



SCIENCE

UNDERGRADUATE

WELCOME TO MONASH SCIENCE

As a society we continue to face a wide range of complex challenges – environmental pressure, climate change, booming population and an ever-changing technological, economic and social landscape.

At Monash Science, we believe in making a difference to the world by using our science training and knowledge to influence our future. Science is about learning how to analyse problems and solve them.

Our future depends on bright minds, innovators and collaborators who can create solutions that will change the world. With a science degree from Monash University, the possibilities to be a driver of change are endless.

You could find yourself on one of our many exciting field trips gaining hands-on learning experiences or influencing international policy on environmental issues.

Or you might want to be an entrepreneurial scientist using your training and knowledge in the business, government and not-for-profit sectors.

Our Bachelor of Science degree is one of the most flexible and popular science degrees in Australia.

In addition to this flexible program, we offer many other courses including the Bachelor of Applied Data Science, the Bachelor of Applied Data Science Advanced (Honours), the Bachelor of Science Advanced Research (Honours) and the Bachelor of Science Advanced Global Challenges (Honours).

When you join Monash Science, you will be immersed in a science precinct that is among the most vibrant and dynamic in the world. Our students are taught, nurtured and mentored by scientists who are at the forefront of their disciplines.

Our world-class staff and teaching environment will provide you with a globally-recognised education and the skills to make a difference in the world through science. I look forward to welcoming you, our future scientists, leaders and world-changers, in 2027.

PROFESSOR JORDAN NASH

Dean, Faculty of Science Monash University









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COURSE INFORMATION FAST FACTS

Look for these icons on each course page for key information.

	Location
	Duration (years)
	Intakes
	Requirements

MONASH UNIVERSITY recognises that its Australian campuses are located on the unceded lands of the people of the Kulin Nations, and pays its respects to their Elders, past and present.

WHY CHOOSE SCIENCE AT MONASH?



Find out more about one of our outdoor classrooms, the Earth Sciences Garden.



Find out more about one of our on campus outdoor classrooms, the Jock Marshall Reserve.



Find out more about our Physics and Astronomy Collaborative Learning Environment (PACE).



Find out more about our Hutton-Westfold Observatory.

FLEXIBILITY

Our science degrees offer flexibility and choice unrivalled by any other Australian university. You can:

- Study subjects across the scientific spectrum, and even take units from other areas such as arts, music and business, just to name a few.
- Graduate with two degrees in less time by studying a double degree.
- Build your course around your passion for science, and not be directed to study subject areas outside science that may not interest you.

LEARNING BEYOND THE CLASSROOM

Take your learning beyond the classroom with an exchange program, field trip, internship, research project, overseas study tour or the Global Immersion Guarantee (GIG).

GLOBAL IMMERSION GUARANTEE (GIG)

GIG is a funded two-week fieldwork unit (12 credit points) that takes you to one of nine countries at the end of your first year. While abroad, you will learn from local leaders about how they're working to address the human impact on the environment in different local contexts and see first-hand how to balance environmental protection and sustainability with economic and social development. Eligibility criteria apply.

FIELD TRIPS

We offer many units with field trips, from a single day to a full week, exploring locations from Phillip Island and Broken Hill to Borneo-Malaysia, the Cook Islands or Italy.

STUDY ABROAD

Take your Science degree around the world from intercampus study, a university partner exchange, to study tours and overseas placements.

RESEARCH

Whether you're passionate about research or just curious to try it out, you'll have the opportunity to work with academics on a research project across 22 different science disciplines.

INTERSHIPS

Undertake a science-based internship of 80-160 hours where you will put into practice the knowledge and skills developed in your course.



DISCOVER YOUR LEARNING BEYOND THE CLASSROOM OPPORTUNITIES

go.monash.edu/beyond-classroom

STUDY IN ONE OF THE WORLD'S AND AUSTRALIA'S BEST SCIENCE PRECINCTS

SCIENCE STUDENT LEARNING LOUNGE

We have two purpose-built student lounges just for science students, along with many other comfortable breakout spaces for studying or just hanging out.

EARTH SCIENCES GARDEN

We take a unique approach to teaching. For example, you'll study geology by working in our Earth Sciences Garden – an outdoor classroom like no other; the first of its kind in Australia and the most comprehensive worldwide.

JOCK MARSHALL RESERVE

We're home to the three-hectare Jock Marshall Reserve, which allows you to study the natural world in the great outdoors. The reserve includes a new integrated learning facility.

PLANT SCIENCES COMPLEX

Located within the Jock Marshall Reserve, this state-of-the-art facility houses advanced plant growth environments for research in plant genetics, conservation and ecological studies.

GREEN CHEMICAL FUTURES BUILDING

Budding chemists take note – our home of chemistry is an award-winning, multidisciplinary innovation hub where teaching, research and industry mix in an exciting, creative space.

PHYSICS AND ASTRONOMY COLLABORATIVE LEARNING ENVIRONMENT (PACE)

It's the end of traditional lectures in our first-year physics and astrophysics classes. Instead you'll benefit from problem-based learning through hands-on activities in a collaborative learning environment, with purpose-built spaces to foster teamwork and improve learning outcomes.

NEW HORIZONS RESEARCH CENTRE

This houses the research laboratories of the School of Physics and Astronomy. It brings together world-leading researchers from Monash and CSIRO, with diverse backgrounds in physics, astrophysics, engineering, mathematics, IT and biosciences.

MATHEMATICS LEARNING CENTRE

The Mathematics Learning Centre is a drop-in centre, which offers one-to-one help if you're enrolled in mathematics and statistics units.

THE HUTTON-WESTFOLD OBSERVATORY

The Hutton-Westfold Observatory at our Clayton campus allows you to observe stars and distant galaxies that are 10,000 times fainter than what can be seen with the unaided eye.



JOIN US FOR A TOUR OF THE SCIENCE PRECINCT



go.monash.edu/science-precinct

GET READY FOR THE REAL WORLD

Enhance your professional experience through science industry internships or projects, earning credits toward your degree.

SCIENCE INDUSTRY CAREERS EXPO

Start your career networking journey at our annual science industry week. Unlock the door to endless possibilities as leading employers converge on campus to share insights and opportunities in the dynamic world of science. Connect with industry experts, explore diverse career paths, and gain invaluable knowledge that propels you towards a successful science career.

Don't miss this chance to bridge the gap between study and industry – your future awaits!

- Our 'Career skills for scientists' unit focuses on developing essential skills like commercial awareness, leadership, teamwork, and communication.
- Access the jobs database and services from Monash Career Connect for work opportunities during and after studies.
- Benefit from our track record of propelling graduates into diverse careers and research.
- Explore professional memberships based on your major, including the Royal Society of Chemistry and many others.

See go.monash.edu/sci-employability



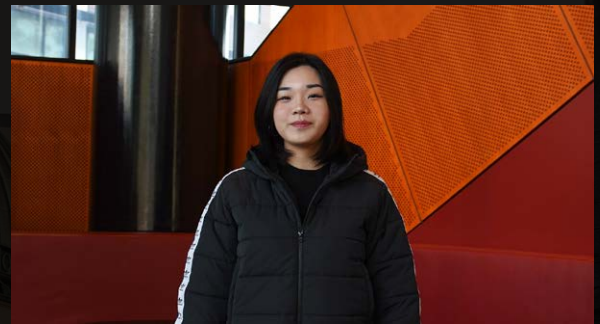


JOBS IN SCIENCE

Jobs in science can vary depending on the major you select in your science degree.



Discover where a science degree can take you:
go.monash.edu/sci-graduate-careers



INTERNSHIPS

Bachelor of Science student Sam discusses her experience completing a Work Integrated Learning (WIL) unit as part of her degree, where she applied studies in chemistry to water and energy sustainability.



For more information about undergraduate internships, visit:
go.monash.edu/sci-undergrad-internship

SUPPORTING YOU ALL THE WAY

Your success is our success. We partner with you to bring out your best. Science at Monash offers a range of services to help you start your course, and then throughout it.

COURSE ADVICE AND ENROLMENT INFORMATION



Planning your first year in Science? Explore how to structure your course, discover the units you can take, and start shaping your Science journey before you even begin! go.monash.edu/sci-first-year



University can be a confusing place – from enrolling in units to choosing your major to finding your classes and social activities. Get all the help and support you need when you arrive.

go.monash.edu/sci-help-support



Chat to our VTAC selection officers about the right course for you. Discover entry requirements and pathways to your dream course:

go.monash.edu/chat-sci

DROP-IN STUDY CENTRES

Mathematics Learning Centre – The Mathematics Learning Centre is a drop-in centre, which offers one-to-one help if you're enrolled in mathematics or statistics units.

The Area for Physics and Astronomy Study (TAPAS) – The TAPAS lounge is a dedicated study space where a tutor is available to support students at certain times of the day.

PEER ASSISTED STUDY SESSIONS (PASS)

PASS is an optional academic small group-learning support program for first-year students. The program runs alongside first-year units students may find challenging.

PEER MENTORING

Our Science Peer Mentoring Program matches you with a senior science student who can help you get settled in and make friends as you begin your studies.

The six-week program provides you with opportunities to meet like-minded fellow students in a social setting.

GET INVOLVED

We offer many additional opportunities to develop networks within the university and to help you take your science degree to the next level.

BECOME A PEER MENTOR

As a mentor, you play a vital part in helping new students make a smooth transition from high school to university life. You'll meet your mentee weekly and organise fun activities to help them settle in, make friends and have a fun and successful first year. As a mentor, you receive training and support from your own 'super mentor'.

MONASH SCIENCE CLUBS AND SOCIETIES

The Monash Science Society (MSS) is one of our largest student clubs, offering a range of activities throughout the year. There are also a number of other science societies such as the Biological Society, SOCS and MASS^3 that provide a great opportunity to make friends and get involved.

Monash University has more than 150 student clubs and societies, as well as plenty of opportunities to become involved through the many different volunteering and leadership initiatives.

SCIENCE FUTURE LEADERS PROGRAM

Influence and inspire the next generation of scientists by joining the Science Future Leaders Program. Activities undertaken during the year-long program will help you develop a range of skills relevant to leadership in your studies and career. These include a camp, a series of leadership seminars and workshops, and the opportunity to practise leadership within the university, your chosen profession, and/or the wider community.

SCIENCE STUDENT AMBASSADORS

Science student ambassadors play a key role in promoting science programs and activities to future and current students. You'll gain hands-on experience with public speaking, social media and events. Science student ambassadors are employed by the Science Faculty as casual employees.



For more information about getting involved, visit: go.monash.edu/sci-student-leadership



OUR COURSES AT A GLANCE

FOR STUDENTS LOOKING TO BEGIN STUDY IN 2027



The interdisciplinary nature of this course attracted a diverse cohort from business to healthcare. Every semester we undertook a 12-week group project where we worked on a real-world issue while mentored by external industry professionals.

I transferred to this course in my second year with no prior coding experience, and I've graduated with employable skills, lifelong friends and confidence to begin creating meaningful impact within my chosen field of work."

MARDI

Bachelor of Applied Data Science graduate
Senior Data Analyst at McGrathNicol



BACHELOR OF APPLIED DATA SCIENCE

If you're interested in mastering big data and helping others to understand it, this is the course for you.

- This program of study will provide you with the skills necessary to solve a wide range of problems.
- It's a comprehensive course which will develop your technical know-how in being able to approach data challenges.
- Through selected streams, you'll develop your passion for the physical sciences, sociological or anthropological studies, business or engineering.
- Through both group work and individual projects, you'll integrate key IT and mathematics skills and apply them to real-world problems.

OUR VTAC SUBJECT ADJUSTMENT BONUS

This rewards students studying more than one Year 12 mathematics and science subject – this could improve your ranking and eligibility by providing additional points towards your ATAR aggregate.

SUBJECT PREREQUISITES

VCE

English: Units 3 and 4: a study score of at least 25 in English (EAL) or 25 in English other than EAL.

Maths: Units 3 and 4: a study score of at least 25 in Mathematical Methods or Specialist Mathematics.

IB

English: Level 1.

Maths: Level 3.

For prerequisite subject requirements, please refer to page 20.

BACHELOR OF APPLIED DATA SCIENCE ADVANCED (HONOURS)

This is an advanced program for those passionate about data science.

- This four-year specialist course brings together studies in IT and mathematics in a series of interdisciplinary problem-solving challenges.
- The degree will give you the skills necessary to provide solutions to a wide range of problems.
- Research and analysis into big data has the capacity to make a positive impact on our daily lives.
- Through selected streams, you'll develop your passion for the physical sciences, sociological or anthropological studies, business or engineering.
- Through both group work and individual projects, you'll integrate key IT and mathematics skills and apply them to real-world problems.
- Satisfactory completion of this course may provide credit toward a Monash master's by coursework degree.

SUBJECT PREREQUISITES

VCE

English: Units 3 and 4: a study score of at least 25 in English (EAL) or 25 in English other than EAL.

Maths: Units 3 and 4: a study score of at least 30 in Mathematical Methods or Specialist Mathematics.

IB

English: Level 1.

Maths: Level 3+.

For prerequisite subject requirements, please refer to page 20.

 Clayton

 3 years (full-time)

 **ATAR¹:** 82.35

IB: 31.25


MG: 72

COURSE CODE: S2010 **CRICOS CODE:** 099359F


(ATAR and IB for domestic applicants only.
International applicants please refer to page 20.)



The Monash Guarantee (MG) allows entry into select courses by lowering the ATAR for all eligible applicants.

 go.monash.edu/guarantee-entry

 Clayton

 4 years (full-time)

 **ATAR¹:** 90.55

IB: 35.5


MG: 80


COURSE CODE: S3003 **CRICOS CODE:** 099360B

(ATAR and IB for domestic applicants only.
International applicants please refer to page 20.)



The Equity Schemes (SEAS) adjusts your ATAR in recognition of any circumstances that may have affected your studies.

 go.monash.edu/equity-entry

1. The scores provided in this publication are to be used as a guide only, and are either the lowest selection rank to which an offer was made in 2026 or an estimate (E). Australian domestic students ATAR and IB. International students should consult  monash.edu/study

BACHELOR OF SCIENCE

The choice, flexibility and depth across the huge range of science disciplines available at Monash means you'll graduate with a degree unique to you, tailored to your individual expertise, interests and career aspirations.

- Flexible, not locked-in from day one to a defined area of science.
- Choose from 26 majors.
- Specialise in up to two majors – you can study an additional major from The Faculty of Science or from another eligible faculty.

OUR VTAC SUBJECT ADJUSTMENT BONUS

This rewards students studying more than one Year 12 science subject – this could improve your ranking and eligibility by providing additional points towards your ATAR aggregate.

go.monash.edu/sci-subject-adjust

SUBJECT PREREQUISITES

VCE

English: Units 3 and 4: a study score of at least 25 in English (EAL) or 25 in English other than EAL.

Maths or Science: Units 3 and 4: a study score of at least 25 in one of Biology, Chemistry, Environmental Science, Geography, Mathematical Methods, Specialist Mathematics, Physics or Psychology.

IB

English: Level 1.

Science: from approved list.

For prerequisite subject requirements, please refer to page 20.

BACHELOR OF SCIENCE ADVANCED – GLOBAL CHALLENGES (HONOURS)

This course is the only one of its kind in Australia.

- Combines science with business and industry.
- One internship, which can be an international placement.
- Includes an 'Impact through science' stream that provides high-level training in leadership, persuasive communication, entrepreneurship, policy, ethics and corporate social responsibility.



For more information visit: go.monash.edu/bsc-global-challenges to view entry requirements and to read more about this course.

SUBJECT PREREQUISITES

VCE

English: Units 3 and 4: a study score of at least 35 in English (EAL) or 30 in English other than EAL.

Maths or Science: Units 3 and 4: a study score of at least 30 in one of Biology, Chemistry, Environmental Science, Geography, Mathematical Methods, Specialist Mathematics, Physics or Psychology.

IB

English: Level 2.

Science: higher score required.

For prerequisite subject requirements, please refer to page 20.

BACHELOR OF SCIENCE ADVANCED – RESEARCH (HONOURS)

Do you see yourself making a difference in the world through the advancement of scientific research? If so, this is the course for you.

- Designed for students who intend to pursue a career in research.
- Allows for accelerated learning by progressing earlier to higher-level and advanced units.
- Enhanced opportunities for research projects from your first year.
- Research mentoring by leading scientists.
- You must undertake two science majors.
- Direct entry into a PhD program.
- Satisfactory completion of this course may provide credit toward a Monash master's by coursework degree and will provide the preparation necessary to undertake a master's by research degree or a doctoral (PhD) degree.

SUBJECT PREREQUISITES

VCE

English: Units 3 and 4: a study score of at least 35 in English (EAL) or 30 in English other than EAL.

Maths: Units 3 and 4: a study score of at least 30 in either Mathematical Methods or Specialist Mathematics

Science: Units 3 and 4: a study score of at least 30 in two of Biology, Chemistry, Environmental Science, Geography, Mathematical Methods, Specialist Mathematics, Physics or Psychology.

IB

English: Level 2.

Maths: Level 3+.

Science: higher score required in two subjects.

For prerequisite subject requirements, please refer to page 20.

Clayton

3 years (full-time)

ATAR¹: 82

IB: 31

MG: 72

COURSE CODE: S2000 **CRICOS CODE:** 017092G

(ATAR and IB for domestic applicants only.
International applicants please refer to page 20.)

Clayton

4 years (full-time)

ATAR¹: RC²

IB: RC²

MG: RC²

COURSE CODE: S3001 **CRICOS CODE:** 083682D

(ATAR and IB for domestic applicants only.
International applicants please refer to page 20.)

Clayton

4 years (full-time)

ATAR¹: 93.10

IB: 37.25

MG: 84

COURSE CODE: S3002 **CRICOS CODE:** 083681E

(ATAR and IB for domestic applicants only.
International applicants please refer to page 20.)

1. The scores provided in this publication are to be used as a guide only, and are either the lowest selection rank to which an offer was made in 2026 or an estimate (E). Australian domestic students ATAR.

International students should consult monash.edu/study

2. Range of criteria, including interview.

COURSE STRUCTURE

This is what your studies will look like as a Bachelor of Science student. You'll have the option to take electives, allowing you to choose subjects outside of science or extra science subjects, depending on your interests.

Year 1

Semester 1	Science major	Science	Maths or statistics	Elective or second major
Semester 2	Science major	Science	Science communication	Elective or second major

YEAR 2

Semester 1	Science major	Science	Science	Elective or second major
Semester 2	Science major	Science	Science	Elective or second major

YEAR 3

Semester 1	Science major	Science major	Elective or second major	Elective or second major
Semester 2	Science major	Science major	Elective or second major	Elective or second major

DOUBLE DEGREES

If you have a passion for an area outside of science, or would like to go into a field in which scientific knowledge would be an advantage, a double degree could be the perfect choice for you. Combining science with another area of specialisation gives you a distinct set of skills and helps you stand out in today's competitive job market.

Bachelor of Science	Duration	2026 ATAR ¹	2026 VCE International ATAR
SECOND DEGREES AVAILABLE			
+ Bachelor of Arts	4	82.05	80
+ Bachelor of Biomedical Science	4	91.00	90
+ Bachelor of Commerce	4	87.35	87.50
+ Bachelor of Computer Science	4	82.05	80
+ Bachelor of Global Studies	4	82.75	80
+ Bachelor of Education (Honours)	4	Primary = 86.70 RC ² Secondary = 83.15 RC ²	80
+ Bachelor of Engineering (Honours)	5	85.65	85
+ Bachelor of Information Technology	4	82.75	80
+ Bachelor of Laws (Honours)	5	95.10	95
+ Bachelor of Music	4	RC ³	80
+ Bachelor of Psychology	4	87.75	85

For more information about double degrees, including how they work and their benefits, visit:

go.monash.edu/sci-double-degrees

YEAR 1

Semester 1	Science major	Science	Partner degree	Partner degree
Semester 2	Science major	Science	Partner degree	Partner degree

YEAR 2

Semester 1	Science major	Maths or statistics	Partner degree	Partner degree
Semester 2	Science major	Science communication	Partner degree	Partner degree

YEAR 3

Semester 1	Science major	Science	Partner degree	Partner degree
Semester 2	Science major	Science	Partner degree	Partner degree

YEAR 4

Semester 1	Science major	Science	Partner degree	Partner degree
Semester 2	Science major	Science	Partner degree	Partner degree

1. The scores provided are to be used as a guide only, and are either the lowest selection rank to which an offer was made in 2026 or an estimate (E). Australian domestic students ATAR.

International students should consult monash.edu/study

2. Range of criteria includes a Situational Judgement Test.

3. Range of criteria includes audition.

WHERE YOUR FIRST YEAR

As a first year Science student, you'll need to study a minimum of two first year Science sequences. Each sequence consists of two units that provide the foundational knowledge for a range of majors. Choose your two sequences from the seven areas in blue below.

BIOLOGY

Choose units from:

- BIO1011 Blueprints for life
- BIO1022 Life on Earth
- BIO1042 Life in the environment

POSSIBLE MAJORS

- Biochemistry
- Anatomy and developmental biology
- Ecology and conservation biology
- Environmental science (extended major)
- Genetics and genomics
- Human pathology
- Immunology
- Microbiology
- Pharmacology
- Physiology
- Plant sciences
- Zoology

Biomedical Science majors

CAREER OPTIONS

- Agricultural researcher
- Animal technician
- Bioinformatician
- Biotechnologist
- Biotechnology product developer
- Botanist/plant scientist
- Clinical scientist
- Cytogeneticist
- Ecologist entomologist
- Environmental/conservation biologist
- Environmental consultant
- Environmental health promoter
- Evolution and adaptation biologist
- Fauna assessment officer
- Geneticist
- Hospital scientist
- Laboratory research technician
- Marine/freshwater biologist
- Medical researcher
- Microbiologist
- Museum curator
- Park ranger
- Patent officer
- Research scientist
- Science journalist
- Science teacher
- Soil scientist
- University lecturer
- Wildlife manager
- Zoologist

CHEMISTRY

Choose units from:

- CHM1011 Chemistry 1
- CHM1022 Chemistry 2
- CHM1051 Chemistry 1 advanced
- CHM1052 Chemistry 2 advanced

POSSIBLE MAJORS

- Biochemistry
- Chemistry
- Microbiology
- Physiology

CAREER OPTIONS

- Agrochemicals chemist
- Analytical chemist
- Biomedical chemist/analytical chemist
- Biotechnologist
- Biotechnology sales and marketing manager
- Cosmetology
- Drug development chemist
- Environmental/water chemist
- Explosives chemist
- Food technologist
- Forensic scientist
- Hospital or medical laboratory technician
- Industrial chemist
- Instrument specialist
- Molecular design chemist
- Occupational health and safety officer
- Occupational hygienist
- Paint chemist
- Perfumer
- Pharmaceutical and product manufacturer
- Pharmaceutical representative
- Polymer chemist/materials scientist
- Process control specialist
- Quality controller
- Research chemist
- Risk-management consultant
- Science journalist
- Teacher
- Toxicologist
- Waste and resources management consultant
- Water quality and management consultant
- Winemaker

EARTH, ATMOSPHERE AND ENVIRONMENT

Choose units from:

- EAE1011 The Earth system: From the core to the atmosphere
- EAE1022 The Earth system: Changing environments and climates
- ATS1310 Extreme earth! The geography of disasters

POSSIBLE MAJORS

- Climate and atmospheric science
- Environmental earth science
- Environmental science
- Geographical science
- Geoscience

CAREER OPTIONS

- Agricultural researcher
- Atmospheric scientist
- Climate change advisor
- Climate and sustainability manager
- Climate scientist
- Ecotourism operator
- Environmental consultant
- Environmental geoscientist
- Environmental scientist
- Geochemist (analytical laboratories)
- Geological survey scientist
- Geologist (mineral/petroleum exploration)
- Geophysicist
- Geospatial analyst
- Government advisor (environmental policy and management)
- Hydrologist
- Hydrogeologist
- Landcare project manager
- Oceanographer
- Marine geoscientist
- Metallurgist
- Meteorologist
- Museum scientist
- Natural resource manager
- Palaeontologist
- Planetary scientist
- Research scientist
- Science communicator
- Seismologist
- Soil scientist
- Volcanologist
- Weather forecaster

Please note, some careers may require further study.



DISCOVER WHERE A SCIENCE DEGREE CAN TAKE YOU

go.monash.edu/sci-graduate-careers

OF STUDY CAN TAKE YOU

MATHEMATICS

Choose units from:

- MTH1010 Functions and their applications
- MTH1020 Analysis of change
- MTH1030 Techniques for modelling
- MTH1035 Techniques for modelling (Advanced)
- MAT1830 Discrete mathematics for computer science
- MTH2010 Multivariable calculus
- MTH2015 Multivariable calculus (advanced)
- SCI1020 Introduction to statistical reasoning
- STA1010 Statistical methods for science
- SCI1022 Introduction to scientific coding

POSSIBLE MAJORS

- Applied mathematics
- Financial and insurance mathematics (extended major)
- Mathematics
- Mathematical statistics
- Pure mathematics

CAREER OPTIONS

- Atmospheric scientist
- Biostatistician/data analyst
- Business analyst
- Computational mathematician
- Computer software developer
- Data mining analyst
- Environmental resource
- Model developer
- Financial consultant
- Investment/business analyst
- Market statistician
- Mathematical modeller
- Mathematics teacher
- Meteorologist
- Oceanographer
- Programmer
- Quantitative analyst
- Statistician



PLANNING YOUR FIRST YEAR IN SCIENCE

Explore how to structure your course, discover the units you can take, and start shaping your Science journey before you even begin!.

go.monash.edu/sci-first-year

PHYSICS

Choose units from:

- PHS1011 Classical physics and relativity
- PHS1022 Fields and quantum physics
- PHS1031 Physics for the living world
- PHS1002 Physics for engineering
- PHS1001 Foundation physics
- ASP1010 Earth to cosmos: Introductory astronomy
- ASP1022 Life in the universe: Astrobiology

POSSIBLE MAJORS

- Astrophysics
- Physics
- Physiology

CAREER OPTIONS

- Accelerator physicist
- Acoustics scientist
- Applied physicist
- Astronomer and astrophysicist
- Atmospheric physicist
- Biophysicist
- Electron microscopist
- Energy consultant
- Forensic physicist
- Industrial physicist
- Instrumentation physicist
- Materials scientist
- Medical physicist
- Nuclear physicist
- Optical physicist
- Optical systems specialist
- Patent attorney
- Physics teacher
- Synchrotron scientist
- Telecommunications specialist
- University lecturer

COMPUTATIONAL SCIENCE

Choose units from:

- FIT1008 Fundamentals of algorithms OR FIT1054 Fundamentals of algorithms (Advanced)
- FIT1045 Introduction to programming OR FIT1053 Introduction to programming (Advanced)

POSSIBLE MAJORS

- Computational science

CAREER OPTIONS

- Business analyst
- Business operations
- Coordinator
- Consultant business systems
- Analyst
- Graduate project manager
- IT analyst
- IT consultant
- IT domain specialist
- IT support
- Project manager
- Software consultant
- Software developer
- Software test analyst
- Strategic analyst
- Technology consultant
- Web developer

PSYCHOLOGY*

Choose from:

- PSY1011 Foundations in psychology
- PSY1023 Introduction to psychological inquiry

POSSIBLE MAJORS

- Psychology

CAREER OPTIONS

- Career counselling
- Child psychology
- Clinical neuropsychology
- Clinical psychology
- Counselling psychology
- Educational and developmental psychology
- Forensic psychology
- Health psychology
- Management
- Organisational psychology
- Sport psychology
- Teaching

*Interested in becoming a psychologist? APAC accredited psychology can only be studied in the Bachelor of Science, Bachelor of Science/Bachelor of Arts or Bachelor of Psychology/Bachelor of Science.

EXPLORE OUR MAJORS

Within the Bachelor of Science, at least eight units will make up your science major. You'll also have eight units of free electives, which offer you the flexibility to shape your course in a number of different ways – such as extending your major to add depth, adding a second major or a minor from the same or another course, or studying a range of units from across the university.



For more information about majors and sequences, visit: go.monash.edu/sci-majors

BIOLOGICAL AND LIFE SCIENCES

ECOLOGY AND CONSERVATION BIOLOGY



- Study the ecological and evolutionary interactions between organisms and their environments.
- Explore conservation management.
- Develop ways to reduce the escalating biodiversity loss within our world.
- Study ecosystem structure and function.
- Discover how organisms adapt to changing environments.

PLANT SCIENCES



- Study the structure, function, genetics and diversity of plants – from algae and mosses through to gymnosperms and angiosperms.
- Discover the differences and similarities between plants living on the land, in the sea and in freshwater environments.
- Learn how plants adapt to particular environments and what factors influence the distribution and diversity of plant species and communities in which they grow.

ZOOLOGY



- Study the diversity of animals, including their evolution, form, function, behaviour and ecology.
- Explore the interactions of animals with their environments through food chains and competition for resources.
- Understand the impact that parasites and pests have on our natural food supplies.
- Undertake field trips in Australia and overseas.

BIOMEDICAL AND BEHAVIOURAL SCIENCES

ANATOMY AND DEVELOPMENTAL BIOLOGY

- Explore the processes of development from a single cell to an adult organism.
- Investigate cellular and molecular mechanisms underlying normal and abnormal development.
- Apply laboratory practices incorporating cellular, molecular and imaging techniques.
- Study topics such as gene expression, stem cell biology, tissue engineering, regenerative biology and medicine.



BIOCHEMISTRY

- Explore the chemical components and biological processes of all living systems.
- Study the chemistry within the biological processes that form the foundation for all living matter.
- Understand the cause of disease.
- See how effective treatments and vaccines are developed.



GENETICS AND GENOMICS

- Study genes – their structure, function, transmission and evolution.
- Learn how genetics underpins areas such as biomedical science, conservation biology, forensics and biotechnology.
- Develop advanced practical skills in recombinant DNA technology, transgenic organism analysis, genotyping, genomics and bioinformatics.
- Design and implement both laboratory and computer-based genetic experiments.



HUMAN PATHOLOGY

- Study disease processes, including cell death, inflammation, disorders of immunity and neoplasia.
- Learn about organ system failure during disease and injury, and how this knowledge is critical for diagnosis, prognosis and medical intervention.
- Develop a comprehensive knowledge of cell injury, wound healing, fluid and vascular disorders, growth disorders and immunopathology.
- Apply practical laboratory skills such as microscopy, histological staining techniques and diagnosis.



IMMUNOLOGY

- Learn how the immune system protects us from harmful pathogens such as bacteria and viruses.
- Study the immune system's mechanisms in cancers, allergies, autoimmunity and transplant rejection.
- Explore how the function of the immune system can be manipulated to improve development of vaccines and cures for autoimmune diseases.



MICROBIOLOGY

- Learn about micro-organisms, including bacteria, viruses, protozoa, algae and fungi.
- Study their diversity, structure, molecular biology and how they interact with humans and other living organisms.
- Study the rise of antibiotic resistance in medically important bacteria.
- Discover how microbiologists are involved in the development of vaccines.



PHARMACOLOGY

- Study the effect of drugs on living organisms and how to scientifically define the term 'drug'.
- Discover how drugs affect cell responses, including whether drug action will be selective and long-lasting, and the nature of side effects.
- Learn about drugs used in the prevention or treatment of an illness and those that are taken for recreation.



PHYSIOLOGY

- Learn how the body functions in health and disease.
- Explore how body systems adapt when challenged by stresses such as exercise or environmental extremes, and how body functions change in diseased states.
- Examine the nerves and muscles, the brain and hormones, and the body's functionality from the molecular and cellular through to the body systems level.



PSYCHOLOGY

- Study the mind and behaviour, including investigations of the brain, learning, memory, reasoning, decision-making, language, developmental and social processes, personality and mental health.
- Examine the practical and ethical applications of psychological research.
- Opportunity to complete the Australian Psychology Accreditation Council (APAC)-accredited study for those wanting to specialise in psychology.



EARTH AND ENVIRONMENTAL SCIENCE

CLIMATE AND ATMOSPHERIC SCIENCE



- Study climate and atmospheric science, meteorology and climatology. Exploring the links between the Earth's atmosphere, cryosphere, oceans and landmasses.
- Study aspects of Earth science, applied mathematics and physics that drive weather and climate.
- Explore how we can better forecast day-to-day weather and understand our changing climate using data science and advanced modeling.

ENVIRONMENTAL EARTH SCIENCE



- Study the Earth's physical environments, including soils, water, landforms, climates and the atmosphere.
- Explore how landscapes and climate systems are changing, and investigate how science can guide our responses.
- Undertake hands-on fieldwork locally, interstate and overseas to understand Earth processes in action.
- Learn how to manage land, water and other natural resources responsibly to support a sustainable future.
- Apply scientific skills to real-world environmental challenges across industry, government and research.

ENVIRONMENTAL SCIENCE



- Study the interactions between the physical and living environments, exploring how Earth systems and ecosystems function together.
- Investigate major environmental challenges such as climate change, biodiversity loss, water and land management, resource use and sustainability.
- Apply scientific knowledge to the management of natural systems and the protection of environmental health.
- Understand how environmental science informs policy, planning and decision-making at local, national and global scales.
- Choose from three streams, ecology, climate or environmental earth science, to tailor your extended major to your interests.

GEOGRAPHICAL SCIENCE



- Study the links between society and the natural environment to find innovative solutions for global challenges.
- Learn physical and human geography, including climatology, hydrology, soil science and sustainability theory.
- Explore natural hazards, climate change, vegetation dynamics, how landscapes change, urbanisation and environmental policy, as well as land, coast and water management.

GEOSCIENCE



- Study the Earth's formation, evolution and structure, from its deep interior to its surface environments.
- Explore the physical processes that shape our planet, including plate tectonics, volcanism, earthquakes and mountain-building.
- Undertake exciting fieldwork locally, interstate and overseas to investigate rocks, minerals, landscapes and geological history.
- Use analytical tools and models to interpret Earth processes and reconstruct past environments.
- Learn how geoscience supports responsible resource management and contributes to a sustainable future.

MATHEMATICAL AND COMPUTATIONAL SCIENCE

APPLIED MATHEMATICS



- Apply techniques and models to solve problems from medicine, engineering, information technology and commerce.
- Explain observations or predict future trends.
- Contribute to new theories and adapt existing mathematical approaches to new problems.
- Develop key technical skills in advanced calculus, linear algebra, differential equations and computational methods.

COMPUTATIONAL SCIENCE



- Solve scientific problems through computers.
- Construct and apply mathematical models, simulations and data analysis techniques.
- Learn the fundamentals of algorithmic problem-solving to advanced programming, 3D computer graphics and intelligent systems.
- Undertake parallel computation for massive data analysis and simulation to tackle the world's current and emerging problems.

FINANCIAL AND INSURANCE MATHEMATICS



- Apply mathematical modelling and statistical techniques to understand and assess risk in insurance and financial markets.
- Develop financial and risk models.
- Evolve financial and investment business strategies.
- Demonstrate high-level critical thinking skills to analyse, use and interpret data.

MATHEMATICS



- Discover how mathematics is used to describe, model, understand and even create aspects of the world around us.
- Develop key technical skills in advanced calculus and linear algebra.
- Explore techniques for modelling and how to use these techniques to solve complex problems.

MATHEMATICAL STATISTICS



- Study mathematical theory and the applications of this theory in the real world.
- Explore models involving random, unpredictable components, and learn how to use these models to make informed decisions.
- Develop key technical skills in advanced calculus and linear algebra.
- Apply high-level probability, statistical and stochastic processing techniques to real-life problems.

PURE MATHEMATICS



- Pure mathematics deals with the abstract, the rigour and the beauty of perfection.
- Explore how pure mathematics becomes the basis for applied mathematics to solve the most concrete problems.
- See how the theory of prime numbers is fundamental to security systems and electronic banking.
- Apply high-level knowledge in advanced analysis, algebra and geometry.

PHYSICAL AND CHEMICAL SCIENCES

ASTROPHYSICS



- Use observations and the laws of physics to understand the universe and its constituents.
- Study celestial objects such as planets and stars, comets, pulsars and quasars, black holes and galaxies.
- Link the smallest and the largest objects in the universe, from strings to super clusters of galaxies.
- Explore the possibility of extraterrestrial life.
- Use the latest technology – from large telescopes to supercomputers.

CHEMISTRY



- Study the science of matter and energy.
- Investigate the structure of substances.
- See how atoms and molecules react and interact, and how this affects materials, medicine and technology.
- Learn about synthetic and analytical chemistry, medicinal and biological chemistry, and physical and environmental chemistry.
- Undertake lab work in purpose-built chemistry facilities.

PHYSICS



- Study space and time, matter and energy.
- Explore the full spectrum of topics, from atom optics and BECs to particle physics and quantum science.
- Investigate recent discoveries such as the Higgs boson and gravitational waves.
- See how physics underpins other science disciplines, including medicine and engineering.
- Develop high-level analytical, numerical modelling and problem-solving skills.

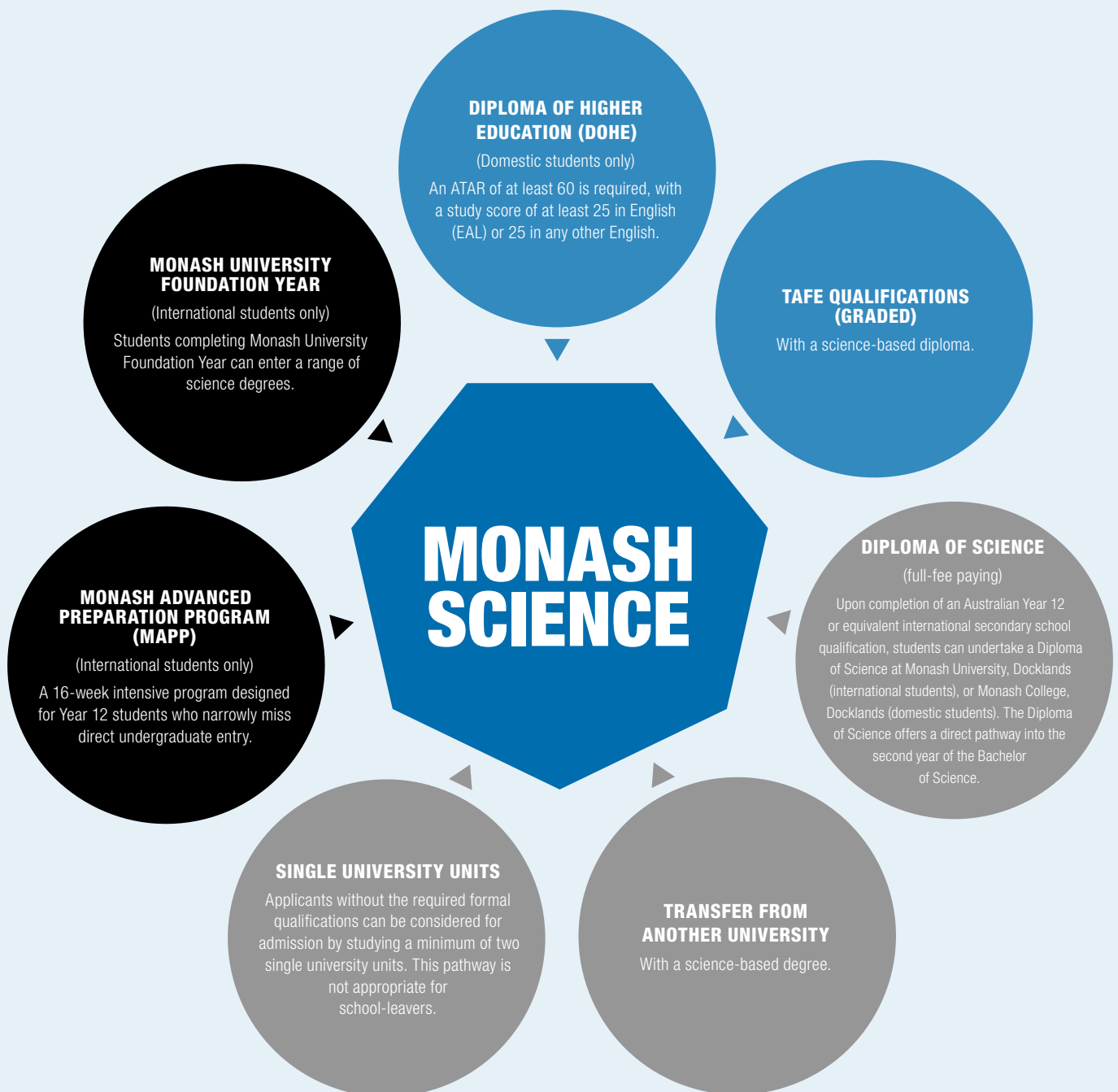


For information about majors and sequences, visit:
go.monash.edu/sci-majors



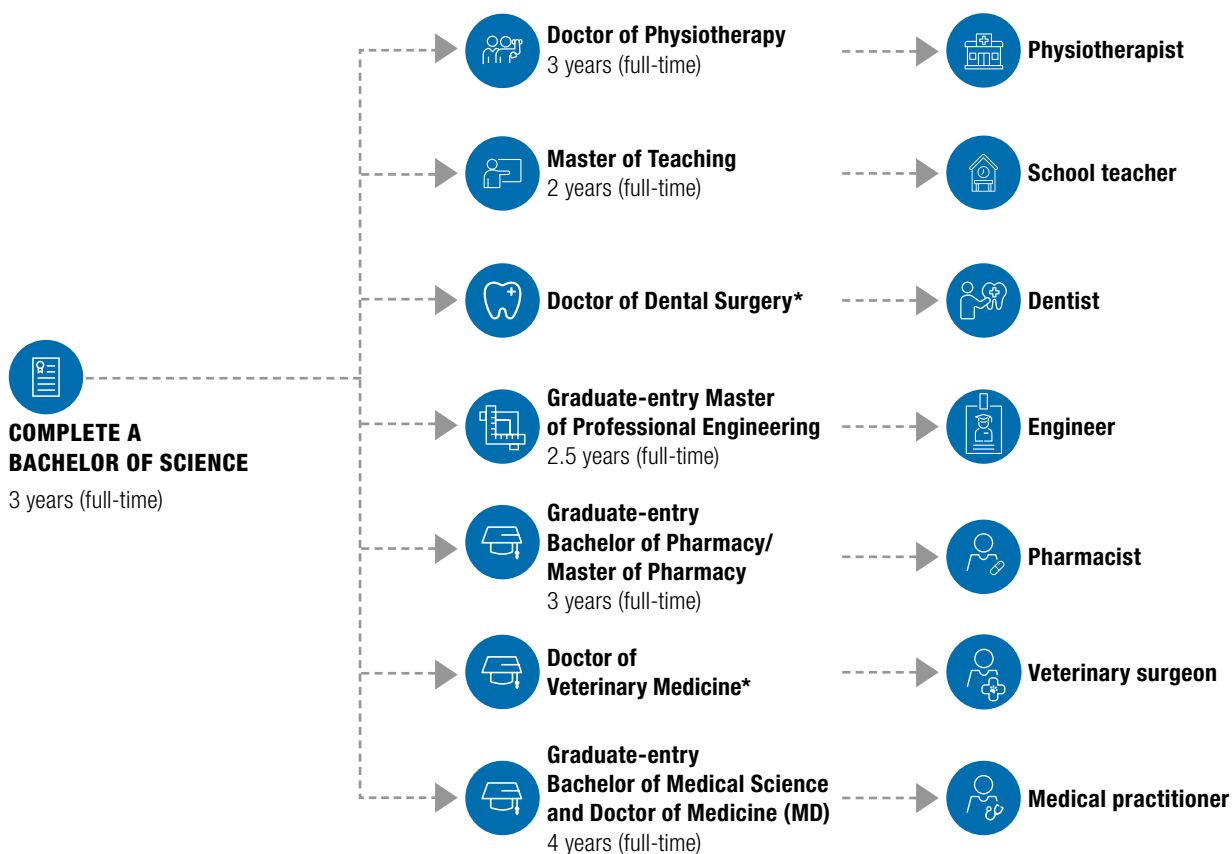
PATHWAYS INTO SCIENCE

There are a range of pathways into a Bachelor of Science at Monash.

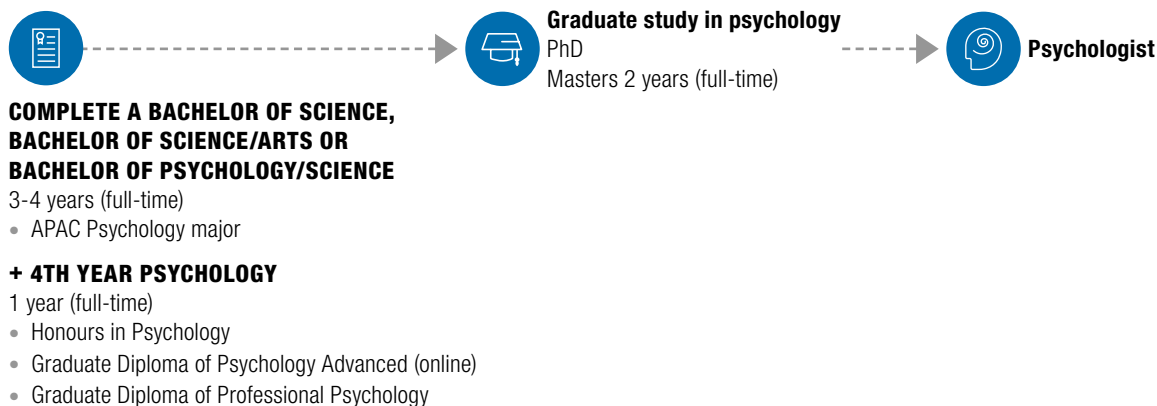


For more information about pathways into Science, visit:
go.monash.edu/sci-pathways

SCIENCE AS A PATHWAY



For more information about Science as a pathway to Medicine, visit:
go.monash.edu/sci-med-pathway



*Degree not offered at Monash University.

PREREQUISITE SUBJECT LEVELS

All undergraduate courses require you to have previously studied and achieved required Australian level standards in specific subjects known as prerequisite subjects. Different prerequisite subject levels apply to each undergraduate course and can be located throughout this guide. The table below outlines acceptable subjects that meet these prerequisite subject levels for VCE and IB.

	English		Mathematics		Science
	■ Level 1 English (Australian Year 12 equivalent)	■ Level 2 Higher score in English (Australian Year 12 equivalent)	■ Level 3 Higher level mathematics (Australian Year 12 equivalent)	■ Level 3+ 	■ Science approved list ¹
VCE	Units 3 and 4: a study score of at least 25 in English (EAL) or 25 in English other than EAL.	Units 3 and 4: a study score of at least 35 in English (EAL) or 30 in English other than EAL.	Units 3 and 4: a study score of at least 25 in one of Mathematical Methods (any) or Specialist Mathematics.	Units 3 and 4: a study score of at least 30 in one of Mathematical Methods (any) or Specialist Mathematics.	VCE: Units 3 and 4: a study score of at least 25 in one of Biology, Chemistry, Environmental Science, Geography, Mathematical Methods (any), Specialist Mathematics, Physics or Psychology, unless otherwise stated.
IB	At least 4 in one of the following SL subjects: <ul style="list-style-type: none"> English A: Literature, English A: Language and Literature, Literature and Performance, OR At least 3 in one of the following HL subjects: <ul style="list-style-type: none"> English A: Literature, English A: Language and Literature, OR At least 5 in one of the following SL subjects: <ul style="list-style-type: none"> English AB, English B, OR At least 4 in the following HL subject: <ul style="list-style-type: none"> English B. 	At least 5 in one of the following SL subjects: <ul style="list-style-type: none"> English A: Literature, English A: Language and Literature, Literature and Performance, OR At least 4 in one of the following HL subjects: <ul style="list-style-type: none"> English A: Literature, English A: Language and Literature, OR At least 6 in one of the following SL subjects: <ul style="list-style-type: none"> English AB, English B, OR At least 5 in the following HL subject: <ul style="list-style-type: none"> English B. 	At least 4 in one of the following SL subjects: <ul style="list-style-type: none"> Mathematics: Analysis and Approaches, OR At least 3 in one of the following HL subjects: <ul style="list-style-type: none"> Mathematics: Applications and Interpretations, Mathematics: Analysis and Approaches. 	At least 5 in one of the following SL subjects: <ul style="list-style-type: none"> Mathematics: Analysis and Approaches, OR At least 4 in one of the following HL subjects: <ul style="list-style-type: none"> Mathematics: Applications and Interpretations, Mathematics: Analysis and Approaches. 	At least 4 at SL or 3 at HL in Biology, Chemistry, Environmental Systems and Societies (SL only), Geography, Mathematics: Analysis and Approaches, Mathematics: Applications and Interpretations (HL only), Physics or Psychology, unless otherwise stated. Where Higher score required: At least 5 at SL or 4 at HL in Biology, Chemistry, Environmental Systems and Societies (SL only), Geography, Mathematics: Analysis and Approaches, Mathematics: Applications and Interpretations (HL only), Physics or Psychology, unless otherwise stated.

2027 INTERNATIONAL ENTRY REQUIREMENTS

Course ¹	Course code	Intake (semester)	Prerequisite subjects (refer to prerequisites subject table above)					English language ⁶
			English		Mathematics		Science	
			Level 1	Level 2	Level 3	Level 3+	Approved list ¹ or specified	
Bachelor of Applied Data Science ³	S2010	Feb	■		■			ACADEMIC IELTS: Overall 6.5 with no band lower than 6
Bachelor of Applied Data Science Advanced (Honours) ³	S3003	Feb	■			■		INTERNET BASED TOEFL: 79 overall, 21 Writing, 13 Reading, 12 Listening, 18 Speaking
Bachelor of Science ³	S2000	Feb, July	■				■	
Bachelor of Science Advanced – Global Challenges (Honours) ^{3, 4, 5}	S3001	Feb		■			Higher score ■	ACADEMIC IELTS: Overall 7.0 with no band lower than 6.5
Bachelor of Science Advanced – Research (Honours) ³	S3002	Feb, July		■		■	Higher score in two of Biology, Chemistry, Environmental Science, Geography, Physics, Psychology or Specialist Mathematics	INTERNET BASED TOEFL: 94 overall, 24 Writing, 19 Reading, 20 Listening, 20 Speaking

1. Science approved list (unless specified otherwise) VCE: Biology, Chemistry, Environmental Science, Geography, Mathematical Methods (any), Specialist Mathematics, Physics or Psychology. IB (SL or HL): Biology, Chemistry, Environmental Systems and Societies (SL only), Geography, Mathematics: Analysis and Approaches, Mathematics: Applications and Interpretations (HL only), Physics or Psychology.
2. The Monash College Diploma Part 1 and Part 2 entry requirements published in this guide are for students commencing their undergraduate destination degree in 2027 and are applicable to specific Diploma programs only. [monashcollege.edu.au/courses/diplomas](https://www.monashcollege.edu.au/courses/diplomas).
3. Studies must have been completed within five years of intended commencement.
4. This course has additional selection requirements. Please refer to the course page for further details.



INFORMATION FOR OFFSHORE DOMESTIC STUDENTS (INCL. NEW ZEALAND)

Admissions and application information for offshore domestic students, including those studying in New Zealand.

go.monash.edu/sci-offshore-dom



INFORMATION FOR INTERSTATE STUDENTS

Admissions and application information for interstate students.

go.monash.edu/interstate-guide



2027 ATAR for international students	GCE A Levels	Gaokao	International Baccalaureate (IB) Diploma	All India Senior School Certificate	Indian School Certificate Examination	Advanced Placement, America	SAT, America (Total score out of 1600)	High School Diploma Republic of Korea	High School Diploma, Vietnam	Hong Kong Diploma of Secondary Education	Ontario Secondary School Diploma – Grade 12	SMA 3, Indonesia – 10-point scale (6 pass)	STPM, Malaysia	UEC, Malaysia	Monash College		
															Monash University Foundation Year (commencing MUFY in 2027)	Diploma Part 1 ²	Diploma Part 2 ²
80	9	65%	28	75%	70%	7	1190	77%	8.28	18	81.60%	7.9	8.5	4.2	72.50%	N/A	N/A
90	12	70%	33	83%	77%	8	1290	86%	8.56	21	87.90%	8.8	9.7	2.6	80%	N/A	N/A
80	9	65%	28	75%	70%	7	1190	77%	8.28	18	81.60%	7.9	8.5	4.2	72.50%	80%	55%
90	12	70%	33	83%	77%	8	1290	86%	8.56	21	87.90%	8.8	9.7	2.6	80%	N/A	
93	14	70%	36	85%	80%	9	1360	90%	8.7	23	91%	9	10.3	1.8	85%	N/A	

Assumed knowledge: International senior secondary qualification with maths and/or science at the required level

It will be assumed that you have reached the level of knowledge equivalent to the VCE prerequisite required for your preferred course. To make sure you are fully prepared for your studies we strongly recommend that you strengthen your knowledge in the relevant areas by completing the online modules.

5. There are a limited number of places available in this course. The entry score is only indicative.

6. This is only applicable if you have not satisfied the English requirement; you're required to complete a Monash-approved English test such as IELTS (Academic), Internet Based TOEFL or Pearson Test of English (Academic) – refer to our website for specific score. Other English tests may also be accepted and are assessed when you apply to Monash.

MONASH SCIENCE

monash.edu/science

INSTAGRAM

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facebook.com/ScienceatMonash



Your Essential Guide to
Monash Science

go.monash.edu/yeg-science



Get in touch

Chat to our VTAC selection officers
about the right course for you,
discover entry requirements and
pathways to your dream course.

go.monash.edu/chat-sci

MONASH UNIVERSITY

monash.edu

FIND A COURSE

monash.edu/study

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T +61 3 9903 4788 (outside Australia)

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