Master of Applied Cybernetics

2024 application pack
The School of Cybernetics is a non-traditional School based in the College of Engineering, Computing and Cybernetics at the Australian National University; we are making space for different futures.

Established in 2021, the School of Cybernetics is the Australian National University’s first new School in nearly half a century.

We are establishing cybernetics as an important tool for navigating major societal transformations, through capability building, policy development and safe, sustainable and responsible approaches to new systems.

Our goal is to build a new generation of cybernetic practitioners who will shape a future that we want through and with technology.

The ANU Master of Applied Cybernetics is our flagship education program. It is the first of its kind and the only Master’s program in applied cybernetics in the world. The program offers a transformational education experience by drawing upon high-impact research and creating meaningful engagements with industry and the broader community.

Our graduated Master’s students have gone on to senior leadership roles in digital, data and AI in Federal and State governments, non-profits and industry, as well as on to PhDs at the ANU and other leading global universities.

Entry to the program is by competitive application only, and the number of students is strictly limited to under 20. Scholarships are available to remove barriers to entry and encourage diversity through recognition of individual background, education, and industry experience.

We welcome applications from candidates who come from diverse backgrounds and disciplines, including those who have pursued non-traditional academic pathways but have met the professional experience levels of assumed knowledge.

This application pack provides details on how to apply for one of the limited number of positions on this degree program in 2024.

### At a glance

**Admission**
- Competitive entry (see page 4), small cohort (approx. 12-20 students).

**Length**
- 1 year for Master of Applied Cybernetics or 1.5 years for Master of Applied Cybernetics (Advanced).
  - Full-time on ANU campus from Feb 2024 – Nov 2024.

**Fees**
- Indicative fees for 2024 are:
  - Domestic: $37,710 and
  - International: $50,760 per annum.

**Application time**
- 05 June – 25 August, 12pm

**Contact us**
- cybernetics@anu.edu.au
- +61 2 6125 8121
We are recruiting a small cohort of students. Successful applicants will undertake the program over one year commencing in February 2024 through to November 2024. Courses are delivered full-time and in-person on the ANU campus in Canberra, Australia.

Students who would like to complete a larger research and/or industry project in 2025 may enrol in the Master of Applied Cybernetics (Advanced), which extends the period of study to 18 months full-time equivalent.

Criteria for selection

- Criteria for entry into the Master of Applied Cybernetics is based on a competitive two-stage selection process. Candidates will be assessed based on the following criteria:
  - A track record of outputs illustrating intellectual leadership in your field, such as, but not limited to:
    - Awards, grants and projects, publications, media, policy briefings, outreach activities, guidelines and training delivered, IP, products and product concepts created.
  - A demonstrated ability to communicate complex ideas to a range of audiences across disciplines, media and sectors.
  - A demonstrated ability to operate with a high degree of flexibility and openness to calculated risk-taking.
  - Demonstrated determination and resilience, and aptitude for working in uncertain and fast-changing environments.
  - Demonstrated aptitude for transdisciplinary, mission-driven collaboration and ability to operate across disciplinary silos.
  - Ability to think laterally and critically.
  - Individual and/or group-based professional / entrepreneurial / community service contributions.
  - (Highly regarded) Experience in one or multiple of these fields: education, policy, technology, business, the arts, science, engineering, computing, social sciences, and entrepreneurship.

Assumed level of knowledge

Although not a formal entry requirement, the following level of cognate study in any discipline, or relevant professional experience is assumed:

- A Bachelor degree with honours or international equivalent, or higher qualification, and GPA of 5/7; or

- A Bachelor degree or international equivalent with a minimum GPA of 5/7 and a minimum of 3 years full-time, relevant work experience at ANZSCO Skill Level 1; or

- GMAT (Graduate Management Admission Test), completed no more than 5 years before the time of application, with a minimum score of 600 (minimum 5.0 in Analytical Writing) and a minimum of 8 years full-time, relevant work experience; or

- GRE General test, completed no more than 5 years before the time of application, with a minimum score of 155 for Verbal Reasoning, 155 for Quantitative Reasoning and 4.0 in Analytical Writing and a minimum of 8 years full-time, relevant work experience; or

- A minimum of 15 years of full-time, relevant work experience at ANZSCO Skill Level 1.

In addition, candidates must:

- Be ready to start in February 2024 and commit to full-time, in-person studies on the ANU campus until November 2024.
- Meet the University's English Language Admission Requirements for students.
Application process

Applications will open on 05 June 2023 and close on 12:00pm on 25 August 2023. The competitive selection process will include a review of documentary submissions and interviews with applicants.

We will contact short-listed applicants by early September to arrange interviews. Domestic applicants must be available to participate in an in-person interview. Overseas applicants are given a virtual interview option.

What to submit

- Most recent CV / resumé;
  - A cover letter (max 2 A4 pages)
  - addressing admission requirements and,
  - A Portfolio Piece that succinctly demonstrates your interest in the program.

Your portfolio piece must be your own work and can be in any format – e.g., a short piece of writing, an artwork, a video recording, a piece of software, a poem, a blueprint, etc. – we encourage you to be creative!

Click here to submit

We recommend you contact us early if your portfolio piece is a large file or if you require any form of assistance.

- 5 June, 2023
  Applications open

- 15 August, 4-5pm 2023
  Online information session

- 25 August, 12pm, 2023
  Applications close

- Early-September, 2023
  Applicants contacted

- 11-15 September, 2023
  Applicant interviews

- Early October, 2023
  Offers made

- Late-October, 2023
  Acceptance of offers by applicants
Scholarships

All applicants will be automatically considered for a School of Cybernetics scholarship to help with the cost of their studies. Scholarship recipients will be notified upon successful admission by the ANU into the Master of Applied Cybernetics.

Candidates may also apply for one of the following scholarships if they meet the eligibility criteria as listed on the ANU Scholarships page.

Please note, scholarship recipients may only receive one of the scholarships attached to the Master of Applied Cybernetics.

Florence Violet McKenzie Master of Applied Cybernetics scholarships

This scholarship honours the legacy of Florence Violet McKenzie. The objective of the Award is to support students who are undertaking the School of Cybernetics’ Master of Applied Cybernetics.

The Award aims to remove barriers to entry and to encourage diversity through recognition of individual background, education, industry experience and aspiration.

The award will be given to a successful applicant who has never received an undergraduate degree but can demonstrate appropriate experience that is relevant to the field of cybernetics.

School of Cybernetics Scholarship for Indigenous Students

To accelerate Indigenous participation in our School, we are also offering a targeted School of Cybernetics Indigenous scholarship. The objective of the Award is to support indigenous students who are undertaking the School of Cybernetics Master of Applied Cybernetics.

The Award aims to help build the recipient’s leadership skills in technology, business and community areas, and to develop a mentoring relationship with prominent professionals in the private and public sectors.

To apply for these scholarships, indicate your intent to be considered in the online application form.

The Bill Hickson & Engineers Australia Scholarship for Masters in Applied Cybernetics

The Bill Hickson & Engineers Australia Scholarship for Master in Applied Cybernetics will be awarded to successful applicants to the 2024 program who have an undergraduate degree in engineering and are eligible for membership to the Institution for Engineers Australia.
Program outline

Students are expected to dedicate approximately 40 hours per week to the program and commit to full-time, in-person studies for one-year (subject to the usual university holiday breaks). Around 20 hours per week will be in-class contact hours; the remaining hours per week will be reading, listening, reflecting, viewing, discussing and writing, as well as individual and group projects.

Program structure

The Master of Applied Cybernetics is comprised of four main courses that interact and reinforce each other.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Build</th>
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<tbody>
<tr>
<td>Semester 1 2024</td>
<td>12 units</td>
</tr>
<tr>
<td>20 hours per week</td>
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This course will start to create cybernetic practitioners who can critically examine new and emerging technological constellations and the questions they raise for human society.

It challenges participants to (a) engage with technological detail and understand the building blocks of the technologies around us, (b) integrate multiple disciplinary perspectives to move from a focus on solving problems to a focus on framing critical questions about cyber-physical systems (CPS).

This course will give participants a hands-on understanding of new and emerging technological constellations and their separate components. Participants will complete a range of lab-based projects to develop an understanding of systems as designed objects which embody values.

They will also gain confidence in designing, building and understanding learnt in ‘Questions’ and ‘Practice’. Through learning-by-doing, participants will complement their existing skillsets and gain the mastery required to build and guide teams developing and understanding new and emerging technologies.

<table>
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<tr>
<th>Practice</th>
<th>Professional Experience</th>
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<tr>
<td>Semester 1 2024</td>
<td>12 units</td>
</tr>
<tr>
<td>20 hours per week</td>
<td>140 hours total as negotiated with placement organisation</td>
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This course uses a case-study approach focusing on emerging CPS. It is designed to (a) provide participants with an appreciation of the complexity and dynamics of the settings in which CPS are planned, designed, built, operated and maintained, and (b) give participants a practical grounding in new and existing approaches they could use to analyse and intervene throughout the CPS lifecycle.

Building on the critical framework established in ‘Questions’, this course challenges participants to explore the key questions of autonomy, agency and assurance, plus how we decide metrics for success and what the interface looks like when planning, designing, building, operating and maintaining cyber-physical systems.

This course will enable students to develop competencies expected of professionals working in business, government, academia or the broader community. There may be internship opportunities available, for which students can apply. A holistic selection process will be used to match the best applicant for each opportunity.

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<thead>
<tr>
<th>Master of Applied Cybernetics (Advanced)</th>
<th>Capstone Project</th>
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<tr>
<td>Courses as above plus the following course.</td>
<td>Capstone research and/or industry projects will be established following negotiations between the student, ANU and the potential host organisations or project sponsors, before being offered to students along with other opportunities.</td>
</tr>
<tr>
<td>Capstone Project</td>
<td></td>
</tr>
<tr>
<td>Semester 1 2025 (neogitable)</td>
<td>24 units</td>
</tr>
<tr>
<td>40 hours per week</td>
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Frequently asked questions

Where and when can I apply for the 2024 ANU Master of Applied Cybernetics?

You can apply on our website: cybernetics.anu.edu.au.

Applications will open on 05 June 2023 and close on 12:00pm on 25 August 2023. The selection and interview process will happen from September.

I don’t meet the assumed level of knowledge for the Master of Applied Cybernetics. Should I apply?

Yes. The selection panel will review all applications received and make informed decisions on the basis of the information provided by candidates and their suitability against the selection criteria.

If I want to pursue extended research after my Master’s program, what options do I have?

The Master of Applied Cybernetics is a one-year, 48-unit degree. For students seeking an additional research experience, including an extended industry placement, they may pursue a Master of Applied Cybernetics (Advanced) and take an additional 24-unit research project course. This can be taken individually over a period negotiated with project supervisors. Students keen to pursue a PhD but who have not previously undertaken large research projects are encouraged to pursue the Advanced track. The Master’s program is mandatory for those wanting to do their PhD at the School of Cybernetics.

What are the fees for the Master of Applied Cybernetics?

Estimated fees for students commencing in 2024:
For Master of Applied Cybernetics (1 year; 48 units)
Domestic: $37,710 and International: $50,760.

The schedule of fees is regularly updated. Check the Master of Applied Cybernetics’ most recent schedule of fees on the Program and Courses page of the Australian National University website.

How will you select the 2024 cohort for the ANU Master of Applied Cybernetics?

Applications will be reviewed against the assumed level of knowledge and criteria for selection (listed under Student Profile). Applications will then be ranked. If you have access and equity considerations that require tailored support, we would be happy to assist. Equity and access scholarships are available, please review the scholarship section.

Contact us at cybernetics@anu.edu.au or +61 2 6125 8121.

Will students receive a scholarship for living expenses?

All applicants will be considered for a scholarship if they are accepted into the program. More information on scholarships is available in the Application Pack under the Scholarships section.

How many students will you accept for 2024?

We will admit up to 20 students in our next cohort.
Will I need to commit 40 hours a week every week?

You will need to commit approximately 40 hours per week to the program during the ANU Semesters 1 & 2 2024, as follows:

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<th>Academic Period</th>
<th>Activity - Off campus delivery</th>
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<td>Winter 2024 or Summer 2025</td>
<td>Student time for professional experience (4 weeks full time equivalent)</td>
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What if I can’t relocate to Canberra for reasons beyond my control?

The nature of teaching and learning in this program requires in-person delivery. Unfortunately, we cannot hold your place in the program if you are unable to move to Canberra, Australia.

Is it possible to maintain full-time or part-time work during this program provided it doesn’t clash with class contact hours?

Due to the nature of the intensive program, group-work requirements and additional non-coursework activities, it will be highly challenging to keep up with external work commitments.

What happens if I get sick or am no longer able to commit to the ANU Master of Applied Cybernetics due to an unforeseen change in circumstances?

We realise that life sometimes gets in the way of best-laid plans. If your circumstances change and you are no longer able to commit to the ANU Master of Applied Cybernetics, the School of Cybernetics team will work with you to find the best way forward based on your situation.

I cannot meet all the time commitments outlined in the application pack, is it OK to miss out on some of the courses or activities?

No. Students are required to study full-time and in-person on the ANU campus in Canberra, Australian Capital Territory.

Will you be running an online information session?

Yes. Our teaching team will be hosting an online information session 4-5pm AEST Tuesday 15 August, 2023 which will run through what to expect from the course, answer any questions you may have, and provide practical advice on the application process. Please make sure that you are subscribed to our mailing list to ensure you receive the event details for this session or check our website for the latest updates.

I would like to talk or email the school about further questions I have

Of course, our school office email is cybernetics@anu.edu.au or you can phone us on +61 2 6125 8121.
Connect

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T: +61 2 6125 8121
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