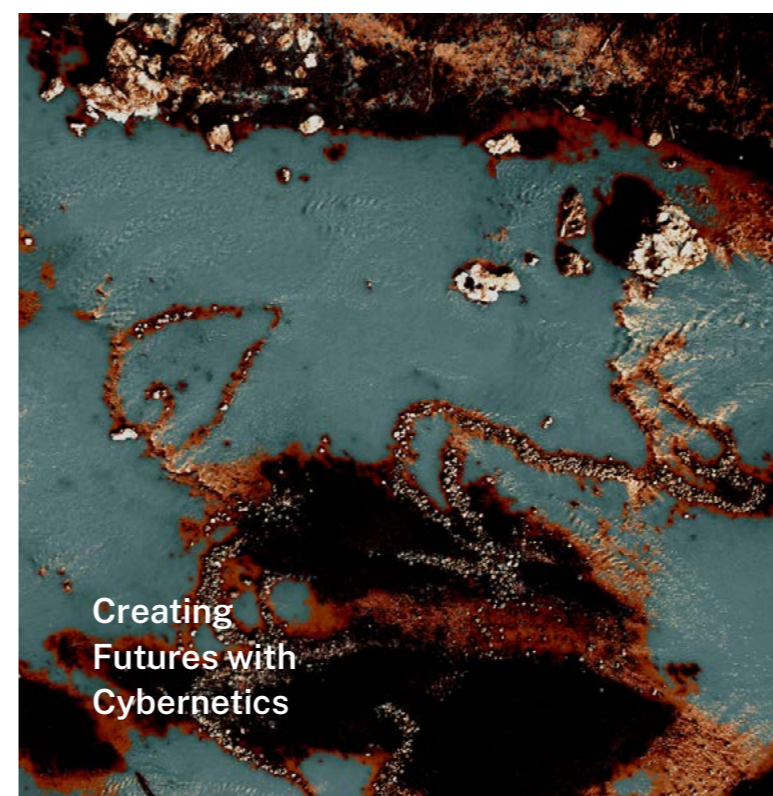
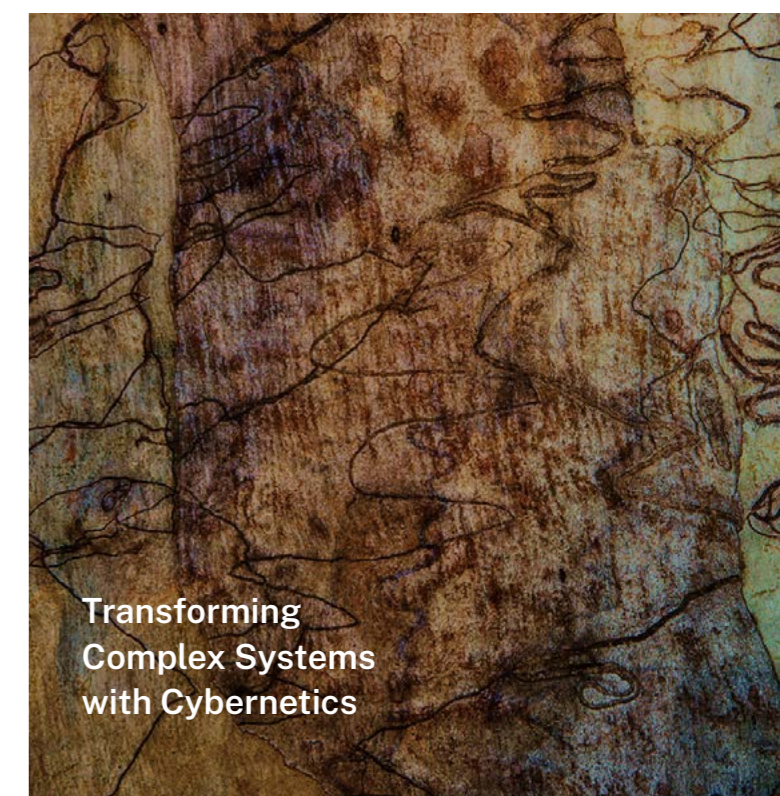Cybernetic Leadership In-Person Learning Experience Participant from Australian Public Service

Decoding AI through Cybernetics
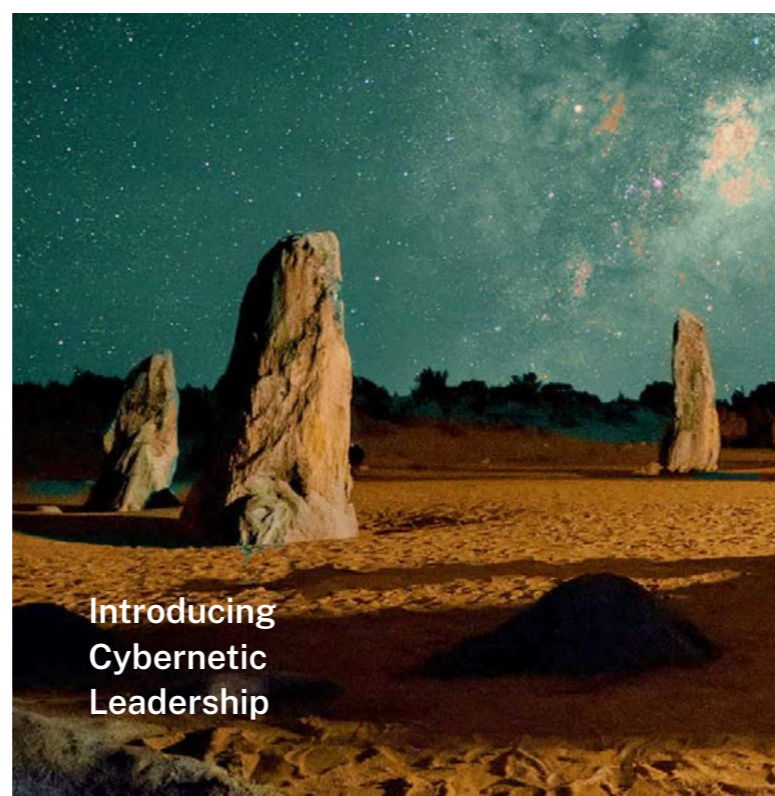
Introducing Cybernetic Leadership

Creating Futures with Cybernetics

Transforming Complex Systems with Cybernetics

Artificial Intelligence is suddenly everywhere. This learning experience will empower participants with a stronger and clearer understanding of AI technologies and their implications and controversies. The program will develop new ways to discuss AI outside the constraints of existing - and often misleading - technological terms and narratives.

Participants will explore expected and unexpected outcomes and interactions between the components of an AI system and wider societal systems. Using cybernetic tools, participants will further consider how to manage the technology across current and future deployment scenarios.

Being a leader in today's tech-driven environment can be tough.

This one-day learning experience offers leaders a chance to learn ways to navigate these unfamiliar waters. Join us at the School of Cybernetics as we develop leaders' capabilities in self-reflection and systemic thinking, preparing them to meet the challenges of the future.

Drawing on interdisciplinary research, the learning experience guides learners through cybernetic leadership principles for the 21st century that are immediately and pragmatically applicable to their own contexts.

In a time of accelerating change, we are increasingly responsible for creating a shared future in which emerging technologies and technological systems are safe, inclusive, and sustainable. Understanding the different histories of and pathways through a system allows us to imagine different possibilities and risks.

This one-day learning experience will guide participants through the challenge of imagining and influencing the development of new systems. Drawing upon the ground-breaking work of the School's Cybernetic Imaginations Residents and the Australian Cybernetic exhibition, the program immerses participants in storytelling and creative practice, guiding them through the uncomfortable and the unexpected as they reimagine the future and their role in crafting it.

The 'system' is one of the most important concepts and realities underpinning our 21st century world.

This one-day learning experience offers participants a chance to learn new perspectives and approaches for understanding difficult and persistent systemic challenges. Participants will apply cybernetic tools to illuminate a system, its dynamics and trajectories, and begin to unfold possibilities for effective intervention.

This learning experience aims to demonstrate the practical application of cybernetic principles. It presents a toolkit for participants to integrate into their practice to begin transforming complex systems.

COUSEWORK APPLICATIONS

Make sure you meet our admission requirements before you apply. When we receive your application, we'll automatically consider you for a range of scholarships.

How to apply

You can list up to five degrees on your application. Make sure you do this in order of preference as we only send offers for the highest eligible degree.

Applying is free. ANU takes approximately 4–6 weeks to assess applications – and then releases offers on a rolling basis. We automatically consider applicants for some scholarships; however, you may need to apply for others separately.

Find a scholarship

View all ANU domestic postgraduate scholarships and find out how to apply for them.

Find a scholarship
study.anu.edu.au/scholarships/
find-scholarship

Apply directly to ANU

Create an account in the ANU postgraduate application portal. Upload your details and follow the prompts to navigate your way through each step. You can log out and go back to your application at any time before submitting it.

Go to the ANU application portal

Find your degree

Browse our coursework and research degrees. Discover GPA requirements, prerequisite subjects and any other admissions requirements you'll need to meet before applying to ANU.

Search programs and courses

HIGHER DEGREES BY RESEARCH (HDR) APPLICATIONS

When we receive your application, we will automatically consider you for a research scholarship.

Find a supervisor

Finding the right supervisor is the most important first step of your higher degree by research journey. Your supervisor will guide you throughout your research program.

Applying for a PhD or MPhil is a bit like applying for a job, so it's a good idea to approach your supervisor in a professional manner. Take the time to explore their research and publications before you get in touch. Write a brief email introducing yourself and why you will be a good fit as an HDR candidate in their research area.

Researchers at ANU belong to one of seven academic colleges. Start by exploring the ones in the college whose disciplines are most relevant to you. You may find that more than one college can offer you supervision in your study area.

In most areas, you must have the approval of a potential supervisor before we can consider your application. Talk to your school or college to find out if you need to meet this requirement before you apply. They may also have their own application process for you to follow.

How to apply

Apply through the ANU postgraduate application portal at any time of the year. Make sure that you do this within the deadline of any scholarships you may be considering.

We take approximately 6–8 weeks to assess applications. This could take longer if we're also considering you for a HDR scholarship.

Start your research application

Login to the ANU application portal. It's free! Once you register, you can log out and go back to your application at any time.
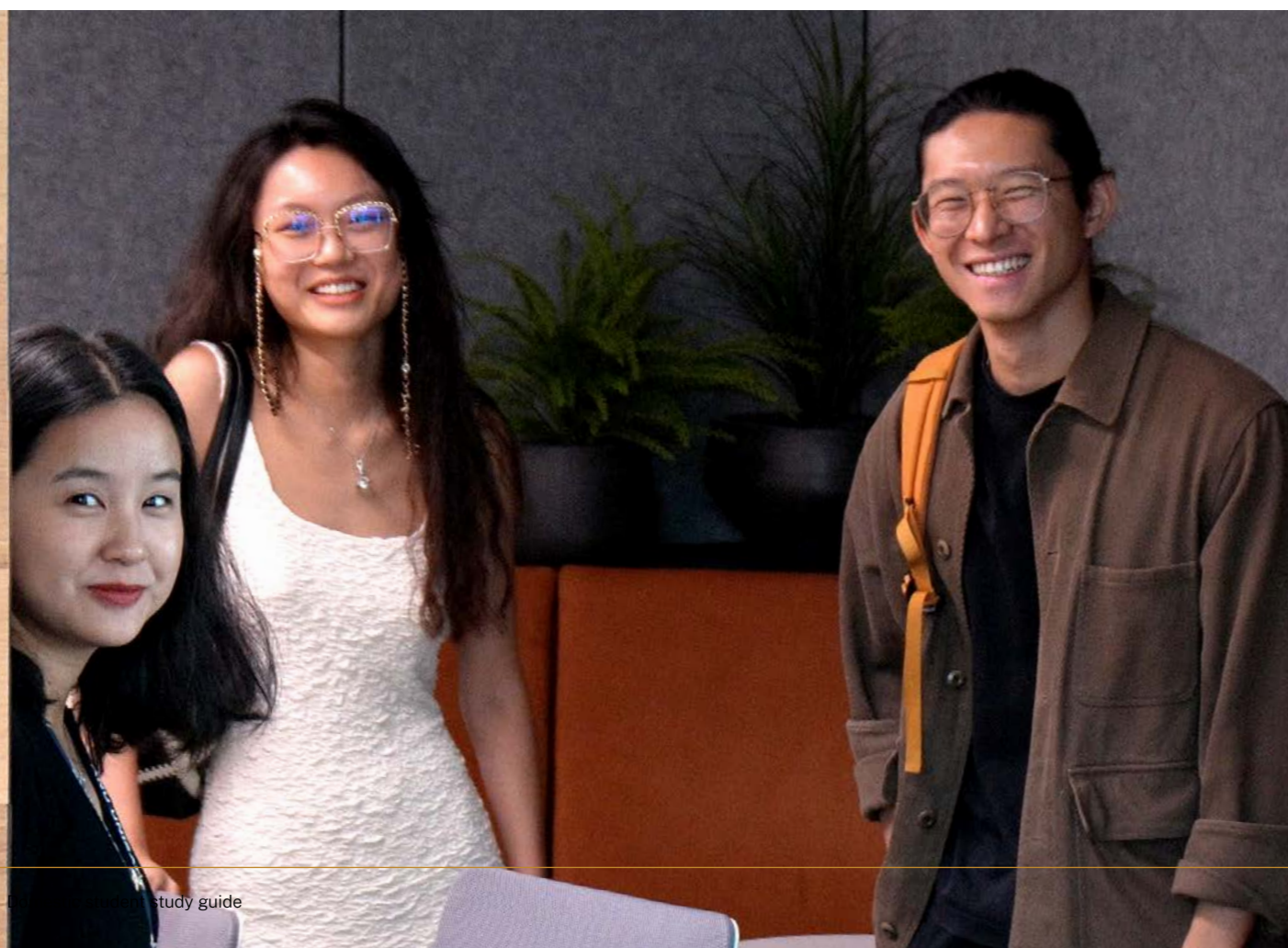
Go to the ANU application portal

Learn more about HDR admission

Find out how to apply for a research degree at ANU that could see you contributing substantially to your field or discipline.

Follow the steps

SUPPORT ON YOUR JOURNEY

Scholarships

Build your future with our help. ANU scholarship opportunities cater to students from various backgrounds and abilities. You can be automatically considered for some scholarships when you apply.

Whether you are looking for financial support to pursue further studies, or to assist with on-campus accommodation, ANU had scholarship opportunities for you and your situation. Our scholarships recognise a range of circumstances including diverse backgrounds, accessibility and academic merit.

ANU also offers scholarships that support unique challenges and experiences. Start by viewing all ANU domestic postgraduate scholarships and find out how to apply for them.

Find a scholarship
study.anu.edu.au/scholarships/
find-scholarship
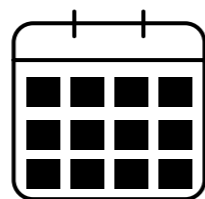
Get in touch

Message a student adviser on WhatsApp

Message a student adviser on WhatsApp. We're available during local Canberra time Mon-Fri 9am-5pm.
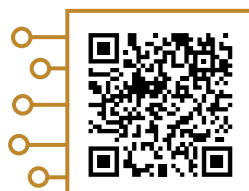
Book a one-on-one chat or campus tour

Let us know what times work for you and we will book in a Teams call.

Ask us anything

Join our monthly information sessions to have all your questions answered! Learn about life on campus, facilities, managing work alongside studies and employment opportunities.

Accommodation

ANU has a strong and vibrant postgraduate community. Students are either housed in specialised postgraduate residences or at other residences where there is a balanced mix of undergraduate and postgraduate students.

Our specialised postgraduate residences offer a vibrant mix of students from different countries and from programs across the university. Postgraduate residences on and off campus provide the opportunity to make connections with your peers and grow life-long friendships.

Find out more
study.anu.edu.au/accommodation/
other-accommodation-options/
postgraduate-accommodation

Careers & opportunities

ANU Careers & Employability is here to help you maximise your employment potential and support you in your job hunting journey. We provide current students and new graduates with a range of in-person and online services that can help you with career planning and decision-making. These services can support you in your search for a new job or to reach the next level in your existing role.

Look out also for upcoming workshops on job applications, career planning and much more.

Find out more
anu.edu.au/students/careers-
opportunities/careers