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Australia’s leading university

Be recognised with in-demand qualifications from Australia’s top university.

The Australian National University (ANU) is one of the world’s foremost research universities.

Distinguished by its relentless pursuit of excellence, the University attracts leading academics and outstanding students from Australia and around the world.

As the specially-chartered national university, the University conducts research at the highest levels in all of its colleges, and offers a unique research-led education to undergraduate and postgraduate students as well as postdoctoral fellows.

The University has strong links with leading research institutions in Australia and overseas. It is a founding member of the International Alliance of Research Universities, a co-operative network of ten eminent international research-intensive universities around the world.

At the ANU College of Engineering and Computer Science, you will have the opportunity to join an exceptional teaching and learning environment, offering some of the best engineering and computer science programs in the world.

You will have the opportunity to undertake ground-breaking research, engage with world-class academics, and connect with a vibrant student cohort.

Through modern and unique programs we encourage our students to build a diverse, multidisciplinary skillset that will prepare them to successfully enter a changing job market.

We have an extensive network of academic, government and industry partners in Australia, Europe, the Asia Pacific and North America.

Through these collaborations and partnerships, our academics and students develop world-class innovations that contribute to a vibrant world economy and drive technological advancement.
ANU is ranked #1 in Australia and #24 in the world.¹

1:14 staff-to-student ratio

5 star rating for staff qualification

88 per cent of ANU staff hold a PhD, Doctorate by research or Doctorate by coursework.³

Six Nobel Laureates

The highest number of all Australian universities.

ANU is ranked #5 in Australia for Engineering and Technology.²

Student figures
9,719 Postgraduate Coursework, 2,815 Higher Degree Research, 12,827 Undergraduate.
Across the world, demand for engineering and computer science graduates is escalating in industry, business and government.

The impact of technology has been powerful and far-reaching and its practitioners have changed our world.

Modern engineers and computer scientists play an integral role in meeting the grand challenges of our time, including climate change, humanitarian crises and protecting our natural resources.

Thanks to competitive salaries and exciting opportunities, professionals working in these fields report some of the highest levels of job satisfaction globally (Engineers Australia, 2012).

A postgraduate program in engineering or computing will reward you while you study, and long after. You will be challenged, placed at the forefront of technological innovation, and have the opportunity to develop transferable skills that can be applied in a range of professional contexts.

The job market is continually changing. Traditional vocations are disappearing or transforming, while new jobs are emerging in response to contemporary needs. Studying engineering or computing will provide you with skills and attributes that will remain relevant and keep you competitive in the evolving future job market.

Future-proof yourself with a postgraduate program in engineering or computing.

“(...)“

We have partnerships and collaborations with institutions across the world and in Australia. These partnerships span from international renowned universities, industry leaders and humanitarian organisations. These connections greatly benefit our education and research whilst allowing us to contribute back to the community.

Professor Elanor Huntington
Dean, ANU College of Engineering and Computer Science
ANU has embarked on a major initiative to reimagine the future of engineering and computing.

The Reimagine project aims to get us thinking about what our world will be like in 2050, when we are completely embedded in both a digital and physical environment, and to encourage us to take charge and shape a new intellectual agenda.

It is a unique opportunity to reimagine the future of engineering and computing in the context of our current and future society.

We are committed to significantly increasing scale and capacity in order to frame new thinking around, and solutions to, some of the world’s most complex human and technological challenges.

Through the Reimagine project, the ANU College of Engineering and Computer Science will grow nearly three-fold, inspiring a new generation of creative thinkers to these areas, challenging historic biases through the inclusive environment we create together.

This is an exciting time to be studying with us, join us as we reimagine the future.

For more information visit cece.anu.edu.au/reimagine
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* Our postgraduate programs allow you to study part time if you are a domestic student.
** Universities Admission Centre (UAC): uac.edu.au
CREDIT STATUS

Two year globally recognised Master degree

You have an undergraduate degree in an unrelated field

You have an undergraduate degree in a related field
Up to six months credit (24 units)

You have an undergraduate degree with honours in a related field
OR a graduate qualification in a related field
Up to 12 months credit (48 units)

Program specific credit information can be found at programsandcourses.anu.edu.au
Research School of Electrical, Energy and Materials

Engineering
The Research School of Electrical, Energy and Materials Engineering (RSEEME) at the Australian National University is a creative mix of staff and students that embrace the breadth of engineering professions from materials and manufacturing, to robotics, telecommunications and systems. The culture of the school is highly interdisciplinary and dynamic, leading to internationally recognised research and educational activities. Our research covers a broad range of areas in engineering, including: biomedical, computer vision, materials and manufacturing, robotics, semiconductor, photovoltaic, solar thermal energy and solar cell technologies, systems and control, and telecommunications and signal processing.

The research intensive nature of the school lends itself to a strong cohort of higher degree research students and project students completing innovative work. The small and highly integrated nature of the school means that we provide a dynamic and cross disciplinary research environment in which we incubate new areas of research contributing to the growth of new disciplines and new technology.

The school has built an extensive network of international collaborations with research institutions and industries in Europe, the Asia Pacific and the United States. Several spinoffs, such as Seeing Machines, are now highly successful companies. Key technology developed within the school, such as the Big Dish, provide flagship infrastructure for Australian industry and academia.

Our engineering graduates will have the skills and knowledge to:

- Apply advanced, integrated technical knowledge in their chosen area of engineering and the underpinning sciences and scientific methods.
- Apply Systems Engineering to address complex, multi-disciplinary, real-world engineering problems related to modern digital systems, electrical engineering, optoelectronic systems, renewable energy methods, robotics and mechatronics.
- Identify and critically evaluate current developments and emerging trends within various sectors of engineering.
- Understand the contextual factors that influence professional engineering practice, and identify the potential societal, ethical, and environmental impacts of engineering activities.
- Communicate effectively with colleagues, other engineering professionals and the broader community employing a range of communication, media and tools.
- Engage in independent investigation, critical reflection and lifelong learning to continue to practice at the forefront of the discipline.
- Work effectively and proactively within cross-cultural, multi-disciplinary teams, demonstrating autonomy, ethical conduct, expert judgement, adaptability and responsibility to achieve engineering outcomes at a high standard.
This program will provide you with specialised knowledge and professional engineering skills that will prepare you for a career in information engineering, which is at the heart of modern digital systems. This degree can be applied to microelectronic systems, communication networks, computer vision, audio and acoustic signal processing.

The program includes specialised courses in signal processing, engineering statistics, wireless communications, embedded systems and information theory. You can also select electives from across the University or extend your technical expertise into related areas of data analytics, computer vision and robotics.

The program builds on the ANU interdisciplinary engineering focus and research expertise to equip you with the skills to address complex multidisciplinary problems, while providing technical knowledge in digital systems and telecommunications engineering.

Entry requirements*

A Bachelor of Engineering, Bachelor of Engineering with Honours or international equivalent with a minimum GPA of 5/7 and a minimum of 1 course in Digital Communications or Digital Systems.

All applicants must meet the University's English Language Admission Requirements for Students.

Cognate disciplines


Credit exemption/status

Eligible students may be awarded up to one year (50 per cent) of status credit.

This may include students:

> who have completed a Masters in Engineering
> who have a High Distinction average (or equivalent) in a Bachelor degree in Engineering
> who have a Distinction average in an ANU Bachelor of Engineering (Honours)
> with an appropriate combination of relevant work experience and qualification.

* Admission requirements for entry in 2020 may be subject to change. Please visit programsandcourses.anu.edu.au for any changes in entrance requirements.
This program will provide you with the technical knowledge and professional skills that prepare you for a career in the extensive field of electrical engineering.

This program will introduce you to the broad area of electrical engineering with courses in systems engineering, electronics and control systems. You will also gain advanced technical knowledge in the complementary areas of power systems, renewable energy, telecommunication systems and mechatronic systems through specialised courses in these fields. You will also be able to select computer science courses, or University-wide elective courses.

The program builds on the ANU interdisciplinary engineering focus and research expertise which addresses complex multidisciplinary problems and provides advanced technical knowledge.

**Entry requirements***

A Bachelor of Engineering, Bachelor of Engineering with Honours or international equivalent with a minimum GPA of 5/7.

All applicants must meet the University’s English Language Admission Requirements for Students.

**Cognate disciplines**


**Credit exemption/status**

Eligible students may be awarded up to one year (50 per cent) of status credit.)

This may include students:

- who have completed a Masters in Engineering, or
- who have a High Distinction average (or equivalent) in a Bachelor degree in Engineering, or
- who have a Distinction average in an ANU Bachelor of Engineering (Honours), or
- with an appropriate combination of relevant work experience and qualification.

* Admission requirements for entry in 2020 may be subject to change. Please visit programsandcourses.anu.edu.au for any changes in entrance requirements.

**Degree structure**

The Master of Engineering in Electrical Engineering requires the completion of 96 units, which must consist of:

**48 units** from completion of the following compulsory courses:

- ENGN6250 Professional Practice 1
- ENGN8260 Professional Practice 2
- ENGN8100 Introduction to Systems Engineering
- ENGN8120 Systems Modelling
- ENGN8170 Group Project (12 units)
- ENGN6625 Power Systems and Power Electronics
- ENGN6223 Control Systems

A minimum of **12 units** from completion of electrical engineering electives.

A minimum of **18 units** from completion of computing electives.

A minimum **24 units** of these from completion of 8000-level electrical engineering or computing electives:

- ENGN8534 Information Theory
- ENGN8535 Engineering Data Analytics
- ENGN8536 Advanced Topics in Mechatronics Systems
- ENGN8537 Embedded Systems and Real Time Digital Signal Processing
- ENGN8538 Probability and Stochastic Processes in Engineering
- ENGN8637 Advanced Topics in Communications and Signal Processing
- ENGN8830 Photovoltaic Power Plants
- ENGN8831 Integration of Renewable Energy into Power Systems and Microgrids
- ENGN8833 Industrial Energy Efficiency and Decarbonisation
- ENGN8625 Advanced Power Systems
- COMP8300 Parallel Systems
- COMP8600 Statistical Machine Learning

A maximum of **6 units** from completion of breadth electives:

- SOCR8201 Introduction to Social Science Methods and Types of Data
- SOCR8202 Using Data to Answer Policy Questions and Evaluate Policy
- SOCR8082 Social Research Practice
- ENVS6015 GIS and Spatial Analysis
- ENVS6021 Participatory Resource Management: Working with Communities and Stakeholders

A maximum of **12 units** from completion of elective courses offered by ANU.
MASTER OF ENGINEERING IN MECHATRONICS

Make yourself career-ready with this two-year qualification in the rapidly growing fields of mechatronics, robotics and intelligent systems.

A mechatronics degree will show you how mechanics, electronics and computing combine to make mechatronic systems with vast applications such as space, medicine, transport and more. Explore how automation and computer vision are changing the way we perceive technology and everyday objects.

This degree with an interdisciplinary engineering focus and research expertise allows you to take specialised courses in advanced control systems, computer vision, robotics, embedded systems, data analytics, grid integration and industrial energy efficiency. You also have the opportunity to select up to two elective courses from across the University.

Entry requirements*

A Bachelor degree or international equivalent in a cognate discipline with a minimum GPA of 5/7.

All applicants must meet the University’s English Language Admission Requirements for Students.

Cognate disciplines

Electrical Engineering, Electronic Engineering, Optoelectronic Engineering, Physics.

Credit exemption/status

Eligible students may be awarded up to one year (50 per cent) of status (credit).

This may include students:

> who have completed a Masters in Engineering, or
> who have a High Distinction average (or equivalent) in a Bachelor degree in Engineering, or
> who have a Distinction average in an ANU Bachelor of Engineering (Honours), or
> with an appropriate combination of relevant work experience and qualification.

Degree structure

The Master of Engineering in Mechatronics requires the completion of 96 units, which must consist of:

54 units from completion of the following compulsory courses:

> ENGN6250 Professional Practice 1
> ENGN8260 Professional Practice 2
> ENGN8100 Introduction to Systems Engineering
> ENGN8120 Systems Modelling
> ENGN8170 Group Project (12 units)
> ENGN6213 Digital Systems and Microprocessors
> ENGN6223 Control Systems
> ENGN6627 Robotics

A minimum of 6 units from completion of technical group 1 courses from the following list:

> ENGN6528 Computer Vision
> COMP6710 Structured Programming
> COMP6730 Programming for Scientists
> ENGN6224 Fluid Mechanics and Heat Transfer
> ENGN6331 Systems Dynamics

A minimum of 24 units from completion of technical group 2 courses from the following list:

> ENGN8535 Engineering Data Analytics
> ENGN8536 Advanced Topics in Mechatronics Systems
> ENGN8537 Embedded Systems and Real Time Digital Signal Processing
> ENGN8538 Probability and Stochastic Processes in Engineering
> ENGN8831 Integration of Renewable Energy into Power Systems and Microgrids
> ENGN8833 Industrial Energy Efficiency and Decarbonisation
> ENGN8224 Advanced Control Systems

A maximum of 12 units from completion of elective courses offered by ANU.

Elective options include the possibility for students to complete an industry-based internship, or an individual research project, subject to availability and individual academic performance.

* Admission requirements for entry in 2020 may be subject to change.
Please visit programsandcourses.anu.edu.au for any changes in entrance requirements.
MASTER OF ENGINEERING IN
PHOTONICS

The interdisciplinary engineering focus and research expertise of this program will provide you with the knowledge and skills required to excel in the field of photonics and optoelectronics.

Learn how to engineer photons to manipulate and store data within digital systems and networks for designing technology of the future.

As a photonics professional, you may work across a wide range of industries, including research and development, telecommunications, sensing and remote detection and biomedical diagnostics.

You will learn about photonics theory and applications through specialised courses in optical physics, fibre optic communications, biophotonics, optical instrumentation for astronomy, and photovoltaics. You will also have the opportunity to select electives from across the University.

Entry requirements*

A Bachelor degree or international equivalent in a cognate discipline with a minimum GPA of 5/7.

All applicants must meet the University's English Language Admission Requirements for Students.

Cognate disciplines

Electrical Engineering, Electronic Engineering, Optoelectronic Engineering, Physics.

Credit exemption/status

Eligible students may be awarded up to one year (50 per cent) of status (credit). This may include students:

> who have completed a Masters in Engineering, or
> who have a High Distinction average (or equivalent) in a Bachelor degree in Engineering, or
> who have a Distinction average in an ANU Bachelor of Engineering (Honours), or
> with an appropriate combination of relevant work experience and qualification.

Degree structure

The Master of Engineering in Photonics requires the completion of 96 units, which must consist of:

78 units from completion of the following compulsory courses:

> ASTR8016 Optical Instrumentation
> ENGN6250 Professional Practice 1
> ENGN6512 Optical Physics
> ENGN6513 Fibre Optics Communication Systems
> ENGN6613 Photonic Sensing Systems
> ENGN8100 Introduction to Systems Engineering
> ENGN8120 Systems Modelling
> ENGN8260 Professional Practice 2
> PHYS8014 Photonics in Biotechnology and Nanotechnology
> PHYS8015 Photonics Laboratory
> PHYS8017 Integrated Optics and Optoelectronics
> PHYS8170 Research Project in Photonics (12 units)

A minimum of 6 units from completion of courses from the following list:

> ENGN6334 Semiconductors
> ENGN6524 Photovoltaic Technologies
> ENGN6626 Digital Communications
> PHYS3035 Fourier Systems and Optics

A maximum of 12 units from completion of elective courses offered by ANU.

Elective options include the possibility for students to complete an industry-based internship, or an individual research project, subject to availability and individual academic performance.

* Admission requirements for entry in 2020 may be subject to change. Please visit programsandcourses.anu.edu.au for any changes in entrance requirements.
This two-year program will provide you with specialised knowledge to excel in a career in the rapidly growing renewable energy industry.

You will be equipped with advanced technical knowledge and practical skills in renewable energy through specialised courses in solar, wind and other renewable technologies, utility-scale systems design, grid integration and energy efficiency.

The program comprises of a compulsory core that provides advanced engineering professional development, specialist knowledge in energy resources and integration of renewable energy.

You will also have the opportunity to select electives from across the University, including courses in the complementary areas of energy policy, law and economics.

Entry requirements*

A Bachelor of Engineering, Bachelor of Engineering with Honours or international equivalent with a minimum GPA of 5/7.

All applicants must meet the University’s English Language Admission Requirements for Students.

Cognate disciplines


Credit exemption/status

Eligible students may be awarded up to one year (50 per cent) of status (credit).

This may include students:

> who have completed a Masters in Engineering, or
> who have a high distinction average (or equivalent) in a Bachelor Degree of Engineering, or
> who have a distinction average in an ANU Bachelor of Engineering (Honours), or
> with an appropriate combination of relevant work experience and qualification.

Degree structure

The Master of Engineering in Renewable Energy requires the completion of 96 units, which must consist of:

A minimum of 42 units of 8000-level courses.

48 units from completion of the following compulsory courses:

> ENGN6250 Professional Practice 1
> ENGN8260 Professional Practice 2
> ENGN8100 Introduction to Systems Engineering
> ENGN8120 Systems Modelling
> ENGN8170 Group Project (12 units)
> ENGN6524 Photovoltaic Technologies
> ENGN6516 Energy Resources and Renewable Technologies
> ENGN8831 Integration of Renewable Energy into Power Systems and Microgrids

A minimum of 12 units from completion of Renewable Energy Generation courses from the following list:

> ENGN6524 Photovoltaic Technologies
> PHYS6301 Wind Energy
> ENGN6525 Solar Thermal Technologies

A minimum of 24 units from completion of courses from the following list:

> ENGN8832 Urban Energy and Energy Efficiency
> ENGN8833 Industrial Energy Efficiency and Decarbonisation
> ENGN8830 Photovoltaic Power Plants
> ENGN6334 Semiconductors
> ENGN6224 Fluid Mechanics and Heat Transfer
> An additional Renewable Energy Generation course from the list above.

A maximum of 12 units from completion of elective courses offered by ANU.

Elective options include the possibility for students to complete an industry-based internship, or an individual research project, subject to availability and individual academic performance.

More than 50% of new electricity capacity installed globally in 2016 was renewable. Our program provides the skills to be at the forefront of this energy revolution, which already employs more than 8 million people worldwide.

Associate Professor Tom White
ANU College of Engineering and Computer Science
Research School of Computer Science
Computer Science is the study of information and computation: algorithms, data and computing systems which accept, store, transform and present data in ways that contribute to knowledge, industry and society. Educational programs in the Research School of Computer Science (RSCS) focus on the disciplines of computer science, computing, information technology and software engineering. They emphasise foundations, creativity, design and engineering processes. Our graduates are widely recognised as solid professionals who are able to drive innovation in industry and government. Our students often win industry awards for their excellent work.

Our research groups and research activities traverse many of the layers of computing technology and computer science. They range from studies on the foundations of algorithms, logic and artificial intelligence to the building of programming language support systems and new interfaces for computer human interaction.

Our researchers have excellent international reputations and collaborate with the best in the world in their disciplines. Our location at ANU creates multidisciplinary interaction with outstanding researchers throughout the college and University. We currently have research collaborations with Data61, Australia’s leading digital research network, and also collaborate with a number of international organisations to provide a unique experience.

Employment opportunities:

Computing jobs are currently projected to be amongst the fastest growing occupations of our time - so there is no shortage of jobs for graduates. This degree can be utilised to access a wider corporate career, as well as a path to further academic undertakings.

Graduates are ideally positioned to take on challenging roles in their chosen sector and become leaders in the 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.
The Graduate Diploma of Computing is a one-year full 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. This program provides its graduates with a pathway into the IT industry or to more advanced study in the computing discipline.

The Graduate Diploma of Computing gives students a strong foundational knowledge and skills in problem solving, programming and the mathematics required to continue with more advanced study in the computing discipline or to acquire and develop entry level skills and knowledge. The program provides students with the opportunity to investigate a wide range of specialist areas which can be used as the basis for further study or for a new career involving computing.

Direct entry is available only for domestic students. An early exit degree is available for international students.

Entry requirements
A Bachelor degree with a GPA of 4/7; or
An Advanced Diploma or Associate Degree with three years’ work experience in a relevant domain; or
At least ten years work experience in an ANZSCO Skill Level 1 role.

All applicants must meet the University’s English Language Admission Requirements for Students.

Credit exemption/status
Students with a Bachelor degree or Graduate Diploma that includes programming or mathematics may be able to obtain credit or exemption for some of the introductory courses included in the core.

Degree structure
The Graduate Diploma of Computing requires the completion of 48 units, which must consist of:

24 units from completion of the following compulsory courses:
> COMP6710 Structured Programming
> MATH6005 Mathematics for Computing
> COMP6250 Professional Practice 1
> COMP6442 Software Construction

Completion of a further 24 units of 6000 – 8000-level COMP computer science courses.

Recommended elective courses:
> COMP6120 Software Engineering
> COMP6240 Relational Databases
> COMP6260 Foundations of Computing
> COMP6261 Information Theory
> COMP6262 Logic
> COMP6300 Introduction to Computer Systems
> COMP6310 Concurrent and Distributed Systems
> COMP6340 Networked Information Systems
> COMP6390 HCI and Usability Engineering
> COMP6466 Algorithms
> COMP6720 Art and Interaction in New Media
> COMP6780 Web Development & Design
> COMP8260 Professional Practice 2

Articulation to the Master of Computing
Students completing the Graduate Diploma of Computing with a GPA of 5/7 or above may be granted up to 48 units of credit into the Master of Computing.

When planning to articulate to the Master of Computing on completion, students will need to take care selecting their elective courses to allow for maximum credit and a smooth transition. For advice, please book an appointment with the Program Convenor or Student Services.

(studentadmin.cecs@anu.edu.au)
MASTER OF COMPUTING

Academic Plan: 7706XMCOMP
Duration: 2 years full-time
CRICOS Code: 078940M
Minimum: 96 units
UAC Code: 830804

The Master of Computing is a two-year full time degree suitable for graduates without a computing background who wish to acquire a solid knowledge of computing, or graduates with a computing or information technology background who wish to broaden and deepen, or refresh their knowledge. The program is provisionally accredited by the Australian Computer Society.*

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 interests, may choose to specialise in artificial intelligence, human centred design and software development, data science, or machine learning.

The program culminates in a capstone project: either working in small groups as part of the University's innovative TechLauncher program with industry partners, researchers, or in start-ups, or by undertaking a small research project supervised by an academic.

Students completing the Master of Computing with a GPA greater than 6/7 may transfer to the Master of Computing (Advanced) with up to 48 units of credit.

Entry requirements
A Bachelor degree or international equivalent with a minimum GPA of 5/7; or

A Bachelor degree or international equivalent with a GPA of 4/7, with at least three years of relevant work experience.

All applicants must meet the University's English Language Admission Requirements for Students.

Credit exemption/status
Students with a Computing or Information Technology Bachelor Degree or Graduate Diploma may receive up to 48 units of credit.

Degree Structure
The Master of Computing requires the completion of 96 units, of which a minimum of 36 units must come from completion of 8000-level courses in the subject area COMP Computer Science.

36 units from completion of the following compulsory courses:
- COMP6710 Structured Programming
- COMP6442 Software Construction
- COMP6250 Professional Practice 1
- COMP8260 Professional Practice 2
- COMP8110 Managing Software Projects in a System Context
- MATH6005 Discrete Mathematical Models

6 units from one of the following software development courses:
- COMP6120 Software Engineering; or
- COMP8190 Model-Driven Software Development

6 units from one of the following database courses:
- COMP6240 Relational Databases; or
- COMP6420 Introduction to Data Management, Analysis and Security

6 units from one of the following computer networks courses:
- COMP6340 Networked Information Systems; or
- COMP6331 Computer Networks

12 units from one of the following project courses:
- COMP8715 Computing Project; or
- COMP8755 Individual Computing Project; or
- COMP8830 Computer Science Internship. This is usually taken in the student’s 3rd semester but may sometimes be taken in their final semester

30 units from completion of additional COMP courses including at least 12 units of 8000-level courses.

Students may choose to use 24 units to complete one of the following specialisations:
- Artificial Intelligence
- Data Science
- Human Centred Design and Software Development
- Machine Learning

Computing project
The computing project is completed in the final year of study as a capstone experience and may be completed as an individual research project (COMP8755) or as a group project (COMP8715). COMP8715 is completed over the two final semesters as part of the University's innovative TechLauncher program. cs.anu.edu.au/techlauncher. COMP8755 can be completed either over the final two semesters (6 units per semester) or in the final semester (12 units).

* Students are required to take COMP8715 Computing Project for accreditation.
The Master of Computing (Advanced) is a two-year full time degree targeting students who wish to enter industry in an Research & Development (R&D) or leadership role, or to pursue a PhD.

Graduates of the Master of Computing (Advanced) will deepen their existing knowledge and understanding of professional software development and computing practices. Students have the opportunity to participate in cutting-edge courses, and depending upon their interests, are likely to choose to specialise in artificial intelligence, human centred design and software development, data science, or machine learning. The program culminates in a capstone individual research project, requiring students to complete a substantial research thesis.

Entry requirements
A Bachelor degree or international equivalent with a minimum GPA of 6/7; or
A Bachelor degree or international equivalent with a GPA of 5/7, with at least five years of relevant work experience.

All applicants must meet the University’s English Language Admission Requirements for Students.

Cognate disciplines
Computer Science, Software Engineering.
Prospective students with other computing degrees, such as Information Technology or Science (with a major in computing), will be considered on a case-by-case basis.

Credit exemption/status
Students may be awarded up to 48 units of credit. The number of units of credit a student receives will be determined on a case-by-case basis and will be influenced by the background and focus of their earlier studies.

Degree structure
The Master of Computing (Advanced) requires the completion of 96 units, of which a minimum of 48 units must come from completion of 8000-level courses in the subject area COMP Computer Science.

36 units from completion of the following compulsory courses:
- COMP6442 Software Construction
- COMP8260 Professional Practice 2
- COMP6445 Computing Research Methods
- COMP6331 Computer Networks
- COMP6420 Introduction to Data Management, Analysis and Security
- COMP6120 Software Engineering

24 units from completion of COMP8800 Research Project

36 units from completion of additional COMP courses, including at least 24 units of 8000 series courses.

Students may choose to use 24 units to complete one of the following specialisations:
- Artificial Intelligence
- Data Science
- Human-Centred Design and Software Development
- Machine Learning

Unless otherwise stated, a course used to satisfy the requirements of one specialisation may not be double counted towards satisfying the requirements of another specialisation.

NOTE:
To remain enrolled in the Master of Computing (Advanced) students must achieve a minimum GPA of 6/7 in the first 48 units (one year) and have the approval of a supervisor for the research project. Students who fail to achieve the required minimum GPA or who do not have the approval of an identified supervisor will be transferred to the Master of Computing with 48 units of credit.

Research project
The research project is completed in the final year of study as a capstone experience. This is a substantial piece of individual research conducted under the supervision of an academic. It is completed over two semesters (12 units each semester). Prior to undertaking their research project, students are required to complete COMP6445 Computing Research Methods, which introduces them to the fundamentals of research methodologies suitable for application in the computing domain.
MASTER OF COMPUTING AND
MASTER OF COMPUTING (ADVANCED)
SPECIALISATIONS

If a student has space within their program, they may choose to complete a specialisation consisting of 24 units from the list of courses for that specialisation.

**Artificial Intelligence**
The Artificial Intelligence (AI) specialisation offers a deep insight into the world of artificial intelligence and its current frontiers. Students will learn about AI search, optimisation, reasoning, planning, diagnosis, intelligent agents (reinforcement learning, information-theoretic foundations).

24 units must come from completion of courses from the following list:
- COMP6262 Logic
- COMP6320 Artificial Intelligence
- COMP8620 Advanced Topics in Artificial Intelligence
- COMP8691 Optimisation

**Data Science**
Data Science combines the fields of computer science, statistics, applied mathematics, and visualisation. Using automated analysis methods, data science extracts information and insights from massive quantities of both structured and unstructured data. The specialisation includes courses in areas such as database systems, data mining, document analysis, artificial intelligence and machine learning.

18 units from completion of the following compulsory courses:
- COMP8410 Data Mining
- COMP8430 Data Wrangling
- COMP8490 Document Analysis

6 units from completion of one of the following courses:
- COMP6320 Artificial Intelligence
- COMP8420 Bio Inspired Computing: Applications and Interfaces
- COMP8600 Introduction to Statistical Machine Learning
- COMP8620 Advanced Topics in Artificial Intelligence
- COMP8650 Advanced Topics in Statistical Machine Learning

**Human-Centred Design and Software Development**
The goal of human-centred software development is to produce software products designed around the users’ needs and requirements from the very beginning of the process. Human-centred design focuses on the users by considering their needs, requirements, usability knowledge and techniques to improve user satisfaction, accessibility and human well-being.

This specialisation includes courses in the human-computer interface design, software engineering processes and interdisciplinary courses on complex systems.

A minimum of 12 units must come from 8000 level courses.

A maximum of 12 units may come from completion of courses from the following list:
- COMP8100 Requirements Elicitation & Analysis Techniques
- COMP8173 Software Engineering Processes
- COMP8190 Model-Driven Software Development
- COMP8420 Bio-inspired Computing Applications & Interfaces
- VCPG6001 Unravelling Complexity
- VCPG6004 Creating Impact
- VCPG8001 Wicked Problems

**Machine Learning**
The Machine Learning specialisation offers a deep insight into the world of machine learning and its current frontiers. Students will learn about machine learning, intelligent agents (reinforcement learning, information-theoretic foundations), and bio-inspired computing (neural networks, and evolutionary algorithms).

24 units must come from completion of courses from the following list:
- COMP6670 Introduction to Machine Learning
- COMP8420 Bio-inspired Computing: Applications and Interfaces
- COMP8600 Statistical Machine Learning
- COMP8650 Advanced Topics in Machine Learning
- ENGN6528 Computer Vision
Cheng Yu
Master of Computing ‘16

Born in Shanghai, China, Cheng Yu is an entrepreneurial Masters student whose time in Silicon Valley inspired him to develop Artificial Intelligence for the benefit of people. Cheng currently works as the head of Research and Development at Trellis Data, a Canberra based company specialising in deep learning for the government and industry.

“It’s quite mind blowing, many of the theories I’ve learnt in class are two decades ahead of our time, and are taught by leading researchers in the field.”
Machine Learning and Computer Vision
The two-year Master of Machine Learning and Computer Vision (MMLCV) program provides students with specific knowledge and prepares them with competitive professional skills and high flexibility to build their career in the field of Machine Learning and Computer Vision.

This new program will be offered by world-class researchers in Computer Vision, Machine Learning, and Artificial Intelligence, based in the ANU College of Engineering and Computer Science.

There is nowhere better to study this leading edge degree as ANU is one of the finest research universities in Australia, and hosts the ARC Centre of Excellence for Robotic Vision.

For interested students, this program also provides a potential pathway to PhD study.

Graduates will have the skills and knowledge to:
- understand computer vision and visual perception problems and propose and develop novel solutions based on current research literature and state-of-the-art computer vision techniques,
- proficiently apply development tools for solving computer vision and machine learning problems,
- present the methodologies and implementation details in a concise and clear manner,
- conduct concept design, implementation, experimental analysis and testing consistent with current practice in computer vision and machine learning, including standard metrics and benchmark datasets, and
- apply advanced knowledge, techniques and tools to real-world computer vision and machine learning applications.

Entry requirements

A Bachelor degree or international equivalent in a cognate discipline with a minimum GPA of 5/7; or

A Bachelor degree or international equivalent in a cognate discipline with a GPA of 4/7, with at least three years of relevant work experience.

All applicants must meet the University's English Language Admission Requirements for Students.

Cognate disciplines


Credit exemption/status

Students with a completed ANU Bachelor degree with Honours in a cognate discipline may receive up to 48 units of credit. However, the number of units of credit a student receives will be determined on a case-by-case basis and will be influenced by the background and focus of their earlier studies.

Degree structure

The Master of Machine Learning and Computer Vision requires the completion of 96 units of which a minimum of 24 units must come from completion of 8000-level courses.

6 units from one of the following programming courses:
- COMP6710 Structured Programming
- COMP6730 Programming for Scientists

6 units from one of the following professional practice courses:
- ENGN6250 Professional Practice 1
- ENGN8260 Professional Practice 2

24 units from completion of the following compulsory courses:
- ENGN6528 Computer Vision
- ENGN8501 Advanced Topics in Computer Vision
- COMP6670 Introduction to Machine Learning
- COMP8600 Statistical Machine Learning

24 units from completion of Machine Learning and Computer Vision courses:
- ENGN8535 Engineering Data Analytics
- COMP6490 Document Analysis
- COMP8691 Optimisation
- ENGN8536 Advanced Topics in Mechatronics -
- COMP8420 Neural Networks, Deep Learning and Bio-Inspired Computing
- COMP8650 Advanced Topics in Machine Learning
- COMP6262 Logic
- COMP6320 Artificial Intelligence
- COMP8620 Advanced Topics in Artificial Intelligence
- ENGN6627 Robotics
- ENGN8534 Information Theory

Minimum 12 units from completion of a research project or industry internship in the following list*:
- ENGN8602 Research Project
- ENGN6200 Engineering Internship (3–6 months)

24 units of elective courses offered by the ANU.

*An extended capstone project or internship up to 24 units may be taken with permission, with the additional units counting toward the 24 units of program electives.
Interested in developing skills or upskilling in the area of data analytics?

These programs are designed to address a global shortage of graduates with skills in data analytics, which is vital to the development of high-quality, data-informed decision-making. The program has 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.

The rapid expansion of the digital environment has increased the opportunity for data-driven innovation, but also the dangers surrounding it. Being able to understand and anticipate developments in the manipulation and use of data will result in a workforce with a diverse skillset that ranges over computational, statistical and methodological approaches.

These areas of expertise can be applied in a range of professional settings, from public health to national security, from education to consumer industry.

The data analytics program focuses on equipping students to apply their skills in solving problems that reflect ‘real’ conditions, as well as giving students familiarity with the underlying principles of ‘big data’ software systems. Real-world case studies are embedded in several key courses throughout the curriculum.

---

**POSTGRADUATE PROGRAMS IN Applied Data Analytics**

**Graduate Diploma of Applied Data Analytics**

Interested in developing skills or upskilling in the area of data analytics?

These programs are designed to address a global shortage of graduates with skills in data analytics, which is vital to the development of high-quality, data-informed decision-making. The program has 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.

The rapid expansion of the digital environment has increased the opportunity for data-driven innovation, but also the dangers surrounding it. Being able to understand and anticipate developments in the manipulation and use of data will result in a workforce with a diverse skillset that ranges over computational, statistical and methodological approaches.

These areas of expertise can be applied in a range of professional settings, from public health to national security, from education to consumer industry.

The data analytics program focuses on equipping students to apply their skills in solving problems that reflect ‘real’ conditions, as well as giving students familiarity with the underlying principles of ‘big data’ software systems. Real-world case studies are embedded in several key courses throughout the curriculum.

---

**Graduate Diploma of Applied Data Analytics**

**Academic Plan:** DADAN  
**Duration:** 1 year full-time  
**Minimum:** 48 units  
**CRICOS Code:** 097201M  
**UAC Code:** 830813  

**Please Note:** Direct application for this program is unavailable for international students.

**Admission requirements**

A Bachelor degree with Honours or international equivalent with a GPA of 4/7 in any discipline from a recognised university; or

A Bachelor degree or international equivalent with a GPA of 4/7 plus one year of relevant work experience; or

A Bachelor degree or international equivalent with a GPA of 5/7

All applicants must meet the University's English Language Admission Requirements for Students.

**Graduate Certificate of Applied Data Analytics**

The Graduate Certificate is available as an early exit option for students who do not wish to pursue further study in the Graduate Diploma or Master programs. This award requires the successful completion of 24 units consisting of computing, statistics and social science courses.

**Degree structure**

The Graduate Diploma of Applied Data Analytics requires the completion of 48 units, which must consist of:

- **36 units** from completion of the following compulsory courses:
  > COMP8410 Data Mining
  > SOCR8201 Introduction to Social Science Methods and Types of Data
  > SOCR8202 Using Data to Answer Policy Questions and Evaluate Policy
  > STAT6039 Principles of Mathematical Statistics
  > STAT7055 Introductory Statistics for Business and Finance
  > STAT6038 Regression Modelling

- **6 units** from completion of courses from the following list:
  > COMP6240 Relational Databases
  > COMP7240 Introduction to Database Concepts

- **6 units** from completion of courses from the following list:
  > COMP6730 Programming for Scientists
  > COMP7230 Introduction to Programming for Data Scientists
Study in a way that suits you

The Graduate Diploma and Master programs in Applied Data Analytics are delivered in a way that is sensitive to the needs of full-time professionals, using a combination of online learning and a short on-campus component. Typically, each course is designed around a 4+1+4 model – four weeks of online learning, followed by a one week intensive on-campus, then a further four weeks of online learning and major assessment.

The on-campus component is highly valued by students and provides the additional benefit of an opportunity to network with and learn from fellow data analytics professionals.

All courses are also offered in traditional on-campus mode, for international students.

“I really enjoyed the flexible learning system.
Studying from home in my own time was great, with the intensive week really consolidating my learning.”

Hayley Purdon
Data Analyst
Department of Social Services

MASTER OF APPLIED DATA ANALYTICS

**Academic Plan:** MADAN
**Duration:** 1.5 years full-time
**CRICOS Code:** 097058B
**Minimum:** 72 units
**UAC Code:** 830812

**Admission requirements**

- A Bachelor degree with Honours or international equivalent with a GPA of 5/7 in any discipline from a recognised university; or
- A Bachelor degree or international equivalent with a GPA of 5/7 plus 3 years of relevant work experience.

All applicants must meet the University’s English Language Admission Requirements for Students.

**Credit exemption/status**

Applicants who have completed a degree in a cognate discipline may be eligible to receive credit in line with the ANU Graduate Coursework Award Rules.

Relevant work experience can be assessed.

**Degree structure**

The Master of Applied Data Analytics requires the completion of 72 units, which must consist of:

- **48 units** from completion of the following compulsory courses:
  > COMP8410 Data Mining
  > COMP8430 Data Wrangling
  > SOCR8201 Introduction to Social Science Methods and Types of Data
  > SOCR8202 Using Data to Answer Policy Questions and Evaluate Policy
  > STAT6039 Principles of Mathematical Statistics
  > STAT7026 Graphical Data Analysis
  > STAT7055 Introductory Statistics for Business and Finance
  > STAT6038 Regression Modelling

- **6 units** from completion of courses from the following list:
  > COMP6240 Relational Databases
  > COMP7240 Introduction to Database Concepts

- **6 units** from completion of courses from the following list:
  > COMP6730 Programming for Scientists
  > COMP7230 Introduction to Programming for Data Scientists

- **12 units** from completion of courses from any of the following lists:
  - **Computer Science**
    > COMP6490 Document Analysis
    > COMP8420 Bio-inspired Computing: Applications and Interfaces
    > COMP8600 Introduction to Statistical Machine Learning
  - **Social Science**
    > SOCR8082 Social Research Practice
    > SOCR8006 Online Research Methods
    > SOCR8203 Advanced Techniques in the Creation of Social Science Data
    > SOCR8204 Advanced Social Science Approaches to Inform Policy Development and Service Delivery

**Statistical Data Analysis**

- STAT7016 Introduction to Bayesian Data Analysis
- STAT7030 Generalised Linear Models
- STAT7040 Statistical Learning
- STAT8002 Applied Time Series Analysis
The collection of technologies we are currently calling artificial intelligence (AI) heralds the next industrial revolution: Internet of Things (IoT) turbo-charged by AI, advanced robotics, automated vehicles incorporating sensing data with other datasets, and machine learning driving automated decision-making. Rapid convergence into systems – cyber-physical systems – is having unprecedented impact on humanity through deep economic, social and cultural shifts.

The world needs new ways to enable the safe, ethical and effective design, integration, management and regulation of cyber-physical systems. The 3A Institute (3Ai) at the Australian National University is forging this path through the creation of a new applied science (as yet unnamed).

The 3Ai Master of Applied Cybernetics is the first graduate program that grapples with the challenge of bringing intelligent cyber-physical systems safely to scale. We are seeking the next cohort of students who will continue to shape this new applied science, through our innovative model of collaborative learning, teaching and researching.

MASTER OF APPLIED CYBERNETICS

The 3A Institute (3Ai) is committed to creating a new applied science to manage the machines, with a focus on cyber-physical systems. Our graduates will have cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice.

The Master of Cybernetics has an overarching aim: to create pioneers of this new (as yet unnamed) applied science. As the new applied science continues for now in its infant stages, your participation in this program means not just grappling with but also testing the principles we have developed so far.

The Master of Applied Cybernetics is being offered by the College of Engineering & Computer Science, to a small cohort via competitive entry. Due to the unique nature of the program, the application process and deadlines will differ from the other postgraduate programs.

Entry requirements

Applicants must satisfy all of the following requirements to be eligible for entry to the Master of Cybernetics program:

> Honours or a Graduate Diploma or Higher Degree (in any discipline) with a minimum GPA of 5/7.
> Minimum three years of professional experience in an area of relevance to the new applied science.
> Be ready to start in February 2020 and able to commit full-time until February 2021, in person, on the ANU campus.
> Have an interest in participating as a coinvestigator throughout the Masters.
> Demonstrated aptitude for sharing expertise with, and learning from, peers, stakeholders and partners.

All applicants must meet the University’s English Language Admission Requirements for Students.

The following additional elements may be taken into consideration for ranking purposes for admission into the Master of Applied Cybernetics courses but are not mandatory admission requirements:

> A track record of outputs illustrating intellectual leadership in your field, such as (but not limited to):
  > Awards, grants and projects secured,
  > Publications, media, policy briefings, outreach activities, guidelines and training delivered, and
  > IP, products and product concepts created.
> A demonstrated ability to communicate complex ideas across disciplines, media and sectors, to a range of audiences.
> A demonstrated ability to operate with a high degree of flexibility and openness to calculated risk-taking.
> Demonstrated determination and resilience. Aptitude for working in uncertain and fast-changing environments.

> Demonstrated aptitude for interdisciplinary/cross-disciplinary collaboration
> Individual and/or group-based professional/entrepreneurial/community service contributions.
Experience in one or multiple of these fields (highly regarded): education, policy, technology, business, the arts, science, engineering, computing, social sciences, and entrepreneurship.
> Ability to operate across disciplinary silos. Ability to think laterally and critically. Collaborative and mission-driven mindset.

Degree structure

The Master of Applied Cybernetics requires the completion of 72 units, which must consist of:

> CECS6001 Fundamentals of a new applied science I
> CECS6002 Fundamentals of a new applied science II
> CECS8001 New applied science: Lab
> CECS8002 New applied science: Capstone project
> CECS6003 Cybernetics and Cyber-physical Systems
> CECS6004 Scaling Systems Safely: Assurance, Ethics and Governance

For more information and the application process, please visit 3ainstitute.cecs.anu.edu.au

Academic Plan: MAPCY
Duration: 1.5 years full-time
Minimum: 72 units
CRICOS Code: 099472E
UAC Code: NA
You can undertake a research program in engineering or computing through a Doctor of Philosophy (PhD) or a Master of Philosophy (MPhil) degree. Both degrees involve producing high quality original research under the close supervision of a panel of world class academic staff. As a research student you will work with increased independence in a vibrant research-led education programme.

The ANU College of Engineering and Computer Science conducts research that aims to deliver solutions to some of the most pressing technological and environmental challenges the world faces. An extensive network of international partners from research institutions and industries in Europe, the Asia Pacific and the USA promotes a culture of research collaboration.

**Doctor of Philosophy (PhD)**

The Doctor of Philosophy (PhD) award will take you between three and four years to complete full time.

**Entry requirements**

An Australian Bachelor degree with at least Second Class Honours - Upper or its international equivalent; or

Another degree with a significant research/thesis component; or

A combination of qualifications, research publications and/or professional experience related to the field of study.

**Master of Philosophy (MPhil)**

The Master of Philosophy (MPhil) award will take you between one and two years to complete full time.

**Entry requirements**

An Australian Bachelor degree or higher, with an overall grade of distinction, or its international equivalent; or

Another degree with a significant research/thesis component; or

A combination of qualifications, research publications and/or professional experience related to the field of study.

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**How to apply**

1. Go to [cecs.anu.edu.au/study/phd-mphil](cecs.anu.edu.au/study/phd-mphil)
2. Complete the self assessment tool to determine your eligibility to do research at ANU.
3. Complete the pre-application process, including securing the support of a prospective supervisor.
4. Complete a formal application either online or through an agent representative.

**You will need:**

- Curriculum vitae
- Academic transcripts
- Thesis proposal
- Proof of meeting English language requirements (international students only)

**Scholarships**

Scholarships are available to both domestic and international students based on merit.

For more information, visit [cecs.anu.edu.au/study/phd-mphil](cecs.anu.edu.au/study/phd-mphil)

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“I chose to do my PhD at ANU because of the supportive staff, unique research areas and love of Canberra. I’ve been amazed at how many opportunities are available to PhD students, I think it will be a challenge to fit them all in my time here. My undergraduate studies bred a love of research and the ability to pursue my passion in engineering education was a wonderful surprise.”

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*Ellen Lynch*

PhD in Engineering
RESEARCH THEMES

Our world class academics and students conduct research in a number of areas across seven research themes.

Engineering

Energy
- Energy Storage
- Photovoltaics
- Solar Thermal

Fabrication
- Manufacturing
- Micro & Nano Systems
- Optical Devices
- Sensors

Information
- Acoustics & Audio
- Communications
- Computer Vision
- Networked Systems
- Quantum Cybernetics
- Robotics
- Signal Processing

Materials
- Biomaterials
- Composite Materials
- Computational Mechanics
- Nanomaterials

Computer Science

Intelligence
- Data Mining & Matching
- Intelligent Agents
- Knowledge Representation & Reasoning
- Machine Learning
- Planning & Optimisation

Systems
- High Performance Computing
- Human-Centred Computing
- Programming Language Systems
- Software Engineering

Theory
- Algorithms
- Databases
- Logic
Dr Elena Kelareva
CEO/Founder, GippsTech
PhD Computer Science ‘14

ANU graduate, Dr Elena Kelareva is the Founder and CEO of GippsTech, a startup based in Gippsland, Victoria, with the mission of growing regional startup and tech communities.

While studying at ANU, Elena received the NASSCOM Student Innovation Award for IT-Enabled Business Innovation and a NITCA PhD Scholarship.

After graduation, Elena worked at Google for three years as the Product Manager for the Google Maps Web APIs, before leaving to start her own company.

GippsTech has grown rapidly since its founding two years ago, now employing 10 staff. GippsTech won the Gippsland Business Awards New Business category in 2018, and Elena was a finalist in the 2018 Victoria-wide Regional Achievement & Community Awards Leadership & Innovation category.

“Doing my PhD at ANU taught me how to approach solving big complex problems, which was extremely valuable both in my work in developing innovative products at Google, and in starting my own company.”
WHERE WILL YOUR ANU DEGREE TAKE YOU?

89.3%
Full-time employment
89.3 per cent full-time employed postgraduate by coursework graduates.¹

International outlook
Ranked #2 in Australia for international outlook.²

Most employable graduates
Ranked #7 in Australia for Graduate Employability.³

Companies that employ our graduates

**Engineering**
- Accenture
- AECOM
- AEMO
- Airservices Australia
- Amazon
- Arup
- Aurecon
- Australian Government
- BHP Billiton
- Boeing
- BP
- Brookfield Multiplex
- Energy Australia
- Ericsson
- Google Inc
- Honeywell
- IBM
- KPMG
- Motorola
- Northrop Consulting
- Origin Energy
- PwC
- Telstra
- Thales Australia
- Toyota Australia
- WSP

**Computer Science**
- Alcatel-Lucent
- Amazon
- Apple Inc.
- BAE Systems
- CEA Technologies Pty Ltd
- Citadel Systems
- Civil Aviation Safety Authority
- Codarra Advanced Systems
- Deloitte
- Dematic
- Dolby
- Fujitsu
- Genentech
- Google Inc.
- Hewlett Packard
- Huawei
- IBM
- Microsoft
- Motorola
- Nova Systems
- Oracle Corporation
- Optiver
- Seeing Machines
- Telstra
- ThoughtWorks
- Visa

¹ 2018 Graduate Outcomes Survey
² Times Higher Education Rankings 2019
³ QS World University Rankings 2019
MEET OUR ALUMNI

Our graduates are located all over the world, in diverse and exciting roles.

Nitin Rai
Application Engineer
MathWorks, India

Master of Engineering in Digital Systems and Telecommunications ’17

Before joining ANU, Nitin worked as a Project Engineer at the Indian Space Research Organisation (ISRO). On graduating, Nitin returned to India to resume his role with ISRO. He then joined MathWorks, a leading developer of mathematical computing software, in 2018. His role revolves around signal processing and communication, drawing on his Master degree.

“ANU has given me opportunities to work alongside research scholars who are working on some of the breakthrough technologies in the field of wireless communication. I am now inclined to pursue a PhD and help researchers in this field.”

Jess Tsimeris
User Experience Researcher
Google, Seattle

PhD in Computer Science ’15

Originally from Adelaide, Jess was working as a Software Engineer at the Department of Defence when she decided to pursue her PhD.

After receiving her PhD, Jess ventured into the area of user experience (UX) research and worked as a UX Research Assistant at Google, Sydney. She also worked as a Usability Researcher at Microsoft before starting her current role as a UX Researcher at Google, Seattle where she works on a product called ‘Google Cloud Platform’. Her job involves using research techniques to determine what products and features should be built, and how to build them.

“Google is a fast paced environment which requires you to be really good at communicating. Having a rich social life at ANU, being involved in clubs and working in team environments has differentiated me from graduates of other universities.”

Samuel Fernandes
Program Manager
Lawrence Berkeley National Laboratory, Berkeley, California

Master of Systems Engineering (Renewable Energy) ’11

After graduating, Samuel joined the ranks of ANU staff, bringing his enthusiasm for renewable energy to roles with the ANU Energy and Sustainability Office and a startup at IgnitionLabs, Australia’s first clean technology start-up accelerator. Samuel moved to the US five years ago to work at the US Department of Energy’s Lawrence Berkeley National Laboratory, in Berkeley, California.

“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 the University.”
HOW TO APPLY

Apply today to take the first step towards a postgraduate qualification.

Domestic students
You are a domestic applicant if you:

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

If none of these criteria apply, then you are an international student.

You can apply for a postgraduate coursework program if you hold a Bachelor degree or equivalent, or are about to graduate. Most ANU programs also require that you achieve a particular Grade Point Average (GPA) in addition to completion. Some may have further requirements such as professional work experience or cognate backgrounds.

programsandcourses.anu.edu.au

How to apply
To apply for most postgraduate coursework degree programs, you will need to submit your application through the Universities Admissions Centre (UAC) and pay a fee.

uac.edu.au

For the most up to date information, please visit the ANU website.

anu.edu.au/study/apply

How to accept your offer
You can accept your offer to study at ANU online at anu.edu.au/study/accept

Important dates
Postgraduate applications open in September, the year prior to commencement.

Each postgraduate program has a unique application closing date. Always check application deadlines on the relevant ANU School website or the UAC website.

uac.edu.au/future-applicants

International students

How to apply
As an international student, you can apply directly to ANU, or use one of our international agents located around the world.

For the most up to date information regarding the application process and timeline, please visit the ANU website.

anu.edu.au/study/apply

All applicants must meet the ANU English Language Requirements.

Applying online
There are up to three assessment rounds in each semester. Apply in the first round, and you may have three opportunities to be assessed and accepted, giving you the best chance of being offered a place at ANU. You can only apply for one program, although you can change your preference during the application process.

In order to be considered for an offer, you must meet pre-requisite, cognate and English language requirements for your program by the application deadline for the round, as conditional offers will not be issued. You will be ranked against other candidates applying for the same degree and places are limited.

An application fee of AUD$100 applies.

Apply through an official ANU agent
ANU has official agents in over 50 countries around the world. ANU agents will help you with all aspects of your application – from answering your questions and helping you select the right program, to submitting and processing your application. For more information, visit anu.edu.au/study/contacts

Important dates

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<tr>
<th>Important dates</th>
<th>Applications open</th>
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<td>Round 1</td>
<td>4 June ‘19</td>
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<td>Round 2</td>
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<td>Round 1</td>
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<td>Round 2</td>
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<td>Round 3*</td>
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</tbody>
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* Subject to change. Please visit anu.edu.au/study/apply for the most up to date information.

Please Note: We understand that depending on the time that you apply to ANU, you may not have completed the final semester of your prior study. To make sure that you and all other candidates are fairly assessed, we exclude your final semester when we calculate your GPA. What does this mean?

> We will consider your results for the first seven semesters of an eight semester program (excluding the final semester).
> We will consider your results for the first five semesters of a six semester program (excluding the final semester).

Do be aware that your enrolment at ANU will be conditional on you successfully completing your program which includes your final semester. Successful completion means being awarded your degree (or equivalent).
FEES & SCHOLARSHIPS

Tuition fees and other costs vary for domestic and international postgraduate students.

Domestic students
Most domestic postgraduate coursework and non-award students at ANU pay domestic tuition fees. The amount you have to pay is based on the courses that you enrol in. Each course has a set fee, so you will be invoiced for the total fees for all the courses you enrol in for a semester or session.

You can defer part or all of your tuition fees using FEE-HELP if you meet these citizenship and residency requirements:

> You are an Australian citizen or permanent humanitarian visa holder (living in Australia for the duration of your enrolment).
> You are a permanent visa holder undertaking bridging study for overseas-trained professionals, and will be living in Australia for the duration of your enrolment. If you use FEE-HELP, the Australian Government will pay your tuition fees while you study, but you will be required to pay back those fees through the taxation system or voluntary payments.

For more information on FEE-HELP go to the Australian Government website.

studyassist.gov.au/help-loans/fee-help

A small number of postgraduate programs offer Commonwealth Supported Places (CSP) where the Australian Government subsidises your tuition fees.

cecs.anu.edu.au/study/commonwealth-supported-places

International students
If you are an international student, you will have to pay international student fees. The amount you have to pay is based on the courses that you enrol in. Each course has a set fee, so you will be invoiced for the total fees for all the courses you enrol in for a semester or session.

Refund policy for international students
If you are an international student and have enrolled at ANU for the first time and you are in your first semester or session, your tuition fees may be refunded in full if you discontinue your studies.

For more information on this policy go to anu.edu.au/pg/fees

Health insurance
All international citizens living in Australia must have health insurance.

Overseas Student Health Cover (OSHC) is a private health insurance that will cover the costs of your medical and hospital care if you need it. We recommend OSHC Worldcare but you can choose another provider that offers this cover.

Cost of living
In addition to tuition fees, there are other costs you may want to consider before starting your postgraduate degree at ANU, particularly if you’re moving to Canberra from interstate or overseas.

The ACT Government website Canberra: Create your Future explores a range of topics about living, studying and working in Canberra, including living costs.

canberracreateyourfuture.com.au

For international students, the Australian Government’s Study in Australia website also contains useful information about studying in Australia.

studyinaustralia.gov.au

Services and Amenities Fee
Domestic and international students at ANU must pay a services and amenities fee. This helps to support services like student counselling, recreational facilities, sporting and cultural events held on campus throughout the year.

anu.edu.au/pg/ssaf

Scholarships
ANU offers a range of scholarships for students undertaking postgraduate degrees. Please note that in addition to scholarships offered by ANU, there are funding support opportunities offered by Australian and overseas governments, and other industry partners and affiliates that you can take advantage of.

anu.edu.au/students/scholarships-support

ANU funds a range of scholarships for HDR students.

anu.edu.au/students/scholarships/anu-phd-scholarships
Live on campus or take a short commute from one of Canberra’s well-connected neighbourhoods.

**On-campus accommodation**

ANU gives you more opportunities to live on campus than any other Australian university, so you can make the most of your time here. Apply to join nearly 6,000 students from across Australia and around the world who call ANU home.

Postgraduate students can apply for on-campus accommodation in these residences:

- Bruce Hall Packard Wing
- Burgmann College Postgraduate Village
- Davey Lodge
- Fenner Hall
- Gowrie Hall
- Graduate House
- Kinloch Lodge
- Lena Karmel Lodge
- Toad Hall
- University House
- Ursula Hall Laurus Wing
- Wamburun Hall
- Warrumbul Lodge

We cannot guarantee that on-campus accommodation will be available. Also, student residences are not suitable for children, so you may need to explore renting off-campus (non-ANU). We recommend arriving in Canberra early to find accommodation outside the ANU.

anu.edu.au/study/accommodation

**Rent privately**

You can rent an apartment or house privately through a real estate agent or directly from the property owner. The best place to start your search is online. We suggest these sites:

- allhomes.com.au
- domain.com.au
- realestate.com.au
- gumtree.com.au

Because Canberra is a university town, the highest turnover of rental properties is during the December/January summer break. Renting Advice:

anu.edu.au/study/accommodation/advice-procedures/renting

**Applying for a lease**

In Canberra, real estate agents and property owners often insist that prospective tenants see the property before applying for a lease, to be seriously considered.

To apply, you will need to fill out an application form which will ask you about your personal circumstances, including your financial situation. You will also be asked for referees, people who can verify that you are trustworthy, like a previous landlord or employer.

If you are applying from overseas, it is a good idea to attach written references to your application. Given the time differences between Australia and the rest of the world, this will make the process easier for you and the person assessing your application.

The agent should let you know within a week if your application has been successful.

**Setting up your home**

Your lease will usually be for a period of six to 12 months.

Factor in these costs when setting up your new home:

- Bond is usually four weeks’ rent and is held by the ACT Office of Regulatory Services. Provided you don’t cause damage to the property and maintain it, the bond will be returned to you in full at the end of the lease.
- As well as bond, you will probably need to pay between two and four weeks’ rent in advance.
- You will have to pay connection fees for telephone, electricity, gas, and any other utilities you choose to connect to the property.
- Water will be connected by the owner but you will need to pay for the water you use.
- It is a good idea to take out household contents insurance.
- Moving expenses.

If you happen to have a dispute with the landlord or real estate agent, Accommodation Services and the Tenants Union ACT can give you advice and advocate on your behalf.

tenantsact.org.au
ANU Careers Centre
ANU Careers Centre is dedicated to providing a range of services to assist you to reach your full potential. From the general exploration of career ideas to details of specific jobs, employers, and advice on recruitment strategies, the ANU Careers Office offers a range of services to current and graduated students, including:

- resume and application advice
- interview preparation
- building employability and work experience
- job search strategies
- graduate recruitment processes
- host employer and career events

careers.anu.edu.au

Academic Skills and Learning Centre
Academic Skills and Learning Centre (ASLC) offers ANU students of all levels free and confidential help with their academic work through individual tutorials, workshops, courses and handouts.

The centre inspires students to take control of their learning and teaches students a broad range of strategies to become active and confident learners who think critically, research effectively, communicate incisively and apply their learning with integrity.

academicskills.anu.edu.au

After hours Crisis Support Line
This service is intended to help callers find immediate relief from emotional distress, explore coping strategies for the current crisis, safely manage any immediate threats to life or safety, open pathways for longer-term solutions and focus on specific next steps for the caller to take.

ANU Crisis Support Line 5pm-9am weekdays, 24/7 weekends and public holidays.

- phone (voice calls only): 1300 050 327
- text: 0488 884 170

Campus tours
Take a tour guided with a Student Ambassador who will share their experience at ANU while showing you around our beautiful campus.

Tours operate Monday to Friday 10am-5pm (excluding public holidays).

anu.edu.au/campustours

The Postgraduate and Research Students’ Association
The Postgraduate and Research Students’ Association (PARSA) is the student representative body for postgraduates at ANU. They provide a range of free services and activities aimed at meeting the specific needs of postgraduate students in relation to their studies and daily life. The primary focus of PARSA is the interests and welfare of all research and coursework postgraduate students at ANU.

Services include:

- academic advice
- Centrelink assistance
- financial assistance
- accommodation assistance
- legal assistance
- funding assistance

All postgraduate students at ANU automatically become members of PARSA.

PARSA is run by students, for students and represents postgraduates both collectively and individually.

parsa.anu.edu.au

The ANU Sport and Recreation Association
The ANU Sport and Recreation Association, commonly known as ANU Sport, promotes and provides a varied and exciting range of opportunities to participate in affordable sporting and physical recreational activities. They endeavour to make their facilities and activities relaxed, fun, safe and a place for everyone.

ANU Sport run lunchtime sporting competitions including indoor soccer, touch football, ultimate disc, volleyball and basketball.

anu-sport.com.au
Canberra

A safe & welcoming community
Canberra is considered one of the safest cities in Australia with one of the lowest crime rates.*

Global outlook
Canberra has a strong sense of community - a city of just over 409,000 people, with more than 25 per cent of our residents born overseas, there are countless embassies and national institutes.

Abundant wildlife
Despite being in the middle of Canberra, the campus is surprisingly diverse, supporting more than 106 native animals.

Seasons
Canberra experiences the true climate of Spring, Summer, Autumn and Winter and proximity to alpine and coastal regions.

Less time in transit
Canberra offers the shortest commute times in Australia, extensive bike paths and discounts for students on public transport.

Enviable lifestyle
Lonely Planet ranked Canberra the World’s 3rd best city to visit in 2018.

A vibrant and cosmopolitan city
Be entertained by countless events, cultural institutions, museums, art galleries and lively nightlife.

* Police.act.gov.au
CANBERRA

- Australian National University
- Campus residences
- ANU College of Engineering and Computer Science
- City
- Parliament House
- National Library of Australia
CONTACT US

ANU College of Engineering & Computer Science

Brian Anderson Building (115)
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Canberra ACT 2601 Australia

T  +61 1800 620 032
E  future.student@anu.edu.au
W  cecs.anu.edu.au

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