



Australian  
National  
University

# Postgraduate Student Guide

ANU College of Science

# WHY ANU?



## Our students

#1 for graduate employability in Australia<sup>1</sup>

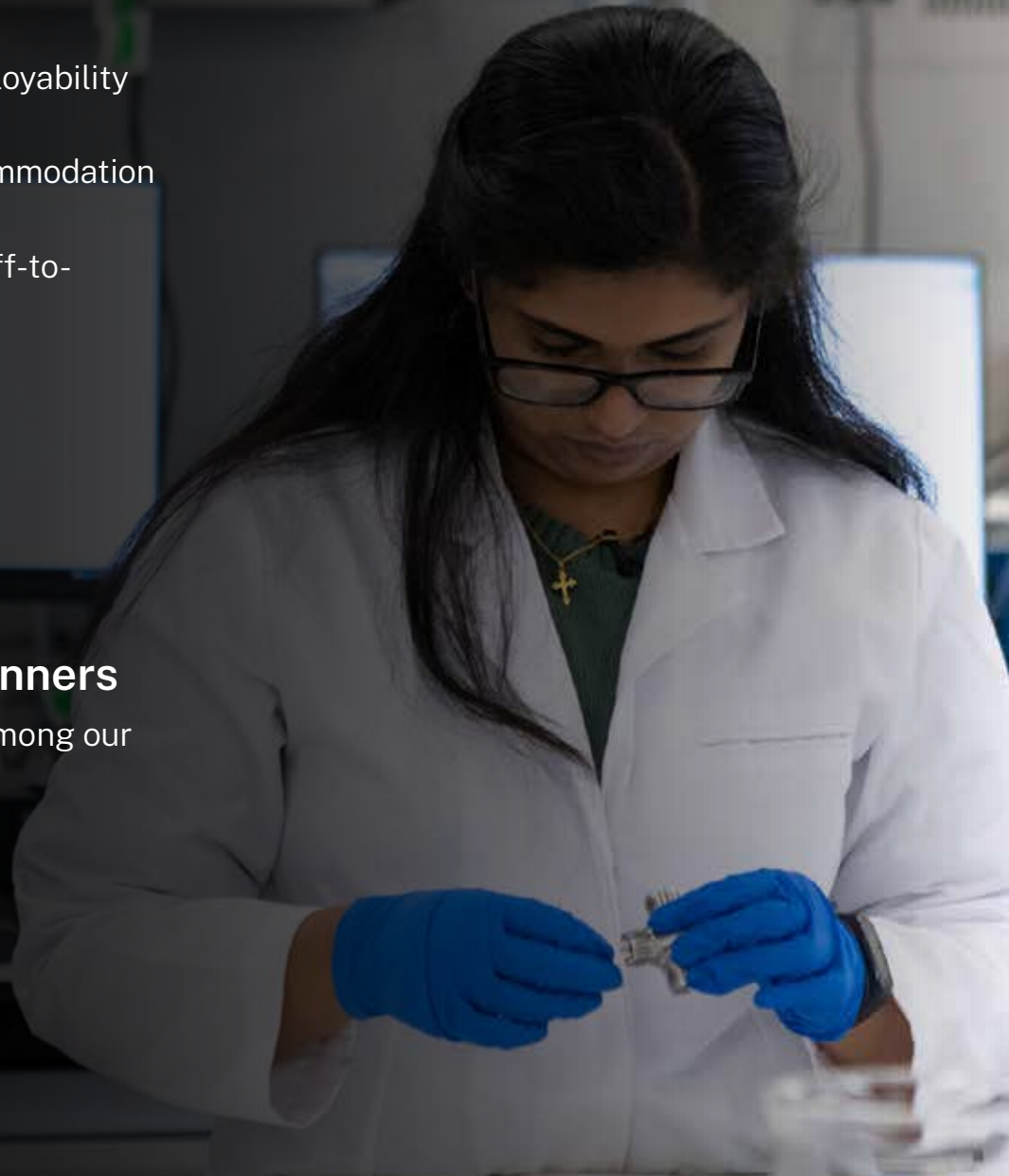
6,490 student accommodation beds on campus

5 star rating for staff-to-student ratio<sup>2</sup>



## Nobel Prize winners

6 Nobel laureates among our staff and alumni



1. Times Higher Education 2023  
2. Good Universities Guide 2023

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# POSTGRADUATE COURSEWORK PROGRAMS

## Postgraduate coursework programs

A major component of a postgraduate coursework degree program is attendance at lectures and tutorials, examinations, and the submission of assessments such as essays and assignments.

Some postgraduate coursework programs also include a research component.

Our postgraduate coursework programs result in the award of the following qualifications:

### Graduate certificate:

Approximately 24 units, or six months of full-time study.

### Graduate diploma:

Approximately 48 units or one year of full-time study.

### Master degree:

Approximately 96 units, or two years of full-time study (or less with credit).

### Master (Advanced) degree:

Approximately 96 units, or two years of full-time study (or less with credit). It includes a 24-48 units supervised research project. The length of the thesis will vary depending on the program.

## Am I qualified to apply?

Postgraduate coursework programs require completion of an undergraduate degree to apply for a postgraduate coursework program. In most cases it will need to be in a cognate (related) discipline.

Each program has specific application requirements. For up to date information please refer to the Programs and Courses page or ANU website.

## When can I start?

Most degree programs have two intakes per year and can be started in either semester one (mid- to late February) or semester two (mid-July).

For up to date information please refer to the Programs and Courses page or ANU website.

## How much does it cost?

Fees for domestic and international students can be found in each of the program descriptions in this guide. Please note the fees listed are indicative only as they are dependent on your course selection and are subject to change. For up to date information please refer to the Programs and Courses page or ANU website.

## Are scholarships available?

Some of our research schools offer scholarships for specific programs. There are a number of ANU scholarships available to domestic and international students, as well as external scholarships managed by organisations outside of the University.

For more information, visit [anu.edu.au/study/scholarships](http://anu.edu.au/study/scholarships)

## How do I apply?

Domestic students apply for postgraduate coursework programs through the University Admissions Centre (UAC) at [uac.edu.au](http://uac.edu.au).

The closing date for semester 1 entry is the end of January, and the closing date for semester 2 entry is the end of June.

International students can apply for postgraduate coursework programs and find more information about closing dates online at [anu.edu.au/study/apply/international-applications-undergraduate-and-postgraduate](http://anu.edu.au/study/apply/international-applications-undergraduate-and-postgraduate)

Semester 1, 2024 applications open on 14 March 2023.

Semester 2, 2024 applications open on 1 June 2023.

Most applications submitted before the 15th day of each month will be considered for an offer on the 1st day of the following month.

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

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

## How long does it take to finish a Masters degree?

A Masters degree from ANU usually takes two years of full-time study to complete, but most programs can be fast-tracked with recognition of previous study in a related discipline.

For detailed admission requirements check the Programs and Courses website: [programsandcourses.anu.edu.au](http://programsandcourses.anu.edu.au)

## Can I get credit for previous study?

Your prior study might count towards your Master degree, meaning you can complete the degree in less than two years.

If you have an Australian undergraduate degree (or international equivalent) in a related field, you might get up to six months' credit towards your Master degree.

If you have an Australian undergraduate degree with honours (or international equivalent) in a related field, or a graduate diploma in a related field, you may be eligible for up to 48 units (1 year) of credit, leaving you with only one year of full-time study to complete your Master degree.

Graduate certificate and graduate diploma awards are available as exit options in circumstances where the two-year Master degree cannot be completed.

For up to date information please refer to the Programs and Courses entry or ANU website.

## English Language Requirements

You must provide evidence of English language proficiency required for admission to ANU.

You may meet this requirement if your tertiary studies were entirely taught and assessed in English during the past two years.

If you are an international student and you completed your English studies more than two years ago, you will need to provide an English proficiency test certificate, such as the International English Language Testing System (IELTS) or the Test of English as a Foreign Language (TOEFL).

Test	Regular Degree Programs (including Exchange and Study Abroad)
Academic IELTS	An overall score of 6.5 with at least 6 in each component of the test.
IELTS UKVI Academic	An overall score of 6.5 with at least 6 in each component of the test.
TOEFL iBT Paper Edition**	All of the following: Overall score: 80 Reading: 20 Writing: 20 Listening: 18 Speaking: 18
TOEFL-iBT [excluding Paper Edition and Home Edition]**	All of the following: Overall score: 80 Reading: 20 Writing: 20 Listening: 18 Speaking: 18
Cambridge C1 Advanced	An overall score of 176 with a minimum of 169 in all sub-skills.
PTE Academic	Overall 64, minimum score of 55 in each section.
PTE Academic UKVI	Overall 64, minimum score of 55 in each section.

\*\*The TOEFL institutional code for the ANU is 0506. Applicants may use this code to report their TOEFL results to the university.\*

# POSTGRADUATE RESEARCH

We offer Doctor of Philosophy (PhD) and Master of Philosophy (MPhil) postgraduate research programs across a range of disciplines in science.

Our postgraduate research students have access to cutting-edge research facilities and work alongside some of the world's most influential and innovative academics.

## Pathways to a PhD

If you are interested in a PhD but your previous studies do not include a research component, you can consider an advanced Master degree, which combines coursework and research. Upon completion, you will have the skills to continue your research career and the academic qualifications needed to apply for a PhD.

You can find more information about our advanced Master programs in the postgraduate coursework section of this guide.

## Postgraduate research areas

### Astronomy and astrophysics:

The research interests of our staff include planetary science, cosmology, instrumentation, observational and theoretical aspects of extra-solar planets, stellar atmospheres and evolution, the interstellar medium, globular clusters, galactic structure, the Magellanic clouds, normal galaxies, active galaxies, radio sources, quasars, and cosmology.

### Biomedical science and biochemistry:

We offer research projects in a range of biological systems, which involve fundamental investigations and applications of molecular, physiological, cellular, developmental and genetic processes in animals, plants, microorganisms and viruses.

### Chemistry:

Our research groups work in areas from a wide spectrum of chemistry, including computational chemistry, materials science and protein structure and function. A large number of international scientists visit the groups each year and contribute to research projects, the extensive seminar series and graduate lecture series.

### Earth, marine and planetary sciences:

Our research in Earth sciences focuses on the physical and chemical Earth processes ranging from those that led to the Earth's formation and shaped its subsequent evolution, to processes impacting on our current environment. Our research is multidisciplinary and encompasses the physical sciences, geology, and biology.

### Environment and resource management:

Our research students collaborate with world-renowned academic leaders in a wide range of topics spanning environment and society, including conservation biology, landscape ecology, interdisciplinary environmental studies, sustainability science, global change, environmental policy and economics, forest science and geography.

### Evolution, ecology and genetics:

Research in evolution, ecology and genetics is a broad-based program that aims to provide students with a diversity of opportunities and training in biological research, and encourages graduates to take advantage of the rich and diverse community of biologists engaged in teaching, research, environmental management and policy formulation in Canberra.

### Mathematical and computational sciences:

Broad research areas include advanced computation and modelling, algebra and topology; analysis and geometry; applied and nonlinear analysis; astronomy and astrophysics; mathematical physics; statistical science; and stochastic analysis. Students have the choice of studying mathematics and statistics in their own right and/or applying them in other disciplines.

### Physics:

The underlying impetus of our research in physics is a belief in the fundamental importance of physics to all of science. Research areas include applied mathematics, materials engineering, quantum science, optics and theoretical physics. Students have access to some of Australia's most important installations, such as the only Heavy Ion Accelerator and centre for nuclear research in the country.

**Plant sciences:**

Research in plant sciences serves as a focal point for graduate students interested in the broad range of research in plant biology that exists in the scientific community in Canberra. Students have the opportunity to work on research incorporating photosynthesis and plant energy biology; plant environmental biology and functional ecology; plant genetics and gene regulation; and plant-microbe interactions.

**Science communication:**

Research in science communication is for graduates with an interest in how science is communicated to diverse non-scientific audiences. Students may examine a scientific issue from a public communication perspective, investigate how a particular medium works to engage people with science, or explore scientists' experiences with communication.

**How to apply for a PhD or an MPhil****STEP 1:  
Expression of interest**

Prospective research students first need to identify a research project and find an academic supervisor.

If you are not sure which area of research or supervisor matches your interest please complete an expression of interest online at [science.anu.edu.au/hdr-expression-interest](https://science.anu.edu.au/hdr-expression-interest)

**STEP 2:  
Academic supervisor**

Email your preferred academic supervisor directly to enquire about projects and supervision. You may also submit a short research proposal.

Once an academic supervisor has been confirmed to support your application you may proceed to step three.

**STEP 3:  
Scholarships**

A number of scholarships are available and are awarded on a merit basis. You can also talk to your academic supervisor about other sources of funding you might access to assist with living expenses and tuition fees.

Please note, international research scholarships are only awarded to the most outstanding students and are extremely competitive.

Scholarship applications can be made when completing the program application process, step four.

**STEP 4:  
Application**

Applicants should apply online at

[anu.edu.au/study/apply/anu-postgraduate-research-domestic-and-international-applications](https://anu.edu.au/study/apply/anu-postgraduate-research-domestic-and-international-applications)

# OUR DEGREES

DEGREE NAME	DESCRIPTION
<b>Master of Biotechnology</b>	Place yourself at the forefront of innovation, engineering organisms to address issues of food security, disease and climate change. Study alongside our leading researchers who work on issues of global importance in areas of biochemistry and molecular biology in the biomedical, animal and plant sciences.
<b>Master of Biotechnology (Advanced)</b>	The Advanced program incorporates a year-long research project supervised by an academic.
<b>Master of Earth Sciences (Advanced)</b>	In this program students will delve into the complex systems and processes that shape our planet, at Australia's leading academic research institution for Earth sciences. Study courses from different Earth science disciplines and undertake training on how to gather data and interpret results, before undertaking a research project supervised by an academic.
<b>Master of Energy Change</b>	Climate change is one of the greatest challenges of the 21st century, and can only be solved with a worldwide transition to carbon-free forms of energy. In this interdisciplinary degree, you'll tailor a suite of courses suited to your individual interests, skills and aspirations, developing your expertise in the relevant policy, legal, technological, environmental and regulatory aspects of energy change.
<b>Master of Energy Change (Advanced)</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Environment</b>	Equip yourself with the skills to tackle the big environmental problems facing contemporary and future society. You could choose to specialise in biodiversity conservation, climate science and policy, disaster studies, environmental policy, environmental studies and human ecology, geography, natural resource management, sustainability science or water science and management.
<b>Master of Environment (Advanced)</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Forests</b>	This program provides a unique opportunity to learn about the science, economy and society of forested landscapes and their management.
<b>Master of Forests (Advanced)</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Mathematical Sciences (Advanced)</b>	Study a variety of courses tailored to your interests and needs, ranging from pure mathematics to mathematical modelling, computational mathematics and applications of mathematics.
<b>Master of Science Communication</b>	In this contemporary degree, you'll join Australia's founding and leading science communication institution, and be taught by some of world's leading science communicators. Combining theoretical and practical aspects of science communication, you'll delve into topics including science in the media, science and public policy, ethics of science and cross-cultural science communication. You can choose to complete an internship as part of your degree and graduate with real-world science communication skills, professional networks, and pathways to employment.
<b>Master of Science in Agricultural Innovation</b>	Globally, agriculture will need to feed over nine billion people by 2050. With a changing climate and increasing competition for land, water and energy resources, the agricultural sector will need to find innovative ways to do more with less.
<b>Master of Science (Advanced) in Agricultural Innovation</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Science in Astronomy &amp; Astrophysics</b>	This program covers a broad range of areas including astrophysical techniques and computing, planetary science, stellar astrophysics, galaxies and cosmology. Some of these courses will provide opportunities to contribute to research by analysing telescope data, developing theoretical models, or testing of new astronomical instrumentation.
<b>Master of Science (Advanced) in Astronomy &amp; Astrophysics</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.



DURATION (FULL TIME)	SEMESTER INTAKE	ENTRY REQUIREMENTS	UAC CODE	CRICOS CODE
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0, with at least 8 courses in a cognate discipline, which must also have a minimum GPA of 5.0/7.0. The program also has a chemistry/biochemistry pre-requisite which requires a minimum of 2 courses of undergraduate chemistry/biochemistry.	830701	082279A
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least 8 courses in a cognate discipline, which must also have a minimum GPA of 5.5/7.0. The program also has a chemistry/biochemistry pre-requisite which requires a minimum of 2 courses of undergraduate chemistry/biochemistry.	830702	082280G
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830782	082288M
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830776	082291E
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830777	082292D
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0.	830715	082293C
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0.	830716	082294B
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830718	111570J
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830719	111571H
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830788	082337G
2 years	1 & 2	A Bachelor degree or international equivalent with a GPA of 5.0/7.0. With at least eight courses in cognate disciplines, or have at least 10 years work experience in a related field.	830749	082350K
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830726	0101483
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830727	0101484
2 years	1 & 2	A Bachelor degree or international equivalent with a GPA of 5.0/7.0 with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses with a minimum of 2 courses of undergraduate second year Physics; and a minimum of 2 courses of undergraduate second year Mathematics.	830760	0101476
2 years	1 & 2	A Bachelor degree or international equivalent with a GPA of 5.5/7.0 with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses with a minimum of 2 courses of undergraduate second year Physics; and a minimum of 1 course of undergraduate second year Mathematics. Completion of ASTR3005 Astrophysics Research Topic or equivalent.	830761	0101477

DEGREE NAME	DESCRIPTION
<b>Master of Science in Biological Sciences</b>	This program allows you to specialise in a particular area of biology such as biomedical sciences, ecology and evolution, genetics, and plant sciences. Alternatively, you can utilise the program to provide a broad overview of biological sciences today.
<b>Master of Science (Advanced) in Biological Sciences</b>	This program offers a research component which provides the student an opportunity to conduct hands-on research in a laboratory of a research scientist/supervisor.
<b>Master of Science in Earth Sciences</b>	This program delves into the complex systems and processes that shape our planet at a time when understanding it has never been more important.
<b>Master of Science in Materials Science</b>	This program includes a mix of coursework and research projects, equipping you with the required skills and knowledge of the scientific, technical, and societal aspects of materials to be highly competitive in the rapidly expanding materials science industry of the present day and of the future.
<b>Master of Science (Advanced) in Materials Science</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Science in Mathematical Sciences</b>	In this program you can study a variety of courses tailored to your own interests and needs, ranging from pure mathematics to mathematical modelling, computational mathematics and applications of mathematics to many research areas (such as biology, astronomy, physics and environmental sciences), to related disciplines such as statistics, computer science, and econometrics.
<b>Master of Science in Nuclear Science</b>	Students will study the fundamentals and applications of nuclear science, including materials analysis, dating techniques, nuclear medicine, and nuclear energy. The degree is a mix of coursework and projects, comprising individual and group-based research. You will develop the scientific background you need for informed debate on nuclear issues, without advocating a particular position.
<b>Master of Science (Advanced) in Nuclear Science</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Science in Precision Instrumentation &amp; Measurement</b>	In this program students have the opportunity to learn the most advanced techniques for studying the heavens, the Earth, and everything in-between. The interdisciplinary expertise students acquire will impact on diverse areas of fundamental scientific research as well as industrial applications. The degree is a mix of coursework and projects, comprising individual and group-based research.
<b>Master of Science (Advanced) in Precision Instrumentation &amp; Measurement</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Science in Quantitative Biology and Bioinformatics</b>	This program provides students with experience in the use of methods and tools to organise and analyse biological data, statistically, mathematically and computationally.
<b>Master of Science (Advanced) in Quantitative Biology and Bioinformatics</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Science in Quantum Technology</b>	This program equips you with the required skills and knowledge of the scientific, technical, business and societal aspects of quantum technology to be highly competitive in the emerging quantum industries of the present day and of the future.
<b>Master of Science (Advanced) in Quantum Technology</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.
<b>Master of Science in Theoretical Physics</b>	This program brings students to the cutting edge of research in an interactive training environment, being taught by some of the world's leading theoretical physicists. You will discover the breadth of theoretical physics, including how non-linear dynamics can be applied to complex problems.
<b>Master of Science (Advanced) in Theoretical Physics</b>	The Advanced program incorporates up to a year-long research project supervised by an academic.

DURATION (FULL TIME)	SEMESTER INTAKE	ENTRY REQUIREMENTS	UAC CODE	CRICOS CODE
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830706	096439G
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830707	096440D
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830781	0101480
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0, with at least eight courses in a cognate discipline with a minimum GPA of 5.0/7.0. Applicants are required to have the equivalent of an ANU minor in Chemistry and a minimum of 2 courses of undergraduate Maths and a minimum of 2 courses of undergraduate Physics.	830792	102930J
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least eight courses in a cognate discipline with a minimum GPA of 5.5/7.0. Applicants are required to have the equivalent of an ANU minor in Chemistry and a minimum of 2 courses of undergraduate Maths and a minimum of 2 courses of undergraduate Physics.	830792	102931H
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830787	102929B
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. With at least 6 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses, or with completion of the Graduate Certificate of Nuclear Technology Regulation with a minimum GPA of at least 5.0/7.0 and at least 2 courses in a cognate discipline, which must also have a minimum GPA of 5.0/7.0	830750	099254D
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 6 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830740	099251G
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0, with at least eight courses in the fields of Physics or Engineering with a minimum GPA of 5.0/7.0. Mathematics equivalent to the level of MATH2305.	830747	099248B
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least eight courses in the fields of Physics or Engineering with a minimum GPA of 5.5/7.0. Mathematics equivalent to the level of MATH2305.	830748	099249A
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830737	096439G
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses, and must include at least 4 courses from the following disciplines: computer science, mathematics, statistics or computational chemistry.	830738	096440D
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830741	099252F
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830752	099253E
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.	830753	0101481
2 years	1 & 2	A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0. with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.	830754	0101482

# MASTER OF BIOTECHNOLOGY



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2

**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830701 / 830702 (Advanced)

**CRICOS code:** 082279A / 082280G (Advanced)

**Cognate disciplines:** Biochemistry, Molecular Biology and Gene Technology

🏆 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0, with at least 8 courses in a cognate discipline, which must also have a minimum GPA of 5.0/7.0. The program also has a chemistry/biochemistry pre-requisite which requires a minimum of 2 courses of undergraduate chemistry/biochemistry.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Biotechnology is a coursework program that provides a pathway for science graduates with background knowledge in biochemistry, molecular biology and chemistry to acquire new knowledge, or extend and update their theoretical and practical understanding of modern biotechnology.

Throughout the program, students have many opportunities to interface with scientists who are advancing research in areas of biochemistry and molecular biology in the biomedical, animal and plant sciences.

## Career opportunities

A Master of Biotechnology degree provides students with opportunities to carry out research in basic, medical or agricultural sciences in university, industry or government research institutions. Opportunities exist in scientific sales, pharmaceutical and pathology companies, or in government and public service positions. A Master of Biotechnology (Advanced) can lead to a PhD.



## STUDENT PROFILE

### Mihir Vardhan Singh

#### Master of Biotechnology

“I have always dreamt of working with the micro- and nanoscale world whose manipulations could contribute towards mankind. So I decided to pursue a Master of Biotechnology at ANU: the University has top-notch educational resources and exposure to the leading scientists in the world. This degree gives me insight into the real scientific world and challenges me to think and communicate like a scientist, which fascinates me enormously and drives me to continue learning.”

## MASTER OF BIOTECHNOLOGY (ADVANCED)

### Admission requirements

A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least 8 courses in a cognate discipline, which must also have a minimum GPA of 5.5/7.0. The program also has a chemistry/biochemistry pre-requisite which requires a minimum of 2 courses of undergraduate chemistry/biochemistry.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program incorporates a research project supervised by an academic, and is a gateway to further research, such as a PhD.

[science.anu.edu.au/study/masters/master-biotechnology](https://science.anu.edu.au/study/masters/master-biotechnology)

# MASTER OF EARTH SCIENCES (ADVANCED)



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2

**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830782

**CRICOS code:** 082288M

**Cognate disciplines:** Earth & Marine Sciences, Physics, Chemistry, Biology, Computer Sciences, Astronomy & Astrophysics, Physical Geography, Mathematics, Engineering

🏆 #1 in Australia for Earth and Marine Sciences, Geology, Geophysics and Natural Sciences\*  
\*QS World University Rankings 2023

🏆 #11 in the World for Earth and Marine Sciences, Geology and Geophysics\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least eight courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

Earth science deals with complex systems and processes that shape our planet. Pressing issues such as the safe supply of water, resources and energy, climate change, sea level rise as well as natural hazards are all intimately related to Earth sciences. Courses from different Earth science disciplines and training on how to gather data and interpret them are offered, as well as expert supervision for your extensive research project.

A number of scholarships are on offer to the best international and domestic students.



## GRADUATE PROFILE

### Faye Williamson

#### Master of Earth Sciences (Advanced)

“I am incredibly proud of what I learnt and achieved during my Master of Earth Sciences (Advanced) that I completed part-time at ANU. I have been able to use the results from my research to improve practices at my workplace (NSW Department of Planning and Environment) and at the MDBA. I wouldn't have been able to achieve what I did without the support of my amazing supervisors and conveners.”

## Career opportunities

A Master of Earth Sciences (Advanced) degree gives you the opportunity to gain a wide range of knowledge and skills that are relevant for employment in industry, government agencies, education, as well as for further university studies. It is an excellent qualification for pursuing a career at geosciences agencies or within mineral & hydrocarbon exploration, natural resource management, environmental monitoring, data sciences and the energy sector. The program is also an ideal pathway to a PhD in Australia or at leading institutes around the world.



# MASTER OF SCIENCE IN EARTH SCIENCES



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2

**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830781

**CRICOS code:** 0101480

**Cognate disciplines:** Earth & Marine Sciences, Physics, Chemistry, Biology, Computer Sciences, Astronomy & Astrophysics, Physical Geography, Mathematics, Engineering

🏆 #1 in Australia for Earth and Marine Sciences, Geology, Geophysics and Natural Sciences\*  
\*QS World University Rankings 2023

🏆 #11 in the World for Earth and Marine Sciences, Geology and Geophysics\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

As a Master of Science in Earth Sciences student, you'll delve into the complex systems and processes that shape our planet at a time when understanding it has never been more important. You'll be studying at Australia's leading academic research institution for Earth sciences, ranked #1 in Australia (QS, 2023). We have a reputation for international leadership and innovation, focused on developing new methods, whether experimental, analytical or computational. You'll study courses ranging from computational geosciences to analytical techniques, biogeochemistry, experimental petrology, geobiology, geochemistry, geochronology, geophysics, ocean and climate change and planetary sciences.



## STUDENT PROFILE

### Steven Petkovski

#### Master of Science in Earth Sciences

Steven Petkovski is the Museum Curator for the National Mineral and Fossil Collection at Geoscience Australia.

"We organised this lunar touchstone display. It's the only place in the Southern Hemisphere where you can actually touch a piece of the Moon. Astronauts in the final Apollo mission in 1972 flew over and picked up over 60 kilograms worth of samples. NASA cut off little slivers like this one from one particular piece, specifically dedicated to making touchstones. We've got this on long-term loan from NASA. It's one of only eleven in the world."

## Career opportunities:

A Master of Science in Earth Sciences gives you the opportunity to gain a wide range of knowledge and skills that are relevant for employment in industry, government agencies and education. It is an excellent qualification for pursuing a career in tectonics, geochronology, mineral exploration and hydrocarbon exploration.

[science.anu.edu.au/study/masters/master-science-earth-sciences](https://science.anu.edu.au/study/masters/master-science-earth-sciences)

# MASTER OF ENERGY CHANGE



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830776 / 830777 (Advanced)

**CRICOS code:** 082291E / 082292D (Advanced)

**Cognate disciplines:** Biology, Business and Finance, Chemistry, Earth Sciences, Economics, Engineering, Environmental Studies, Information Sciences, Law, Mathematics, Physics, Political Science, Sociology

 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Energy Change is an interdisciplinary coursework program that allows you to develop a program of advanced learning suited to your individual interests, skills and aspirations in the area of energy change. A major key to addressing climate change is the need for a world-wide change to carbon-free forms of energy production.

## Career opportunities

The need for energy change is well-established yet there are relatively few people with an effective overview or the multi-disciplinary skills needed to effectively contribute to this complex issue. Depending on the area of study and specialisation, our graduates find work in government, policy, scientific research, development and aid organisations, multi-national companies, and many other exciting fields. The Advanced program is also a pathway to more advanced study.



## GRADUATE PROFILE

### Rahul Ravindranathan and Aniruddha Deshpande

#### Master of Energy Change

Good friends Rahul Ravindranathan and Aniruddha Deshpande didn't know one another until they found themselves on the same journey from India to Canberra to study a Master of Energy Change. Now they've graduated from ANU, but the journey continues for both of them – with jobs in the local renewable energy sector.

## MASTER OF ENERGY CHANGE (ADVANCED)

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 and at least eight courses in cognate disciplines with a GPA of 5.5/7.0 in those courses.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Master of Energy Change (Advanced) is a multi-disciplinary coursework and research degree which will provide you with both a strong basis in the fundamental areas related to energy change, as well as allowing you to undertake advanced courses and research in areas suited to your individual interests.

# MASTER OF ENVIRONMENT



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830715 / 830716 (Advanced)

**CRICOS code:** 082293C / 082294B (Advanced)

**Cognate disciplines:** Anthropology, Asia Pacific Studies, Biodiversity, Biology, Climate Change, Conservation Biology, Development Studies, Earth Science, Ecology, Environmental Policy, Environmental Science, Environmental Studies, Forestry, Geography, Human Ecology, Indigenous Australian Studies, Natural Resource Management, Policy Studies, Population Studies, Public Health, Resource Management and Environmental Science, Science Communication, Sociology, Soil Science, Sustainability Science, Sustainable Development, Urban Planning, Water Science

 #1 in Australia for Natural Sciences\*

\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year) of credit.

## Program description

The Master of Environment degrees allow you to develop a program of advanced learning suited to your individual interests and skills in environment and sustainability.

A broad-ranging suite of courses from across the University provides exposure to current perspectives on environmental issues and approaches. Areas of interest include environmental science and management, social and ecological linkages, environmental economics and governance, environmental policy, and integrative approaches to research and analysis.

You will also develop depth of knowledge in a selected disciplinary area. Available specialisation options include: biodiversity conservation, climate science and policy, disaster studies, environmental policy, environmental studies and human ecology, geography, natural resource management, sustainability science, and water science and management.

[science.anu.edu.au/study/masters/master-environment](https://science.anu.edu.au/study/masters/master-environment)



## GRADUATE PROFILE

### Hana Camelia

#### Master of Environmental Science (Advanced)

“My favourite experience during my Masters was when I was doing my thesis and I was able to be supervised by amazing researchers. I had a chance to do the lab work and process real coral data (which is really cool!). Right now I’m preparing for my PhD in Germany which will be about paleoclimate research using corals taken from the Andaman Sea.”

## Career opportunities

You can choose from a range of careers as diverse as the environment itself. Many of our graduates are employed in policy-making within local, state and federal governments, water resource management, environmental management, urban planning and sustainability, climate change adaptation consulting, and applied research science.

## MASTER OF ENVIRONMENT (ADVANCED)

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

In the Advanced program you will develop research expertise through completing a substantial research project supervised by an academic, which constitutes appropriate research training for a PhD.

# MASTER OF FORESTS



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1


**Indicative annual domestic fee:** \$34,490.00


**Indicative annual international fee:** \$50,760.00

**UAC code:** 830718 / 830719 (Advanced)

**CRICOS code:** 111570J / 111570H (Advanced)

**Cognate disciplines:** Ecology, Environmental Policy, Environmental Science, Environmental Studies, Forestry, Natural Resource Economics, Natural Resource Management, Resource Management.

 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

 5 star rating for Agriculture & Environmental Studies\*\*  
\*\*Good Universities Guide

## Admission requirements

A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Forests provides a unique opportunity to learn about the science, economy and society of forested landscapes and their management. You will study in our world-renowned Fenner School of Environment and Society, a leading centre for interdisciplinary research on the conservation and management of Australia's distinctive biodiversity.

By completing a broad range of courses across forest science and management, you will develop the skills to integrate and adapt knowledge to design novel solutions to complex problems.

## Career opportunities

Graduates with forests expertise work in conservation and sustainable production systems, in partnership with First Nations peoples and with farmers, in the forest and environmental services industries, and across government, business, and community sectors. Graduates have the capacity to enter at managerial and strategic thinking-level positions, and to become the next generation of leaders for forests.

[science.anu.edu.au/study/masters/master-forests](https://science.anu.edu.au/study/masters/master-forests)



## GRADUATE PROFILE

### Yiwen Chen

#### Master of Forestry (Advanced)

Forestry student Yiwen Chen made national headlines with her ANU Masters research project when she discovered Murray-Darling floodplains had not received the majority of environmental water redirected from irrigators under the Murray-Darling Basin Plan.

"I didn't expect it! I feel really happy to see that my paper can be influential for others. I think it's inspiration for me to continue study in the future."

## MASTER OF FORESTS (ADVANCED)

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program focuses on completing a substantial research project supervised by an academic, which constitutes appropriate research training for a PhD.



# MASTER OF MATHEMATICAL SCIENCES (ADVANCED)



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830788

**CRICOS code:** 082337G

**Cognate disciplines:** Mathematics, Statistics, Mathematical Economics, Mathematical Finance, Actuarial Studies, Computer Science, Bioinformatics

 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 and at least eight courses in a cognate discipline with a GPA of 5.5/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

This Advanced program enables students to upgrade their expertise in the mathematical sciences, either as a route to further study of mathematical sciences, or to upgrade their quantitative skills in areas that are rapidly becoming more reliant on advanced techniques from the mathematical sciences, such as the biological and computational sciences.

Students can take a variety of courses ranging from pure mathematics to mathematical modelling, computational mathematics and applications of mathematics, as well as courses in related disciplines such as statistics, computer science, financial mathematics and econometrics. The program can be tailored to the interests and needs of each student as much as possible. Past students have completed research projects in various branches of pure mathematics, as well as in applications including economics, epidemiology, financial mathematics and computational astrophysics.

This program includes a substantial research project supervised by an academic, which constitutes appropriate research training for a PhD.



## GRADUATE PROFILE

### Jiannan Yang

#### Master of Mathematical Sciences (Advanced)

“There were some courses I knew would be challenging before I enrolled in them, but one of those, called Analysis 2, ended up being a favourite of mine. The pace of learning and the problems set for us were appropriate for what we were learning. This course really boosted my confidence from the very first semester.”

## Career opportunities

Examples of roles of our graduates include: Associate, Quantitative Applications Division at Macquarie Group; Lecturer, Sanata Dharma University (Indonesia); and Visiting Assistant Professor of Managerial Economics and Decision Sciences, Kellogg School of Management (USA).

Areas such as biological sciences and computational science are becoming increasingly reliant on advanced techniques from the mathematical sciences. The Master of Mathematical Science will equip you with quantitative skills in this areas, as well as act as a pathway to a PhD.

[science.anu.edu.au/study/masters/master-mathematical-sciences](https://science.anu.edu.au/study/masters/master-mathematical-sciences)



# MASTER OF SCIENCE COMMUNICATION



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2

**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830749

**CRICOS code:** 082350K

**Cognate disciplines:** Mathematical Sciences, Physics and Astronomy, Chemical Sciences, Earth Sciences, Biological Sciences, Environmental Studies, Other Natural and Physical Sciences, Information Technology, Engineering and Related Technologies, Health, Education, Communication and Media

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 with at least eight courses in cognate disciplines, or with at least 10 years work experience in a related field.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

Taught by some of Australia's leading science communicators, the program combines theoretical and practical aspects of science communication, including courses on science in the media; science communication on the web, ethics, issues and consequences of science; science and public policy; and cross-cultural science communication.

Research projects have looked at a range of key issues in the relationship between science and the rest of society, such as attitudes to controversial science, use of rhetoric in science communication, and cutting edge use of new technology to communicate science.

The program is ideal for people interested in becoming professional science communication officers and managers, or in gaining skills in communicating their own science. The course allows students to choose from a range of one-year intensive fieldwork placements at Australia's leading science engagement organisations. Students explore the fundamental theory that underpins science communication in such settings, then apply it to deliver, evaluate and improve existing programs, develop novel programs and work on other suitable priorities of the fieldwork host – including working alongside and learning from their staff.

[science.anu.edu.au/study/masters/master-science-communication](https://science.anu.edu.au/study/masters/master-science-communication)



## GRADUATE PROFILE

### Tiah Penny

#### Master of Science Communication

"I really value the balance between theory and practical learning in the Master of Science communication. The placement with Mulligan's Flat has been a great experience to directly contribute to environmental science communication – spending time in nature, working alongside passionate people, and increasing awareness and appreciation of the Yellow Box Grassy Woodlands and its inhabitants with others. 10/10 experience!"

## Career opportunities

Graduates have found careers as communications officers for scientific organisations such as CSIRO, science-oriented government departments, university departments and businesses. Examples of roles of our graduates include: Senior Medical Writer, Health Interactions; Physics Science Communicator, University of Sydney; Senior Policy Officer, Department of Industry, Innovation and Science; Freelance Journalist; and Radio Host, ABC Canberra.

# MASTER OF SCIENCE IN AGRICULTURAL INNOVATION



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2

**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830726 / 830727 (Advanced)

**CRICOS code:** 0101483 / 0101484 (Advanced)

**Cognate disciplines:** Agriculture, Biology, Environmental Science, Natural Resource Management, Engineering (general), Applied Computer Science, Commerce and Business



## GRADUATE PROFILE

### Paris Capell

#### Master of Science in Agricultural Innovation

“There have been a variety of experiences I wouldn’t have been able to have in any other degree. I really enjoyed being on the ground with producers and being able to see some of what I’d studied with academics from a producer’s perspective. Another awesome part of the degree is the connection to leading soil scientists: through that, I’ve been able to intern and be involved with different projects.”

## Admission requirements

A Bachelor degree or international equivalent with a minimum GPA of 5.0/7.0 with at least 8 courses in a cognate discipline with a minimum GPA of 5.0/7.0 in these courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

Globally, agriculture will need to feed over nine billion people by 2050. With climate change and increasing competition for land, water and energy resources, the agricultural sector will need to find innovative ways to do more with less. To achieve this, an interdisciplinary approach to problem solving will be required.

You will learn from world-leading experts from across ANU, and its industry partners, through initiatives including the Centre for Entrepreneurial Agri-Technology (CEAT), a joint ANU-CSIRO initiative. In partnership with government and industry, CEAT brings together research and technology to address industry challenges, cutting across traditional discipline boundaries.

## Career opportunities

An aging community within the agricultural research and industries is considered a limitation to advancing the agri system. Graduates can build careers in state and federal government, as researchers in industry bodies, corporations and research institutions, as innovation technologist across the agricultural sector and in supporting non-government organisations globally.

## MASTER OF SCIENCE (ADVANCED) IN AGRICULTURAL INNOVATION

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 with at least 8 courses in a cognate discipline with a minimum GPA of 5.5/7.0 in these courses.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Master of Science (Advanced) in Agricultural Innovation program provides you with the opportunity to extend your practical and coursework experience with the development and implementation of a research project supervised by an academic. This is particularly relevant to those who wish to benefit from the research strengths of ANU and pursue a career in research.

[science.anu.edu.au/study/masters/master-science-agricultural-innovation](https://science.anu.edu.au/study/masters/master-science-agricultural-innovation)

# MASTER OF SCIENCE IN ASTRONOMY & ASTROPHYSICS



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830760 / 830761 (Advanced)

**CRICOS code:** 0101476 / 0101477 (Advanced)

**Cognate disciplines:** Astronomy & Astrophysics, Computer Science, Earth & Marine Sciences, Physics, Mathematics

 #1 in Australia for Physics & Astronomy\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses with a minimum of 2 courses of undergraduate second year Physics; and a minimum of 1 course of undergraduate second year Mathematics.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Science in Astronomy & Astrophysics is a full-time two year program based upon 100% coursework. The coursework may be tailored to a student's needs, and can include astrophysical techniques, astrophysical computing, planetary science, stellar astrophysics, galaxies, cosmology, and courses from cognate disciplines.

Many courses contain research or hands-on components that develop skills and knowledge in the latest advances in astronomy and astrophysics. They also offer training in areas highly relevant outside of academia, for example, project management, computer programming, and problem solving skills. Some of the courses may include the acquisition and analysis of telescope data, the development of theoretical models, or the development and testing of new astronomical instrumentation.



## GRADUATE PROFILE

### Melanie Kaasinen

#### Master of Astronomy and Astrophysics

"I have collaborated with researchers from Germany, the USA, France, and Japan and met many more from institutions all over the world. I was also able to travel to Hawaii to observe with the Keck II telescope, one of the world's largest telescopes. These opportunities have enabled me to rapidly develop as a researcher."

## MASTER OF SCIENCE (ADVANCED) IN ASTRONOMY & ASTROPHYSICS

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses with a minimum of 2 courses of undergraduate second year Physics; and a minimum of 2 courses of undergraduate second year Mathematics. Completion of ASTR3005 Astrophysics Research Topic or equivalent.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program provides you with the opportunity to extend your practical and coursework experience with the development and implementation of a research project supervised by an academic. The research component commences in the 2nd semester of study. This is particularly relevant to those who wish to benefit from the research strengths of ANU and pursue a career in research.

# MASTER OF SCIENCE IN BIOLOGICAL SCIENCES



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830706 / 830707 (Advanced)

**CRICOS code:** 096439G / 096440D (Advanced)

**Cognate disciplines:** Biology, Biomedical Sciences, Molecular Biology, Genetics, Evolution, Ecology, and Plant Sciences

 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 with at least 8 courses in a cognate discipline with a GPA of at least 5.0/7.0 in these courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Science in Biological Sciences is a versatile program that allows you to explore different fields in biology. You can also explore related topics such as biological anthropology, ethics, health and disease, innovation and public policy, environmental change, and contemporary perspectives in environmental science.

Through this program you will also develop a critical understanding of the role of science in society, a vital skill that will enable you to identify, communicate and respond to societal needs and global challenges.

## Career opportunities

A postgraduate degree in biological science will provide you with a solid background to pursue career goals in a range of fields including plant and animal laboratory science, field ecology, industry, agriculture, public and environmental policy.

Our graduates find interesting careers in a range of areas including agricultural biotechnology and plant breeding, clinical or medical research, pharmaceutical companies, biosecurity, environmental policy and biological education.



## GRADUATE PROFILE

### Xiaojun Yuan

#### Master of Biological Sciences (Advanced)

“My Masters is better than I imagined. My supervisor is fantastic and I love working with her. I’m having such a good time. My supervisor and I are getting very nice results from the experiments we’re doing on autotransporters, which is really exciting. We’re studying the assembly of a specific autotransporter to see if it’s a good target for developing new antibiotics. It’s still too early to say how important what we’re working on will be, but it’s very promising.”

## MASTER OF SCIENCE (ADVANCED) IN BIOLOGICAL SCIENCES

### Admission requirements

Applicants must present a Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program incorporates a research project supervised by an academic, and is a gateway to further research, such as a PhD.



# MASTER OF SCIENCE IN MATERIALS SCIENCE



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830792 / 830793 (Advanced)

**CRICOS code:** 102930J / 102931H (Advanced)

**Cognate disciplines:** Chemistry, Physics, Chemical Engineering and Materials Engineering

 #1 in Australia for Physics and Astronomy\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

Applicants are required to have the equivalent of an ANU minor in Chemistry and a minimum of 2 courses of undergraduate Maths and a minimum of 2 courses of undergraduate Physics.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

This program provides a broad understanding of the fundamentals and specialist knowledge to face the key challenges in the development of new materials including nanomaterials. You can apply this knowledge to address current global challenges, such as producing materials for renewable energies, battery storage, energy efficiency, tissue engineering, and environmentally conscious and biocompatible materials such as biodegradable plastics.

## Career opportunities

Drawing on world leading expertise from materials scientists across our chemistry, physics and engineering research schools, this program will provide you with the techniques and skills that are in high demand. It will prepare you for a bright future in industry, government or education across areas including green energy technologies, polymer technologies, biomedical engineering, materials engineering, and chemical engineering.



## FACILITIES

### Battery Materials and Energy Storage Laboratory (Battery Lab)

Hosted within the ANU Research School of Chemistry, the Battery Lab enables research into new battery and storage technologies.

This national facility supports the characterisation, development and performance testing of battery materials, electrolytes and devices.

## MASTER OF SCIENCE (ADVANCED) IN MATERIAL SCIENCES

### Admission requirements

Applicants must present a Bachelor degree or international equivalent with a minimum GPA of 5.5/7.0, with at least 8 courses in a cognate discipline with a GPA of at least 5.5/7.0 in these courses.

Applicants are required to have the equivalent of an ANU minor in Chemistry and a minimum of 2 courses of undergraduate Maths and a minimum of 2 courses of undergraduate Physics.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program incorporates a research project supervised by an academic, and is a gateway to further research, such as a PhD.



# MASTER OF SCIENCE IN MATHEMATICAL SCIENCES



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830787

**CRICOS code:** 102929B

**Cognate disciplines:** Mathematics, Statistics, Mathematical Economics, Mathematical Finance, Actuarial Studies, Computer Science, Bioinformatics

 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

This coursework program enables students to study a variety of courses tailored to their own interests and needs, ranging from pure mathematics to mathematical modelling, computational mathematics and applications of mathematics to many research areas (such as biology, astronomy, physics and environmental sciences), to related disciplines such as statistics, computer science, and econometrics.

## Career opportunities

Examples of roles of our graduates include: Associate, Quantitative Applications Division at Macquarie Group; Lecturer, Sanata Dharma University (Indonesia); and Visiting Assistant Professor of Managerial Economics and Decision Sciences, Kellogg School of Management (USA).

Areas such as biological sciences and computational science are also becoming increasingly reliant on advanced techniques from the mathematical sciences. The Master of Mathematical Science will equip you with quantitative skills applicable to these areas and more.



## ACADEMIC PROFILE

### Professor Amnon Neeman

#### Pure Mathematician

Professor Neeman solved two open problems which have, for the past 20 years, thwarted the efforts of the best algebraists in the world.

“I find it calming. When I am in one of these phases, when I’m really completely absorbed by a problem, it takes my mind off other things.”

<https://science.anu.edu.au/study/masters/master-science-mathematical-sciences>

# MASTER OF SCIENCE IN NUCLEAR SCIENCE



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830750 / 830740 (Advanced)

**CRICOS code:** 099254D / 099251G (Advanced)

**Cognate disciplines:** Physics, Engineering, Chemistry, Mathematics

 #1 in Australia for Physics and Astronomy\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least six courses in the field of Physics or Engineering with a GPA of 5.0/7.0 in those courses. Background knowledge equivalent to high-school maths study is recommended but not essential.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (1 semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (1 year full-time) of credit.

Courses completed in the Graduate Certificate of Nuclear Technology Regulation at ANU may contribute as credit towards the Master of Science in Nuclear Science.

## Program description

The Australian National University is the only university in Australia that offers postgraduate education in nuclear science and is the ideal location to pursue an advanced degree in this growing field. Over two years, you will study the fundamentals and applications of nuclear science, including materials analysis, dating techniques, nuclear medicine, and nuclear energy. The degree is a mix of coursework and projects, comprising individual and group-based research. You will develop the scientific background you need for informed debates on nuclear issues, without advocating a particular position.

## Career opportunities

Our students go on to careers in policy development, defence, security or related fields, and on to careers in the nuclear industry. Examples of roles of our graduates include research roles, both fundamental (university) and applied (medical/industrial); regulatory roles in the commercial (mining) and government (radiation protection, customs, security) sectors; and analyst and policy roles in government.

[science.anu.edu.au/study/masters/master-science-nuclear-science](https://science.anu.edu.au/study/masters/master-science-nuclear-science)



## GRADUATE PROFILE

### Ken Maxwell

#### Master of Nuclear Science

“The Master degree in nuclear science was fantastic and catered to students from all backgrounds, whether they’re professionals like me, or from government departments, or they want to be a nuclear physicist. It covers the whole spectrum from practical expertise to pure theory.”

## MASTER OF SCIENCE (ADVANCED) IN NUCLEAR SCIENCE

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 and at least eight courses in the field of Physics or Engineering with a GPA of 5.5/7.0 in those courses. Mathematics - assumed knowledge : Background knowledge equivalent to high-school maths study is recommended but not essential.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program provides you with the opportunity to extend your practical, coursework experience in nuclear science with the development and implementation of a research project supervised by an academic. You will be required to develop expertise in a nominated area through independent research and completion of a thesis. It is particularly relevant to those who wish to benefit from the research strengths of ANU.

# MASTER OF SCIENCE IN PRECISION INSTRUMENTATION AND MEASUREMENT



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830747 / 830748 (Advanced)

**CRICOS code:** 099248B / 099249A (Advanced)

**Cognate disciplines:** Physics, Engineering

 #1 in Australia for Physics and Astronomy\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in the field of Physics or Engineering with a GPA of 5.0/7.0 in those courses. Mathematics equivalent to the level of MATH2305.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

Measurement is at the heart of scientific discovery, and the frontiers of knowledge are expanded through the development of new and more precise instrumentation.

You will be learning from ANU scientists who have worked on projects including: the design and development of instrumentation for the Nobel-prize winning discovery of gravitational waves, a high-resolution ion microprobe for geological analysis, a high-resolution x-ray computed tomography instrument for the study of porous and disordered materials, and, an integral-field spectrograph for an international, next-generation, thirty-meter class optical telescope.

## Career opportunities

A Master's degree specialising in precision instrumentation and measurement provides you with the skills to develop the instrumentation technologies that underpin the advancement of science and industry. ANU has a strong pedigree in the development of new scientific instrumentation, and our graduates are highly sought-after and go on to find interesting careers in a range of areas.



## GRADUATE PROFILE

### Mrunmayi Deshpande

#### Master of Science in Precision Instrumentation and Measurement

"The Master of Science in Precision Instrumentation and Measurement is a unique blend of physical engineering and astronomy. It also has a research component that makes the degree all-round. It taught me real life implementation of science and instrumentation."

## MASTER OF SCIENCE (ADVANCED) IN PRECISION INSTRUMENTATION AND MEASUREMENT

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 and at least eight courses in the field of Physics or Engineering with a GPA of 5.5/7.0 in those courses. Mathematics equivalent to the level of MATH2305.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program extends your practical, coursework experience in precision instrumentation and measurement with the development and implementation of a research project supervised by an academic. You will be required to develop expertise in a nominated area through independent research and completion of a thesis. A Master of Science (Advanced) in Precision Instrumentation and Measurement can also lead to a PhD.

[science.anu.edu.au/study/masters/master-science-precision-instrumentation-measurement](https://science.anu.edu.au/study/masters/master-science-precision-instrumentation-measurement)

# MASTER OF SCIENCE IN QUANTITATIVE BIOLOGY AND BIOINFORMATICS



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830737 / 830738 (Advanced)

**CRICOS code:** 096439G / 096440D (Advanced)

**Cognate disciplines:** Computer Science, Mathematics, Statistics, Biology, Computational Chemistry

 #1 in Australia for Natural Sciences\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Science in Quantitative Biology and Bioinformatics is a program that provides students with experience in the use of methods and tools to organise and analyse biological data, statistically, mathematically and computationally. The course caters to a range of students including students who have come from an undergraduate biological degree, by providing the appropriate mathematical and programming skills; to students with a more quantitative undergraduate background, by providing the necessary background in biology and biological data and analyses. Students also have the opportunity to learn about, and apply, techniques in client engagement and the real-world practice of consulting.

## Career opportunities

This program provides you with skills that are in high demand in a variety of areas including forensic science, agri-technology, the pharmaceutical industry, medical research, bioengineering and biotechnology.



## FACILITIES

### The Australian Phenomics Facility

The Australian Phenomics Facility specialises in the development, characterising and archiving of mouse models of human disease. It has an experienced genomics and bioinformatics capability focussed on the identification of single nucleotide polymorphisms and the phenotyping capability to make the biological associations with probable human disease traits.

## MASTER OF SCIENCE (ADVANCED) IN QUANTITATIVE BIOLOGY AND BIOINFORMATICS

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 with at least 8 courses in a cognate discipline, which must also have a minimum GPA of 5.5/7.0, and must include at least 4 courses from the following disciplines: computer science, mathematics, statistics or computational chemistry.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program incorporates a research project supervised by an academic, and is a gateway to further research, such as a PhD. Students will develop work on an original research project that builds on, and applies, their knowledge of quantitative biological data analysis.



# MASTER OF SCIENCE IN QUANTUM TECHNOLOGY



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830741 / 830752 (Advanced)

**CRICOS code:** 099252F / 099253E (Advanced)

**Cognate disciplines:** Physics, Engineering, Mathematics

 #1 in Australia for Physics and Astronomy\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

Quantum technologies such as computing, metrology and communications have the potential to vastly change our world, as they push us towards the Quantum Age. By exploiting quantum phenomena, society-changing technologies such as unbreakable cryptography or exponentially faster computers are poised to become a reality. Recently, many of these technologies have matured to the point that a commercial quantum industry is emerging. This has been met with huge investments from government and industry, both domestically and internationally.

## Career opportunities:

A Master degree specialising in quantum technology provides you with the skills to pursue a career at the forefront of the emerging quantum industry, including quantum computing, quantum communication, quantum metrology, policy surrounding quantum technologies or further study. ANU has a strong reputation in the field of quantum science, meaning our graduates are highly sought-after and go on to find interesting careers in a range of areas.



## GRADUATE PROFILE

### Angela Anna Baiju

#### Master of Science in Quantum Technology

“Now that quantum is a buzzword, it’s easy to get distracted in the flow. This program helped me to identify what quantum technologies are beyond the hype it carries. It has helped to obtain hands-on experience on various quantum technologies and identify its applications. The flexibility this program provides helped me to explore much more than I expected.”

## MASTER OF SCIENCE (ADVANCED) IN QUANTUM TECHNOLOGY

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 and at least eight courses in a cognate discipline with a GPA of 5.5/7.0 in those courses.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Advanced program provides you with the opportunity to extend your practical, coursework experience in precision quantum technology with the development and implementation of a research projects supervised by an academic. You will be required to develop expertise in a nominated area through independent research and completion of a thesis. It is particularly relevant to those who wish to benefit from the research strengths of ANU. A Master of Science in Quantum Technology (Advanced) can also lead to a PhD.

[science.anu.edu.au/study/masters/master-science-quantum-technology](https://science.anu.edu.au/study/masters/master-science-quantum-technology)



# MASTER OF SCIENCE IN THEORETICAL PHYSICS



## Key facts

**Duration:** Two years full-time (or less with credit)

**Semester intake:** Semester 1 or 2


**Indicative annual domestic fee:** \$34,490.00

**Indicative annual international fee:** \$50,760.00

**UAC code:** 830753 / 830754 (Advanced)

**CRICOS code:** 0101481 / 0101482 (Advanced)

**Cognate disciplines:** Physics, Engineering, Mathematics

 #1 in Australia for Physics and Astronomy\*  
\*QS World University Rankings 2023

## Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.0/7.0 and at least eight courses in a cognate discipline with a GPA of 5.0/7.0 in those courses.

## Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

## Program description

The Master of Science in Theoretical Physics brings students to the cutting edge of research in an interactive training environment, being taught by some of the world's leading theoretical physicists. You will discover the breadth of theoretical physics, including understanding how non-linear dynamics can be applied to complex problems.

If you are interested in big questions, like how the universe works or how elementary particles interact with each other to form nuclei and stars, then you will enjoy learning about quantum field theory. With applications such as particle physics and condensed matter, quantum field theory is arguably the most far-reaching attempt to combine special relativity and quantum physics in a unique framework.

## Career opportunities:

Drawing on world leading expertise from the ANU Research School of Physics, this program will provide you with the techniques and skills necessary for a bright future in research or related careers in education, science and industry.



## FACILITIES

### Australian Plasma Fusion Research Facility (H-INF)

The Australian Plasma Fusion Research Facility (H-INF) is a uniquely versatile plasma research facility, located at ANU.

The heart of the facility is the H-1 Helicac, a large stellarator device which is the Australian focus of basic experimental research on magnetically confined plasma, important in developing fusion energy, a clean, virtually inexhaustible energy source.

## MASTER OF SCIENCE (ADVANCED) IN THEORETICAL PHYSICS

### Admission requirements

A Bachelor degree or international equivalent with a GPA of 5.5/7.0 and at least eight courses in a cognate discipline with a GPA of 5.5/7.0 in those courses.

### Eligibility for credit

Applicants with a Bachelor degree or Graduate Certificate in a cognate discipline may be eligible for up to 24 units (one semester full-time) of credit. Applicants with a Graduate Diploma or Honours in a cognate discipline may be eligible for up to 48 units (one year full-time) of credit.

### Program description

The Master of Science (Advanced) in Theoretical Physics program provides you with the opportunity to extend your practical and coursework experience in theoretical physics with the development and implementation of a research project supervised by an academic. This is particularly relevant to those who wish to benefit from the research strengths of ANU and pursue a career in research.

# INTERNSHIPS



Apply for our official internship program to work in an organisation on an agreed project, earning course credit during a semester. As an intern, you will get hands on work experience that will put you ahead of the competition when it's time to graduate. And did we mention you'll get credit towards your degree?

The internship program is an opportunity for you to work in an organisation for 1-2 days a week in a semester. Opportunities may exist for intensive internships during semester breaks, with a greater time commitment over a shorter period. The number of internships available each semester is based on the number of available projects from host organisations.

## Current internship hosts

- > ACT Health
- > Australian Academy of Science
- > Australian Institute of Health & Welfare
- > Australian Science Innovations
- > Endangered Heritage
- > Esri Australia
- > Fight Food Waste Ltd
- > Food2Soil
- > NSW Biodiversity Conservation Trust
- > Relationships Australia
- > Safe Work Australia
- > Women's Mentoring Foundation

## Self-sourced internships

Students can undertake external internship opportunities if there is no existing formal agreement with the proposed host organisation. In self-sourced internships, students must meet the learning outcomes and other requirements to receive credit for their internship. Students must contact the internship course convener for further information before they undertake self-sourced internships.

E [science.internships@anu.edu.au](mailto:science.internships@anu.edu.au)

## Example of self-sourced internship

### CSIRO

- > Our students often work with leading CSIRO scientists in their world-class facilities, leading to further research and employment opportunities.

## Applications for 2024 internships

### Semester 1:

Applications open early December 2023, close mid-January 2024.

### Winter Semester/Semester 2:

Applications open late March 2024, close mid April 2024.

[students.science.anu.edu.au/careers-opportunities/internship-program](https://students.science.anu.edu.au/careers-opportunities/internship-program)



## STUDENT PROFILE

### Tanya Javaid

#### CSIRO Internship

Tanya Javaid is an international student at ANU and completed an internship at CSIRO as part of her degree.

"Getting caught up in the stress of grades and deadlines, you often forget to enjoy what you're learning, and fail to see that information is used beyond the classroom. An internship is a great way to study what you love in a hands-on way, without obsessing over your grade at the end of it!"

## Eligibility

- > Domestic and international students may apply.
- > You must have completed a minimum of 72 units with at least a Distinction average in Science courses.
- > Postgraduate students require approval from their Postgraduate Program Convener.
- > Selection may include an interview.
- > Additional selection criteria may be set by the host organisation.

# FIELDWORK



A number of our courses offer fieldwork activities, across a range of science fields, to help you get hands-on experience in the field and assist you in solidifying your theoretic knowledge. Here are some fieldwork highlights you can undertake during your studies. Please note: some field trip course are capped due to capacity restrictions and are subject to travel restrictions.



## Coral Reef Field Studies

**EMSC6119**, offered by the Research School of Earth Sciences

Learn from ANU researchers on One Tree Island or Heron Island. Several days will be spent on location studying a modern reefal setting, fossil reef depositional environments and relevant biological processes.



## Environmental Science Field School

**ENVS6218**, offered by the Fenner School of Environment and Society

Apply your theoretical understanding to critical observation and measurement of biodiversity, biogeography, landscape ecology, soil-vegetation processes and sustainable land management.



## Advanced Field Studies in Functional Ecology

**BIOL6303**, offered by the Biology Teaching and Learning Centre

Understand field studies in plant and animal functional ecology. The course location varies each year but has previously been held in Singapore, Kosciuszko National Park and the Daintree Rainforest.



## Island Sustainable Development: Fiji Field School

**ENVS6205**, offered by the Fenner School of Environment and Society

Small island states face considerable challenges as they attempt to achieve sustainable development. This field trip aims to give students a first-hand experience of the real-world circumstances that confront an island nation by exploring important sectoral themes in the context of sustainable development.

[science.anu.edu.au/study/student-experience/field-trips](https://science.anu.edu.au/study/student-experience/field-trips)



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## Contact us


ANU College of Science  
The Australian National University

W [science.anu.edu.au](http://science.anu.edu.au)  
E [science@anu.edu.au](mailto:science@anu.edu.au)

### Student enquiries

T 1800 620 032  
E [future.student@anu.edu.au](mailto:future.student@anu.edu.au)

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