MONASH University

# INFORMATION TECHNOLOGY

## UNDERGRADUATE COURSE GUIDE 2024

# WHEN YOU CHOOSE IT, YOU CHOOSE A WORLD OF OPPORTUNITY

IT lies at the heart of every industry, from healthcare and finance to transport and education. A career in this dynamic field means you'll enjoy endless variety, strong demand – and constant professional growth.

At Monash, we understand the potential of IT to positively transform our world. It's why we're the only university in the prestigious Group of Eight with an entire faculty dedicated to the area.

Your studies with us will be fuelled by the expertise of leading specialists and enriched by unparalleled facilities. We also give you the chance to gain industry experience that's highly desired by employers.

From protecting sensitive data to empowering the world's most vulnerable, go further than you ever thought possible – with an IT degree from Monash.

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.

## FIVE STARS FOR FULL-TIME EMPLOYMENT

**85.5% OF GRADUATES ARE EMPLOYED FULL-TIME WITHIN FOUR MONTHS OF COMPLETING THEIR COURSE.[1]**


**MONASH RANKS 42 IN THE WORLD OUT OF 1400+ UNIVERSITIES.[2]**

**MONASH IS 54TH GLOBALLY FOR GRADUATE EMPLOYABILITY.[3]**

1 Good Universities Guide (2023)
2 QS World University Rankings (2024)
3 QS Graduate Employability Rankings (2022)

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### Course information fast facts

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

| | |
|---|---|
| | Location |
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| | Intakes |
| | Requirements |
| | Comprehensive course |
| | Specialist course |
| | Degree awarded |
| | Faculty |

This course guide includes QR codes that link to more information. Simply scan them with your smartphone camera or QR app.

**Entry requirements**
The entry requirements listed in the fast facts are for domestic students only. International student entry requirements are located on page 32 and 33.

# STEP INTO A THRIVING INDUSTRY

**A MONASH IT DEGREE EQUIPS YOU WITH SKILLS THAT ARE VALUED IN ALMOST EVERY ORGANISATION. WITH NEW ROLES CONSTANTLY EMERGING, GRADUATES IN THIS FIELD ARE HIGHLY SOUGHT-AFTER AROUND THE WORLD.**

## $69K

Average salary of an entry-level computing and information systems professional in Australia.[1]

Higher than the average for all industries.

## +18%

Additional annual earnings of IT graduates compared to average bachelor's graduate[2]

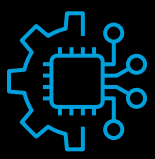
1 Graduate Outcomes Survey, Quality Indicators for Learning and Teaching (2022)
2 Graduate incomes: Insights from administrative data, Department of Education, Skills and Employment (2021)

# TOP EMERGING JOBS

Based on growth over the past five years, here are some top emerging jobs in countries around the world – which you can pursue with a single or double degree in IT.

### ARTIFICIAL INTELLIGENCE SPECIALIST

Develop and deploy high-level strategic AI solutions to solve business challenges.



### DATA ENGINEER

Build, test and maintain processing systems to create databases that deliver valuable insights.

### MACHINE LEARNING ENGINEER

Help machines learn, problem-solve, make decisions and complete tasks without explicit instruction.

### DATA SCIENTIST

Draw insights from data and spot critical trends to inform strategic business decisions.

### ROBOTICS ENGINEER (SOFTWARE)

Build and deploy automation software to optimise business processes.

### CYBERSECURITY SPECIALIST

Protect important information by identifying, monitoring and eliminating vulnerabilities in an organisation's software and hardware.

Jobs on the Rise Reports, LinkedIn (2023)

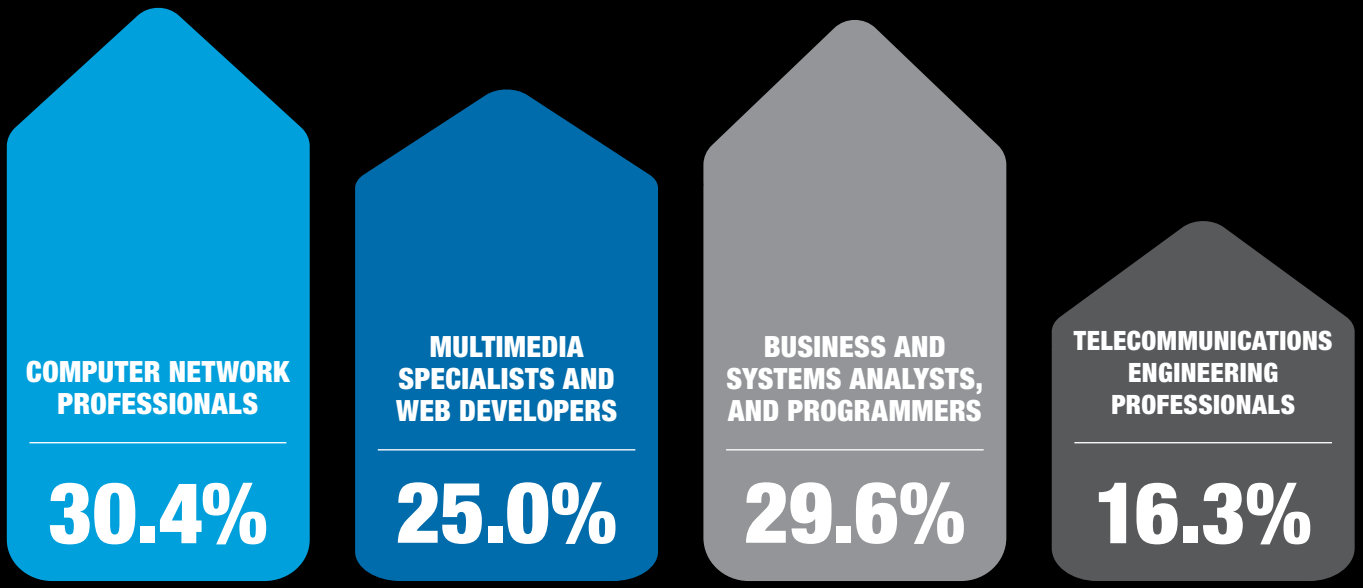
# STRONG PREDICTED GROWTH TO 2026

**16.8%**

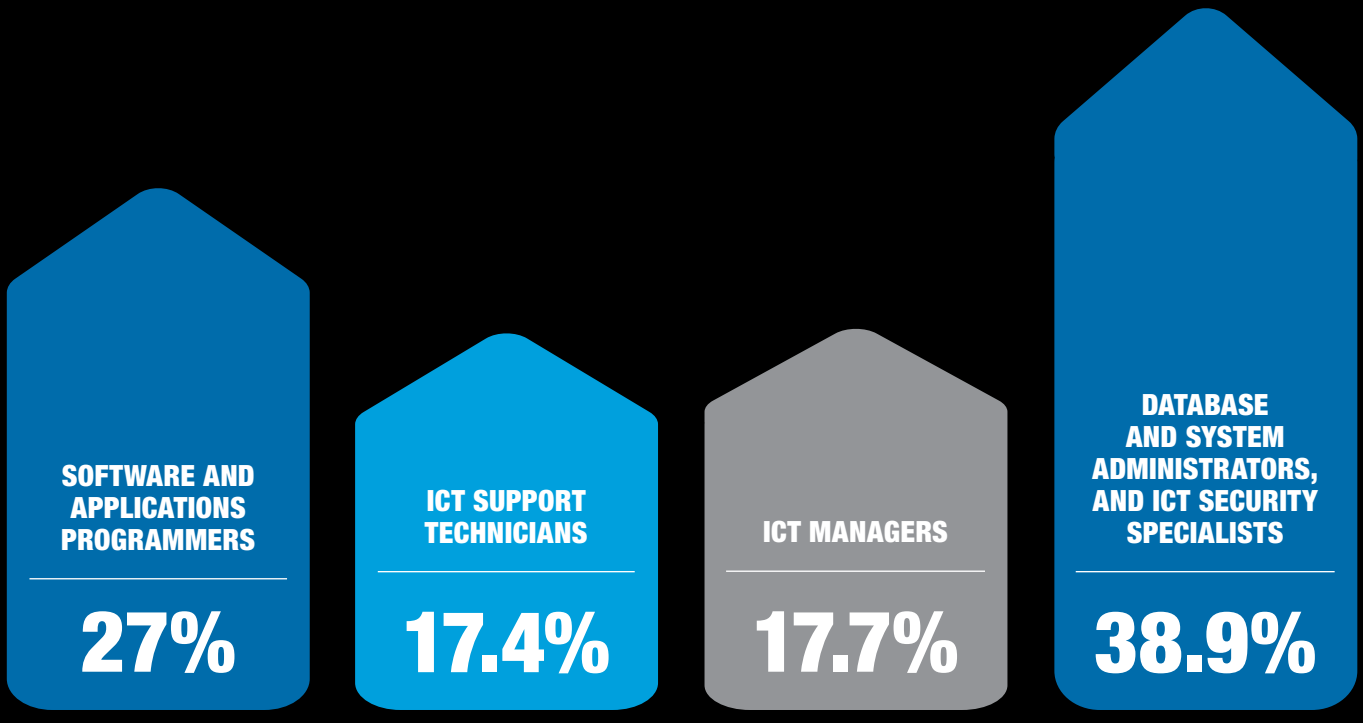
**AUSTRALIA'S 'COMPUTER SYSTEM DESIGN AND RELATED SERVICES' INDUSTRY**

**14%**

**SCIENCE, TECHNOLOGY, ENGINEERING AND MATHS (STEM) JOBS – TWICE AS FAST AS NON-STEM JOBS (7%)**




Occupation Projections – five years to 2025, Australian Government Department of Employment, Skills, Small and Family Business (2020)




Occupation Projections – five years to 2026, Australian Government Department of Employment, Skills, Small and Family Business (2021)

# A MEMORABLE EXPERIENCE FROM DAY ONE

Although we're known for delivering a high-quality education, that's not all you'll enjoy at Monash. You'll also have many opportunities to expand your network, make new friends, apply your skills – and explore the world.

**WATCH AKANSHA'S STORY**

youtu.be/1FIbFjozzAg

## GET HANDS ON

Through our range of industry experience programs, you'll use your expertise to solve real challenges – for real organisations. The result? A professional edge that puts you ahead of the rest.

## TAKE YOUR STUDIES ABROAD

Through our Study Abroad program, we partner with over 160 universities across the UK, Europe, Middle East, Americas, Oceania and Asia. This gives you the chance to take your learning to new and vibrant countries.

## DOUBLE DEGREES, DOUBLE HORIZONS

Spanning a range of areas such as arts, commerce and law, our double degrees help you develop multidisciplinary skills and enhance your career prospects. Even better, they're shorter to complete than two separate courses.

## FULLY ACCREDITED COURSES

Most of our undergraduate courses are accredited by the Australian Computer Society (ACS). This means after graduation, you can become an ACS member and access career support, groundbreaking reports and more.

## MORE OPPORTUNITIES FOR MORE FRIENDS

There are many clubs and societies across the university. Whether you're interested in cybersecurity or gaming, you'll have plenty of opportunity to connect with other students.

## TEMPORARY GRADUATE VISAS

International students studying Bachelor of Information Technology, Computer Science or Software Engineering are now eligible for a four-year Temporary Graduate visa.

## LEARN FROM LEADING EXPERTS

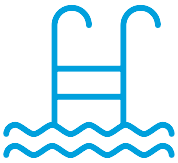
Throughout your course, you'll learn directly from pioneers in IT. People who have developed new cryptocurrencies, natural disaster prediction maps and other innovations.

## SCHOLARSHIPS FOR EQUITY AND EXCELLENCE

We offer many generous scholarships to empower students who want to study IT. These include our dedicated Indigenous Australian, women in IT, international student and industry-based learning scholarships.

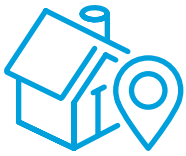
## DEDICATED CAREER SUPPORT

Monash Career Connect is your partner for success. By offering tailored advice, regular workshops and connections to industry, it can help you with career planning, skills development, application writing and more.



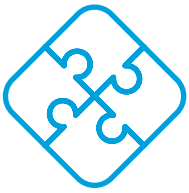
## ESSENTIAL AMENITIES AND SERVICES

As the largest university in Australia, we're home to many amenities and services. These include theatres, a gym, a swimming pool, clinics, counselling, medical assistance, financial aid, cafés, galleries, a hair salon and concert halls.



## COMFORTABLE, CONVENIENT ACCOMMODATION

If you're coming from interstate, overseas or rural Victoria, we have on- and off-campus living options across Clayton, Caulfield, Parkville, the CBD, Peninsula and their surrounding suburbs.



## ONE-OF-A-KIND FACILITIES

Monash has some of the best IT facilities around. One of them is the cutting-edge Woodside Building for Technology and Design, which is helping us create a more sustainable future. This means you'll have the latest and greatest equipment and spaces to complement your learning.

# GAIN HANDS-ON EXPERIENCE AND A COMPETITIVE EDGE

We always focus on translating theory into practice. As an IT students, you'll get the chance to apply your knowledge and skills to a real-world project – while working with a leading organisation. Sharpen technical and soft skills while experiencing a future in tech.

## Industry-Based Learning (IBL)

For more than 30 years, our IBL program has been the benchmark for work-integrated learning.

This initiative lets you complete a placement (or two) with one of our leading partners – such as PwC, ANZ or Deloitte.

Formally assessed and credited, each IBL placement is worth three units in your degree. What's more, you'll receive a $19,000 scholarship for every six-month placement.

This program is open to high-performing international and domestic students.

## Indigenous IBL Guarantee

All First Nations students are guaranteed an IBL placement and scholarship with partners who have allotted places for Indigenous peoples.

## Industry Experience Studio Project units

In this final-year program, play a key role in delivering a real-world IT project for industry.

Working closely in a team, you'll take a product through each stage of development, liaise with relevant stakeholders, create professional documentation and finally, present your work to academics and clients.

Considered to be the highlight of their degrees, past students have built mobile apps, full-scale games, 3D interaction animations and data tools for online businesses.

## National Indigenous Space Academy (NISA)

We are home to the world's first Indigenous space academy.

In partnership with NASA and the Australian Space Agency, we are offering high-achieving First Nations students studying a STEM degree the exciting opportunity to intern at NASA's Jet Propulsion's Laboratory.

You'll enjoy financial support as you gain hands-on experience in innovative projects and explore the vast career prospects open in STEM – particularly in space.

To learn more about Industry-Based Learning (IBL), scan the QR code.

**monash.edu/it/ibl**

To learn more about Industry Experience Studio project units, scan the QR code.

**bit.ly/monashIE**

To learn more about the NISA, scan the QR code.

**monash.edu/it/nisa**

## Monash Student Teams

Looking to develop your technical and soft skills while creating positive societal impact?

Our IT student teams provide you with the unique opportunity to build your own 'mini-business' to tackle a real-world IT research project.

Grow your team of multidisciplinary experts, engage with industry professionals, organise events and more.

To learn more about the Monash Student Teams, scan the QR code.

**monash.edu/it/student-teams**

## Monash Industry Team Initiative (MITI)

MITI is an Australian first and unique to Monash.

This program will see you working in a contemporary commercial environment within a multidisciplinary team.

Students are carefully selected and paired with a top organisation. They then collaborate and design an innovative solution to solve a real challenge in today's business world.

To learn more about the MITI, scan the QR code.

**miti.monash.edu**

## Self-sourced placements

Whether it's at a networking event or through a friend, if you find a placement that's relevant to your degree, it may be eligible for Monash insurance!

## Engineering Co-operative Education Program

Work full-time or part-time over the semester or summer period for 3, 6 or 12 months and receive a competitive salary.

To learn more about the Engineering Co-operative, scan the QR code.

**monash.edu/engineering/coop**

"

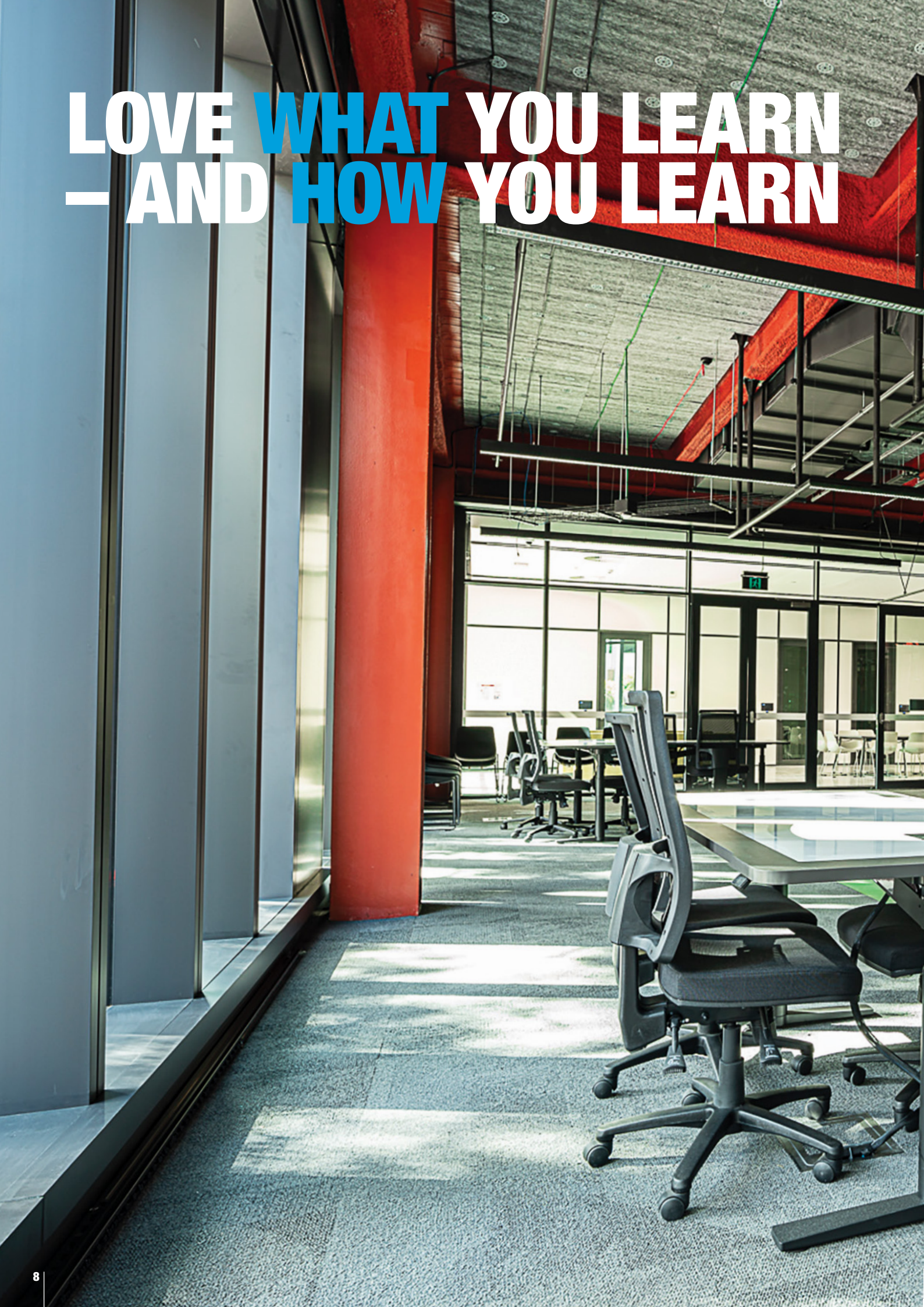
## A PERIOD OF INCREDIBLE GROWTH

My IBL journey was a period of incredible growth.

I expanded my professional network and developed skills that are highly sought-after in the IT industry. During the experience, I was also pushed beyond my comfort zone, which helped me learn more about myself. Today I'm proud to say I'm a portfolio analyst at Origin Energy. And I'm excited to see what the future holds for me."

**NASHIA FAIRUZ**
**Former IBL student**

# LOVE WHAT YOU LEARN – AND HOW YOU LEARN



## A focus on transformative teaching

Your time as an undergraduate can be among the most rewarding years of your life. They give you plenty of opportunity to expand your knowledge, explore new ways of thinking and discover more about yourself.

At Monash, we're leading the way in studio-based IT education. For us, it's all about 'learning by doing' in a collaborative environment.

We use the latest technology to make your lectures interactive and engaging. And our Peer Assisted Study Sessions can connect you with other Monash students to drive your success.

## Lessons from the industry's best

In your degree, you'll learn directly from world-class specialists across all disciplines in IT.

Partnering with like-minded organisations and professionals, they're positively impacting our world and creating a brighter future for all.

A standout initiative is the Artificial Intelligence for Law Enforcement and Community Safety (AiLECS) Lab. Working with the Australian Federal Police, our experts are using machine learning and AI to reduce the trauma that officers experience from distressing child exploitation materials.

## Mixing education with travel

You say 'Study or travel?'. We say 'Both'.

Partnering with more than 160 universities across 35+ countries, our exchange programs let you blend your passion for adventure with your hunger to learn.

Head to our Prato Centre in Italy to delve into IT among breathtaking scenery, delicious cuisine and fascinating history. Or, through Monash Undergraduate Research Projects Abroad, engage in a research initiative with elite professors overseas.

## A home base just for you

The Faculty of IT Learning Lounge is a work and social hub exclusive to IT students.

Not only will you enjoy dedicated work stations such as bookable meeting rooms, the Lounge also offers inviting spaces and kitchen facilities where you can unwind and connect with your peers.

## Peer support from day one

Our peer mentoring program matches new students with an experienced student mentor and a small group of first-year undergraduate students from the faculty.

You'll receive continuous support throughout your first semester with invaluable tips and resources to a successful transition into university life!

Discover our vibrant campus and state-of-the-art IT facilities.

**monash.youtour.com.au**

Explore our immersive learning spaces in the Woodside Building for Technology and Design.

**bit.ly/ITwoodside**

Get more information about learning abroad.

**monash.edu/study-abroad**

# MEET PEOPLE WHO SHARE YOUR PASSIONS

We have a range of clubs, societies and collectives to suit your interests. By joining one, you can forge new friendships, expand your network and drive your personal growth.

### Commerce and Computing Association (CCA)

CCA hosts social and industry activities that help members enhance their networking and public speaking skills – and boost their employability.

### Monash Electronic Gaming Association (MEGA)

Monash's premier gaming club at Monash, MEGA hosts weekly gaming sessions that allow friends and strangers to bond over their shared passion for this activity.

### DiversIT Monash

DiversIT creates a welcoming space for underrepresented groups in IT. The group's social and networking events, and industry and mentoring programs are all designed to foster a sense of community, provide career guidance and create a strong support network.

### Monash Energy Club

Monash Energy Club educates and connects enthusiastic students to energy issues and organisations – to shape the future of the sector in Australia.

### GLEAM

GLEAM is a student group for Queer+ identifying science, technology, engineering and maths students to form nurturing connections within the wider Queer+ community at Monash.

### UnITy

UnITy is an initiative that aims to build a community of women studying IT dedicated to developing supportive networks and sharing knowledge to achieve success in their studies.

### Monash Association of Coding (MAC)

MAC imparts valuable skills to enhance career prospects and academic outcomes. It does this by providing a collaborative, innovative platform for students to solve programming problems, complete projects and learn from one another.

### Monash Cybersecurity Club (MonSec)

Keen to advance your cybersecurity knowledge? MonSec's goal is to develop and encourage cybersecurity awareness and application. Join the club to hear about upcoming events and opportunities, and share your thoughts and experiences.

### Monash Data Science Society (MDSS)

Adopting a fresh approach to fostering future leaders of data science, MDSS is the central hub for Monash data science students who want to connect with industry, peers and faculty.

### WIRED Monash

If you're curious about all things digital, then WIRED is for you. This student club offers you an abundance of networking opportunities and access to social events, so you can connect with industry and other IT students.

### Monash DeepNeuron

DeepNeuron is a student team focused on improving the world with Artificial Intelligence (AI) and High-Performance Computing (HPC).

Learn more about our range of clubs and societies.

**bitly.ws/DqAF**

# COURSES ALIGNED WITH YOUR GOALS

Our undergraduate courses allow you to study IT more broadly or specialise in a particular area. Through elective units, you can also complement your learning by exploring other fields – such as psychology, finance and science.

## EMBARK ON YOUR JOURNEY

### Bachelor of Information Technology

This comprehensive degree lets you explore the full spectrum of IT disciplines. Its broad selection of majors, minors and electives also allows you to focus on specific areas of interest.

### Bachelor of Computer Science

Through this highly specialised degree, you'll gain the expertise you need to design algorithms and data structures.

You'll also learn how to create software that solves real-world challenges related to areas such as organisational strategy, customer satisfaction and business innovation.

### Bachelor of Applied Data Science (Faculty of Science)

Developed to meet the demands of a growing industry, this cross-disciplinary degree blends key subjects in maths, science and computer science with new data units.

It also involves projects focused on physical sciences, sociological or anthropological studies, business and engineering.

## GO A STEP FURTHER

### Bachelor of Computer Science Advanced (Honours)

This honours degree is for high-achieving students who want a strong research focus. It offers all the benefits of the advanced computer science or data science specialisations with a stream of hands-on projects.

Develop programming and analytical skills along with the capabilities needed for graduate research or a career in research and development.

### Bachelor of Software Engineering (Honours) (Faculty of Engineering)

This course helps you build a strong foundation in computer science or maths while gaining deep expertise in software processes, architectures, methodologies and quality frameworks.

It emphasises collaborative studio-based learning and focuses on giving you strong project management skills. Our faculty delivers and oversees the software engineering specialisation of this course.

### Bachelor of Applied Data Science Advanced (Honours) (Faculty of Science)

If you're passionate about applied data science, this advanced degree is for you.

This four-year specialist course brings together studies in IT and maths through interdisciplinary, thought-provoking projects.


**Not sure what's right for you?**
Take our short, fun quiz to find out!

**monash.edu/it/course-matcher**

# DO MORE WITH A DOUBLE DEGREE

Through our double degrees, you can establish yourself in two fields. An interdisciplinary skill set can help you unlock more career opportunities – and greater choice in your future.

## Arts

The rapid growth of the IT industry calls for people who deeply understand the social and human factors shaping it. By studying arts, you'll develop the expertise to influence and manage emerging technologies – while identifying the implications they have on society and the world.

## Business

Through this double degree, you'll delve deep into IT as well as key business principles and practices. With this dual knowledge, you'll be equipped to leverage technology as a tool for helping organisations succeed in unpredictable, rapidly-changing environments.

## Commerce

IT is the foundation of commerce and one of the biggest drivers of growth for the commercial world. As the pressure for advanced technology escalates, so does the demand for people who intimately understand how to apply them in corporate settings.

## Criminology

How we define and understand crime provides greater insight into society's challenges. A successful IT professional is someone who possesses strong technical skills – and deep knowledge of human behaviour.

## Design

This double degree gives you valuable expertise in design and IT. Blending creativity with technology will challenge your lateral thinking and problem-solving skills – and empower you to develop innovative systems and software.

## Engineering (Honours)

IT underpins engineering in all disciplines, and this synergy is only growing stronger. By becoming well-versed in both fields, you'll be able to positively transform a range of industries through technology.

## Fine Art

From innovative design tools to digital artistic expression, let this double degree give you dual expertise that empowers you to shape the future of multimedia, games development and other intersections of IT and fine art.

## Global Studies

Eager to become a leader and address global challenges? In this double degree, you'll cultivate a rich understanding of the interplay between local, regional and global forces, and develop sharp analytical abilities along with flexible and creative approaches. Combine all this with in-demand IT skills and you'll be equipped to make a widespread impact.

## Laws (Honours)

After completing this double degree, you'll have the tools to thrive as an IT professional who specialises in legal information systems and security. Because technology skills are now essential for lawyers, this course will also give you a significant edge if you pursue a legal career.

## Science

Science is relying more heavily on computers to collect, store and analyse large volumes of data. By studying these two fields, you'll have what it takes to develop software and systems critical to advancing research, driving discoveries and ultimately, empowering humankind.

| Double degree options | Arts | Business | Commerce | Criminology | Design | Engineering (Honours) | Fine Art | Global Studies | Laws (Honours) | Science |
|---|---|---|---|---|---|---|---|---|---|---|
| **Computer Science** | | | | | | | | | | |
| Advanced computer science | | | ● | | | ● | | | ● | ● |
| Data science | | | ● | | | | | | ● | ● |
| **Information Technology** | | | | | | | | | | |
| Business information systems | ● | ● | ● | ● | ● | | ● | ● | ● | ● |
| Cybersecurity | ● | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Games and immersive media | ● | ● | ● | ● | ● | | ● | ● | ● | ● |
| Software development | ● | ● | ● | ● | ● | | ● | ● | ● | ● |

## I GAINED INDUSTRY INSIGHTS AND REAL-WORLD SKILLS

Combining commerce with an IT degree appealed to me because of the fast-growing integration and adoption of technology across the business world. Proving to be very worthwhile, the overlap between courses allowed me to contextualise my studies more effectively.

The university's impressive reputation and IT Industry-based Learning (IBL) program made Monash an easy choice.

On top of the skills and knowledge I've developed in my studies, IBL helped me clarify my career aspirations. During my time as a digital analyst at Origin Energy, I gained industry insights and real-world skills in a field that combines both parts of my double degree."

**MATTHEW LICHTIG**
**Bachelor of Commerce and Bachelor of Information Technology**

### DID YOU KNOW?

A double degree isn't double the work.

In most cases, you'll only need to study one extra year than if you were doing a single degree – far shorter than completing two courses separately. That's because the required units from one count as electives in the other.

# Bachelor of INFORMATION TECHNOLOGY

Clayton[1]

3 years full-time
6 years part-time

February and July

**ATAR[2]:** 77
**IB[2]:** 27.25
**MG[2]:** 75

Comprehensive

Bachelor of Information Technology

## DOUBLE DEGREES[3]

- Arts
- Business
- Commerce
- Criminology
- Design
- Engineering (Honours)[4]
- Fine Art
- Global Studies[5]
- Laws (Honours)
- Science[6]

## PREREQUISITES

**VCE**

**English:** Units 3 and 4, with either:

- a study score of at least 30 in English (EAL) or
- 25 in English other than EAL.

**Maths:** Units 1 and 2 with satisfactory completion of two units (any combination) of General Mathematics, Mathematical Methods or Specialist Mathematics.

**IB**

**English:** Level 1

**Maths:** Level 1

For prerequisite subject requirements, refer to page 30.

VTAC Subject Adjustment Bonus available.

**COURSE CODE:** C2000 **CRICOS CODE:** 085120M

To learn more about the Bachelor of IT, scan the QR code.

**handbook.monash.edu/2023/courses/C2000**

Accredited by the Australian Computing Society.

The Bachelor of Information Technology equips you to shape the way we live, work and communicate through technology.

This course focuses on teaching you how to build and leverage computer-based tools to achieve many different goals – from delivering critical insights to creating engaging assets.

Blending core units with many major, minor and double degree options, you'll first develop a strong understanding of fundamental IT concepts before specialising in an area of interest.

After choosing your major, you can then add either:

- a second major
- one or two minors
- electives.

In this degree, you'll also get to put your expertise into practice through a project for an industry client – or you can apply for an Industry-based Learning placement in a well-known organisation.

This degree covers many facets of IT, including business analysis, software development, games development, databases, project management and cybersecurity. It also develops essential skills in information literacy, problem-solving, communication, project management and presentation.

## What you'll learn

In the Bachelor of Information Technology, you'll learn how to:

- apply different methods and theories to develop and implement well-structured information products and systems
- identify the different roles of IT in organisations and society
- effectively use computer hardware and software technologies
- apply emerging technologies in a variety of contexts
- align with professional codes of conduct, recognising the social, legal and ethical impact of your work
- communicate professionally with clients, system users and peers
- assess your performance and drive your own development.

## Careers you could pursue

Here are some professional pathways you could pursue with this bachelor's degree:

**Business analyst**
In this role, you'll consult different stakeholders to identify their business problems. Then you'll document and analyse their needs to design a technical solution.

**Cybersecurity specialist**
As a cybersecurity specialist, you'll work with organisations to protect their computer systems. In the process, you'll organise information access as well as plan and implement reliable security programs.

**Web developer**
Your career as a web developer will focus on designing and creating websites. You'll also manage each site's technical aspects and measure their performance via metrics such as traffic, conversion rates and bounce rates.

**Cloud architect**
Cloud architects look after an organisation's cloud computing system – which provides widespread, on-demand access to resources. In this role, you'll work on cloud app designs, approval plans and systems to optimise storage in the cloud.

**Project manager**
Your responsibility as a project manager will be to lead a project through every stage of its life cycle, from initiation and planning to implementation and control.

**Software developer**
As a software developer, you'll find yourself researching, designing, implementing, testing, evaluating and managing software. You'll also be responsible for creating new modifications for existing programs by writing efficient code.

**Games developer**
Whether you want to work for a major company or be an independent developer, game developers are always hands-on with the latest technologies – from motion capture and 3D animation to augmented and virtual reality.

**Computer forensic investigator**
In this position, you'll work heavily with law enforcement agencies and private firms to draw out information from computers and other data stores.

**Interactive media developer**
As this specialist developer, you'll write, modify, integrate and test computer code for internet apps, computer-based software, games, film, video and other interactive media.

1 If you choose to complete a Bachelor of Information Technology with either the Bachelor of Design, Bachelor of Business or Bachelor of Fine Art, the non-IT coursework will be taught at Caulfield.
2 The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2023 or an estimate (E).
3 For a full list of double degrees, course information and requirements see page 14. Course codes and CRICOS codes for double degrees are available at **monash.edu/study**.
4 This double degree is only available with select engineering specialisations and IT majors; see **monash.edu/study** for full details. Additionally, for this double degree course, you must have completed the VCE subject prerequisites (or equivalent university units) no more than 10 years prior to admission.
5 This double degree isn't available with all specialisations; see **monash.edu/study** for full details.
6 For this double degree, studies must have been completed within five years of intended commencement. If you have not studied science in the past five years, you may still meet the requirements if you can demonstrate that you have engaged with science after your studies; this could be through work, teaching or volunteering in a capacity where you engaged in science in a meaningful way. If you believe you meet the requirements in this way, please provide us with a CV, letter of support from an employer/supervisor or other form of written proof that can demonstrate how you have engaged with science in the past five years.

## THE BEST UNIVERSITY TO STUDY A TECHNOLOGY DEGREE

Monash is by far the best university to study a technology degree. During my course, I got to build tangible end products and had countless resources to support my growth. Through collaborative projects, I developed a range of valuable technical and soft skills. I also learned to think more critically and present my ideas with confidence. Thanks to this experience, I've been able to secure a program manager position at Microsoft in Seattle."

**RHEA PATEL**
**Bachelor of Information Technology**

# BACHELOR OF IT STUDY AREAS

## MAJORS OR MINORS[1]

### Business information systems

Develop a thorough understanding of fundamental business IT concepts and how technology can be used to meet strategic goals.

Spanning topics such as business programming, e-business, data science and decision support, you'll also learn to analyse diverse stakeholder needs and develop reliable computer-driven solutions.

### Cybersecurity

Develop a wealth of knowledge in protecting private and public networks, sensitive information and confidential communications.

With this in-demand expertise, you'll be equipped to design secure computer operating systems, networks and applications for enterprises or government bodies.

### Games and immersive media[2]

Explore the different processes and technologies used to build games, as well as their technical and creative content.

From theoretical and practical perspectives, you'll learn about fundamental game development principles in a collaborative studio environment.

### Software development

Gain the technological skills needed to create robust software for a range of platforms, from large-scale enterprise systems to mobile applications.

In this specialisation, you'll study all aspects of software development, including systems analysis, programming and implementation.

## MINORS

### 3D modelling and animation

All about creation, this minor equips students with the technical expertise to create and edit 3D models, animate them and deploy them to build virtual worlds. It also offers the creative scope for students to develop a body of work in 3D character animation, immersive environments and AR and VR.

### Computer science

The practical applications of computer science spans all disciplines, from science and commerce to engineering and humanities. In this minor, you'll design software and data structures that solve real-world problems.

### Data science

Explore how to capture, manage and use huge volumes of data generated by organisations of all kinds – while building your programming, modelling, visualisation and analysis capabilities.

### Games design

Engage in the principles of designing game characters, environments and soundscapes – a field perfect for those who are more interested in game graphics than programming. In our games design minor, you can expect to work on creative projects centred on immersive virtual worlds.

### Games development

Gain comprehensive knowledge of the principles, processes and technologies used in the games industry. You'll study from both a theoretical and practical perspective, with a focus on collaborative studio environments to explore and execute unique game ideas.

### Mobile apps development

Whether it's for productivity or fun, gain the expertise to create reliable software for mobile devices. This minor will first teach you basic programming, which you'll then apply in building user-friendly apps.

### Software engineering

Empower yourself to apply the tools, processes, management methods and quality control techniques needed to deliver trustworthy software. This minor covers every aspect of software development, providing depth and rigour for students with an interest in this area.

### Web development

Studying web development will give you an understanding of what's involved in building websites. This includes programming, information management and interface technicalities. Expertise in this field will give you an advantage, no matter which field you pursue.

1 Some majors and minors require Year 12 or first-year maths.
2 Not available as a minor.


Faculty of
Information
Technology
14
Rainforest Walk

# Bachelor of
# COMPUTER SCIENCE

Clayton

3 years full-time
6 years part-time

February and July

**ATAR[1] :** 82.05
**IB[1]:** 29.75
**MG[1]:** 75

Specialist

Depending on your specialisation, you'll be awarded either the:

- Bachelor of Computer Science
- Bachelor of Computer Science in Data Science

## DOUBLE DEGREES[2]

- Commerce
- Engineering (Honours)[3]
- Laws (Honours)
- Science[4]

## PREREQUISITES

**VCE**

**English:** Units 3 and 4 with either:

- a study score of at least 30 in English (EAL) or
- 25 in English other than EAL.

**Maths:** Units 3 and 4 with a study score of at least 25 in either Mathematical Methods (any) or Specialist Mathematics.

**IB**

**English:** Level 1

**Maths:** Level 3

For prerequisite subject requirements, refer to page 30.

VTAC Subject Adjustment Bonus available.

**COURSE CODE:** C2001 **CRICOS CODE:** 079336A

To learn more about the Bachelor of Computer Science, scan the QR code

**handbook.monash.edu/2023/courses/C2001**

Accredited by the Australian Computing Society.

Computer scientists drive everything from search engines and weather reports to security and research.

Flexible and practical, the Bachelor of Computer Science will teach you how to think creatively and analytically in equal measure.

You'll graduate with the skills needed to design and implement the algorithms and data structures that will power the technology of the future – creating solutions that will benefit people around the world.

Choose to delve into either advanced computer science or data science. Then toward the end of your studies, you can apply for a placement in a leading organisation or complete a rewarding final-year project.

## What you'll learn

On top of what you'll explore in one of the two specialisations available, in this course we'll teach you how to:

- leverage the value of computer science and computational methods in a wide range of applications, supported by a solid theoretical background critical for effective practice
- use problem-solving techniques to analyse challenges in your chosen specialisation and develop effective software and technology solutions
- coordinate initiatives strategically using diagrams, graphics, interactive visualisations and modern project management tools
- become a technology leader by prioritising competing demands, regularly reviewing performance, driving development and behaving as a top professional
- adapt to the ever-changing landscape of technology, embracing emerging technologies with a wide range of strategies
- address ethical and legal considerations in your chosen discipline and prepare for its future scientific, industrial and social contexts.

## Careers you could pursue

Here are some careers pathways open to you through this bachelor's degree:

**Data analytics specialist**
As a data analytics specialist, you'll combine technical prowess with creative genius to cut through large amounts of information – and reveal the hidden gems inside.

**Database administrator**
In this role, you'll take advantage of innovative software to store and organise your organisation's data. A key responsibility, you'll manage the systems that data analysts use to translate numbers into business strategies.

**Computer forensic investigator**
In this position, you'll support the investigations of law enforcement agencies and private firms by tracking down valuable data from computers and other storage devices.

**IT consultant**
Your job as an IT consultant will focus on consulting with your clients and advising them on how IT can meet their business objectives. You'll also help improve the structure and efficiency of their IT systems.

**Machine-learning engineer**
Your duties as a machine-learning engineer will involve feeding data into models defined by data scientists. You'll also help upsize these models so they can handle terabytes of real-time data.

**Specialist programmer**
Using your technical prowess, you'll design, write, test, troubleshoot and maintain codes to shape the behaviour of specific programs. You'll also design interfaces so non-technical people can easily use your software.

**Software engineer**
Software engineers are computer science professionals who blend engineering principles with programming languages. In this role, you'll draw on this expertise to build software products, develop computer games and run network control systems.

1 The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2023 or an estimate (E).
2 For a full list of double degrees, course information and requirements see page 14. Course codes and CRICOS codes for double degrees are available at **monash.edu/study**.
3 This is only available with select Engineering specialisations; see **monash.edu/study** for full details. Additionally, you must have completed the VCE subject prerequisites (or equivalent university units) no more than 10 years prior to admission.
4 For this double degree, studies must have been completed within five years of intended commencement. If you have not studied science in the past five years, you may still meet the requirements if you can demonstrate that you have engaged with science after your studies; this could be through work, teaching or volunteering in a capacity where you engaged in science in a meaningful way. If you believe you meet the requirements in this way, please provide us with a CV, letter of support from an employer/supervisor or other form of written proof that can demonstrate how you have engaged with science in the past five years.

## SPECIALISE IN...

**A) Advanced computer science**

Do you enjoy solving problems that demand analytical thinking and a mathematical bent? Then this specialisation is for you. Spanning areas such as graphics, intelligent systems and networks, you'll learn how to design and implement substantial pieces of software through a range of programming paradigms, advanced data structures and algorithms.

**B) Data science**

Data science is all about the capture, management and use of big data. When you complete this specialisation at Monash, you'll have access to the largest cohort of data scientists in the Asia-Pacific region. Drawing on their expertise, you'll gain a deep understanding of computation theories. Topics covered in this specialisation include deep learning, modelling for data analysis, data visualisation and databases.

## TECHNICAL SKILLS TO SOLVE REAL-WORLD PROBLEMS

I chose the Bachelor of Computer Science at Monash because I wanted to work in a field where I was constantly learning and being challenged.

The degree's focus on applied maths,data structures and algorithms helped me gain and apply technical skills to solve real-world problems. It also connected me with a community of people who share my passion for technology. All the friends I've made have been really supportive."

**APRIL CHI**

**Bachelor of Computer Science**

Clayton

4 years full-time
8 years part-time

February

**ATAR[1] :** 94
**IB[1]:** 36.75
**MG[1]:** 84

Specialist

Bachelor of Computer Science Advanced (Honours)

## PREREQUISITES

**VCE**

**English:** Units 3 and 4 with either:

- a study score of at least 30 in English (EAL) or
- 25 in English other than EAL.

**Maths:** Units 3 and 4 with a study score of at least 25 in either Mathematical Methods (any) or Specialist Mathematics.

**IB**

**English:** Level 1

**Maths:** Level 3

For prerequisite subject requirements for the above level/s, refer to page 30.
VTAC Subject Adjustment Bonus available.

**COURSE CODE:** C3001 **CRICOS CODE:** 085350G

To learn more about the Bachelor of Computer Science Advanced (Honours), scan the QR code

**handbook.monash.edu/2023/courses/C3001**

Accredited by the Australian Computing Society.

# Bachelor of COMPUTER SCIENCE ADVANCED (Honours)

Open to high-achieving students, this honours degree offers all the benefits of the Bachelor of Computer Science as well as a stream of practical research projects.

This course teaches you everything in the Bachelor of Computer Science depending on your chosen specialisation, and equips you with the advanced programming, analysis and research skills needed to succeed in the ever-growing field of digital research.

To practise what you learn, you can choose to complete a specific project aligned with your studies, or apply for an Industry-based Learning placement. Then in your final year, you'll undertake substantial individual research with support from a computer science expert.

By completing this course, you'll open up greater career opportunities and position yourself to complete a master's degree in just one additional year. This course is also the ideal stepping stone to a PhD.

## What you'll learn

In addition to the outcomes of the Bachelor of Computer Science, you'll also learn how to:

- demonstrate advanced knowledge of computer science and computational methods, and recognise the importance of theory for critically analysing problems
- design algorithmic solutions, program efficient software solutions and apply computational solutions
- showcase your expertise in a range of relevant topics, including the historical, cultural, social, legal and ethical issues inherent in computer science research
- plan, conduct and manage an in-depth research project
- evaluate and select research methodologies appropriate to computer science, and demonstrate their uses and limitations
- document and professionally present research results and the methods used in both verbal and written reports
- take control of your own learning and think in analytical and creative ways.

## Careers you could pursue

With this bachelor's degree, there are several careers you could pursue, including:

**Chief information officer**
A chief information officer is in charge of an organisation's IT and computer systems. In this role, you'll advise the executive team on the best systems to use and guide strategic investment decisions around technology platforms.

**Data architect**
In this role, you'll design essential data management frameworks that can be used by data scientists, analysts and engineers.

**Data engineer**
As a data engineer, you'll be responsible for developing, testing and maintaining architectures such as databases and processing systems – the foundations for other key data functions in an organisation.

**Machine learning engineer**
In this position, you'll create programs and infrastructures that help machines to think and act without receiving explicit instruction.

**Scientific researcher**
Your responsibilities as a scientific researcher will include gathering and interpreting information from controlled investigations – and driving valuable discoveries. This career path requires you to help clients optimise their business operations and systems using technology.

**Technical analyst**
Your job as a technical analyst will be to evaluate the constant fluctuations of the stock market and provide critical investment insights to clients.

1 The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2023 or an estimate (E).

## SPECIALISED IT COURSES FROM THE START

Since high school I knew I wanted to turn my interest in computers and problem solving into a career.

Through my coursework and extracurricular activities, I developed deep technical knowledge and critical soft skills – all of which I refined during my Industry-Based Learning placement at PwC."

**TIMOTHY JORDAN**
**Bachelor of Computer Science Advanced (Honours)**

# Bachelor of
# APPLIED DATA SCIENCE

Clayton

3 years full-time
6 years part-time

February

**ATAR[1] :** 84.80
**IB[1]:** 31
**MG[1]:** 75

Specialist

Bachelor of Applied Data Science

Faculty of Science

## PREREQUISITES

**VCE**

**English:** Units 3 and 4 with either:

- a study score of at least 30 in English (EAL) or
- 25 in English other than EAL.

**Maths:** Units 3 and 4 with a study score of at least 25 in either Mathematical Methods (any) or Specialist Mathematics.

**IB**

**English:** Level 1

**Maths:** Level 3

For prerequisite subject requirements, refer to page 30.

VTAC Subject Adjustment Bonus available.

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

To learn more about the Bachelor of Applied Data Science, scan the QR code

**handbook.monash.edu/2023/courses/S2010**

In this information age, big data is ever-changing and ever-challenging. That's why data science graduates are desired by organisations of all types.

Designed to meet the demands of a growing industry, the Bachelor of Applied Data Science is a cross-disciplinary degree that blends maths units from both science and IT courses.

Through selected streams, you'll develop your passion for the physical sciences, sociological or anthropological studies, business or engineering. You'll also work on rewarding projects that allow you to blend your leadership, entrepreneurial, IT and maths skills to real-life projects.

The ultimate goal? To expand your technical know-how and prepare you to thrive in data science.

## What you'll learn

Through this course, you'll be able to:

- demonstrate advanced knowledge and technical skills in data science
- design, implement and apply reliable methods for capturing, managing and analysing data
- apply critical thinking, problem-solving strategies and enterprising skills to develop effective data science solutions
- develop your multicultural literacy, valuable across a variety of industries
- communicate persuasively with diverse stakeholders in different ways
- understand the value of leadership, social responsibility, ethics and mentorship.

## Careers you could pursue

Graduates with data science skills are in high demand across many industries, including IT, professional services, law, marketing and finance.

By completing either of these courses, you'll be equipped to pursue careers such as:

**Business intelligence analyst**
As a business intelligence analyst, you'll gather data in a number of ways, such as via software, looking at competitors or analysing market trends. This helps paint a picture of where your organisation stands in the industry – and where it can improve.

**Data analyst**
Every business collects data, whether it's through sales, market research, logistics or transport. Your job as a data analyst will be to translate all the complex numbers into valuable insights to help organisations make better business decisions.

1 The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2023 or an estimate (E).

# Bachelor of APPLIED DATA SCIENCE ADVANCED (Honours)

Looking for an interdisciplinary course that blends data science theory, independent research and industry projects? Look no further.

Connecting IT and maths, this four-year specialist course delivers all the learning outcomes in the Bachelor of Applied Data Science and more.

It also gives you the opportunity to delve deeper into critical research methods and key data science principles – and drive a high-level industry research initiative.

## What you'll learn

The Bachelor of Applied Data Science Advanced (Honours) will empower you to:

- demonstrate advanced knowledge and technical skills in data science
- design, implement and apply a variety of methods for capturing, managing and analysing data
- effectively communicate with diverse audiences in a range of ways
- blend analytical and creative thinking, problem-solving skills and ingenuity to develop effective solutions to the world's data challenges
- enhance your multicultural literacy and use it in different sectors, such as government, education and not-for-profit highlight the value of leadership, social responsibility, ethics and mentorship
- apply different methodologies to successfully plan, conduct and manage a substantial research project
- expertly document and present your research and the methods used in concise, compelling verbal and written reports.

**Chief data officer**
When you become a chief data officer, you'll be responsible for the organisation-wide collection, storage and analysis of data – to drive an organisation forward in its overall mission.

**Data architect**
Your day-to-day as a data architect will involve drawing up precise blueprints for building, testing and maintaining databases.

**Data mining engineer**
In this role, you'll create and enhance statistical and predictive models and algorithms to analyse large sets of data. You'll also distil critical insights and improve the quality of information at every opportunity.

**Data scientist**
A career as a data scientist involves knowing which tools and methods to use to extract meaning from data. You'll also spend a lot of time throughout the process collecting information and ensuring it's reliable to use.

**Quantitative analyst**
In a quantitative analyst role, you'll develop and implement complex mathematical models to help businesses make key financial decisions and reduce risks.

Clayton

4 years full-time
8 years part-time

February

**ATAR[1]:** 90.30
**IB[1]:** 34
**MG[1]:** 80

Specialist

Bachelor of Applied Data Science Advanced (Honours)

Faculty of Science

## PREREQUISITES

**VCE**

**English:** Units 3 and 4 with either:

- a study score of at least 30 in English (EAL) or
- 25 in English other than EAL.

**Maths:** Units 3 and 4 with a study score of at least 30 in either Mathematical Methods (any) or Specialist Mathematics.

**IB**

**English:** Level 1

**Maths:** Higher score in Level 3

For prerequisite subject requirements, refer to page 30.
VTAC Subject Adjustment Bonus available.

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

To learn more about the Bachelor of Applied Data Science Advanced (Honours), scan the QR code.
**handbook.monash.edu/2023/courses/S3003**

## GRADUATING WITH EMPLOYABLE SKILLS, LIFELONG FRIENDS AND CONFIDENCE

The interdisciplinary nature of my 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 degree in my second year with no coding experience, and I'm graduating with employable skills, lifelong friends and confidence to create meaningful impact."

**MARDI GILLESPIE-DAWSON**
**Bachelor of Applied Data Science**

# Bachelor of SOFTWARE ENGINEERING (Honours)

Clayton

4 years full-time
8 years part-time

February and July

**ATAR[1] :** 85
**IB[1] :** 31
**MG[1]:** N/A

Specialist

Bachelor of Software Engineering (Honours)

Faculty of Engineering

## DOUBLE DEGREES

- Arts[2]
- Commerce[2]
- Computer Science[2]
- Information Technology[2]
- Science[2]

## PREREQUISITES

**VCE**

**English:** Units 3 and 4 with either:

- a study score of at least 30 in English (EAL) or
- 25 in English other than EAL.

**Maths:** Units 3 and 4 with a study score of at least 30 in either Mathematical Methods (any) or Specialist Mathematics.

**Science:** Units 3 and 4 with a study score of at least 25 in Chemistry or Physics.

**IB**

**English:** Level 1

**Maths:** Level 3

**Science:** Chemistry or physics

For prerequisite subject requirements, refer to page 30.

VTAC Subject Adjustment Bonus available.

**COURSE CODE:** E3001 **CRICOS CODE:** 001722B

Accredited by the Australian Computing Society.

Accredited by Engineers Australia

Software engineering is a field that's constantly evolving as new technologies emerge. As an engineer in this area, your skills will be critical across many functions – from dispensing life-saving medicine to controlling flight paths.

The Bachelor of Software Engineering (Honours) is designed to address the demand for graduates who possess skills in large-scale software systems.

In this comprehensive software engineering specialisation, you'll learn about core areas such as software processes and life cycles, the mathematical foundations of software engineering, requirements analysis and software development.

Then during practical activities, you'll work with modern, industry-strength programming languages, technologies and systems.

You'll undertake all this and more while honing your teamwork, problem-solving, resource management, project coordination and communication skills.

## What you'll learn

By completing this cross-disciplinary honours degree, you'll learn how to:

- expertly apply the relevant scientific methods in software engineering to design solutions for complex problems
- identify, interpret and appraise current developments and advanced technologies, and apply this knowledge to software engineering
- recognise and synthesise the economic, safety, environmental and professional considerations in software engineering practice – and use them to develop your professional acumen
- examine and use theoretical and numerical analysis to predict, design, control and optimise the performance of engineering systems
- research, conceptualise, investigate and interpret knowledge and relevant tools and techniques to solve industry challenges
- evaluate the performance of an engineering system based on economic, safety, social and environmental metrics, and implement strategies to minimise adverse effects
- align with the expectations of the engineering profession and uphold the ethical standards and legal responsibilities involved.

## Careers you could pursue

Here are some careers that the Bachelor of Software Engineering (Honours) prepares you for:

**Software developer**
As a software developer, you'll create applications that help people complete specific tasks on a computer or digital device. You'll also build the underlying systems that run the technology and control networks.

**Software engineer**
In this role, you'll leverage expertise in computer science, engineering principles and programming languages to build software products, develop games and run network control systems.

**Network administrator**
After becoming a network and computer systems administrator, you'll organise, install and manage an organisation's computer systems, including local area networks, wide area networks and intranets.

**User interface designer**
User interface designers are in charge of designing digital screens or pages that users interact with, ensuring each follows the paths laid out by UX designers.

**Business analyst**
When you pursue a career as a business analyst, you'll consult various stakeholders about their business challenges to deliver a technical solution.

**Software tester**
As a software tester, you'll drive quality assurance during software development and deployment. Through a range of tests, you'll ensure that the software is fit for purpose – and free of any bugs.

**Programmer analyst**
Your responsibilities as a programmer analyst will include learning about an organisation's current systems and needs to create strategies for improvement.

**Software project manager**
Upholding the role of software project manager means taking overall responsibility for every software project and their success.

**Configuration control manager**
This position is dedicated to maintaining a system's integrity over time by systematically handling changes. In this role, you'll implement policies, procedures, techniques and tools to track, document, manage and assess adjustments.

1 The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2023 or an estimate (E).
2 Double degrees are not available with all specialisations. For a full list of double degrees, course information and requirements see page 14. To be eligible for these double degree courses, you must have completed the VCE subject prerequisites (or equivalent university units) no more than 10 years prior to admission. Course codes and CRICOS codes for double degrees are available at **monash.edu/study**.

## ALWAYS BEEN THERE TO SUPPORT ME

I chose Monash because it has a remarkable reputation, a broad assortment of course structures, great international prospects and a dynamic range of research environments and industry connections.

The biggest highlight of my learning experience has been Monash's culture, which encourages you to be better every day. My course's structure also adopted a practical learning approach every week and the teaching staff have always been there to support me."

**SHOURYA RAJ**
**Bachelor of Software Engineering (Honours)**

To learn more about the Bachelor of Software Engineering (Honours), scan the QR code.

**handbook.monash.edu/2023/courses/E3001**

# INTERESTED IN AN IT DEGREE?
# HERE'S WHAT YOU NEED TO KNOW

All Monash University undergraduate courses require you to have previously studied and achieved the required Australian-level standards in certain specific subjects – known as prerequisite subjects.

Different prerequisite subject levels apply to each undergraduate course, and can be located on the course specific pages (16–28) and the tables at the end of this guide. The table below outlines acceptable subjects that meet these prerequisite subject levels for VCE and IB.

| | English | | Mathematics | | | Science |
|---|---|---|---|---|---|---|
| | ■ Level 1 | ■ Level 2[1] | ■ Level 1[2, 3] | ■ Level 2[3] | ■ Level 3 | ■ Science approved list |
| **VCE** | Units 3 and 4: a study score of at least 30 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 1 and 2: satisfactory completion in two units (any combination) of General Mathematics or Mathematical Methods or Specialist Mathematics | Units 3 and 4: a study score of at least 22 in Mathematical Methods (any) or Specialist Mathematics, or a score of at least 25 in Further Mathematics | Units 3 and 4: a study score of at least 25[1] in one of Mathematical Methods (any) or Specialist Mathematics | Units 3 and 4: a study score of at least 25 in 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:<br>• English A: Literature<br>• English A: Language and Literature<br>• Literature and Performance, OR<br>At least 3 in one of the following HL subjects:<br>• English A: Literature<br>• English A: Language and Literature, OR<br>At least 5 in one of the following SL subjects:<br>• English AB<br>• English B, OR<br>At least 4 in the following HL subject:<br>• English B. | At least 5 in one of the following SL subjects:<br>• English A: Literature<br>• English A: Language and Literature<br>• Literature and Performance, OR<br>At least 4 in one of the following HL subjects:<br>• English A: Literature<br>• English A: Language and Literature, OR<br>At least 6 in one of the following SL subjects:<br>• English AB<br>• English B, OR<br>At least 5 in the following HL subject:<br>• English B. | At least 3 in any mathematics subject at SL or HL level. | At least 4 in one of the following SL subjects:<br>• Math Studies<br>• Mathematics: Applications and Interpretations. | At least 4[1] in one of the following SL subjects:<br>• Mathematics<br>• Mathematics: Analysis and Approaches, OR<br>At least 3[1] in one of the following HL subjects:<br>• Mathematics: Applications and Interpretations<br>• Mathematics<br>• Further Mathematics<br>• Mathematics: Analysis and Approaches. | At least 4[1] at Standard Level (SL) or 3[1] at Higher Level (HL) in Biology, Chemistry, Environmental Systems and Societies (SL only), Further Mathematics (HL only), Geography, Mathematics, Mathematics: Analysis and Approaches, Mathematics: Applications and Interpretations (HL only), Physics or Psychology, unless otherwise stated. |

Some double degree courses may require you to study across two campuses in order to complete your course. To be eligible for admission to a double degree course, you'll need to meet the academic entry requirements for both single degree courses. All scores are to be used as a guide only. For detailed international, non-school leaver requirements, and double degree entry requirements, visit **monash.edu/study.**

M Master's accelerated pathway  I Indigenous entry pathway

CL –Clayton | CA – Caulfield
RC – Range of criteria.
E – Estimated: the provided score is estimated and is to be used as a guide only.

1 Some Monash courses require a higher prerequisite score than stated above.
2 Level 2 and 3 mathematics subjects can also be used to satisfy Level 1 mathematics prerequisite requirements.
3 Level 3 Mathematics subjects can also be used to satisfy Level 1 and Level 2 mathematics prerequisite requirements.
4 Duration is based on a standard full-time load of 48 credit points per annum.
5 Indicative – The provided score is the 2023 lowest ATAR to which an offer was made, or an Estimate (E), and is to be used as a guide only.
6 IT units will be taught at Clayton campus.
7 This course has additional selection requirements. For further details, see monash.edu/study.
8 Depending on your Arts major, you may take the Arts component at Clayton or Caulfield.
9 Studies must have been completed within five years of intended commencement. If you have not studied science in the past five years, you may still meet the requirements if you can demonstrate that you have engaged with science meaningfully after your studies. This could be through work, teaching or volunteering. If you believe you meet the requirements in this way, please provide us with a CV, letter of support from an employer/supervisor or another form of written proof that can demonstrate how you have engaged with science in the past five years.
10 The Bachelor of Laws (Honours) is an accelerated course where you must undertake more than the standard annual load of 48 credit points in year two and/or year three to complete the course in four calendar years.

# DOMESTIC ADMISSIONS AND ATARS

| Course | Duration (years)[4] | Prerequisites: English Level 1 | English Level 2 | Mathematics Level 1 | Mathematics Level 2 | Mathematics Level 3 | Science: Approved list or specified | Degree awarded | Location | Indicative[5] ATAR | Indicative[5] IB score | Monash Guarantee |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **SINGLE DEGREES** | | | | | | | | | | | | |
| **Engineering** M | 4 | ■ | | | | ■ | Chemistry or Physics | Bachelor of Software Engineering (Honours) | CL | 90.05 | 34 | N/A |
| **Computer Science** | 3 | ■ | | | | ■ | | Bachelor of Computer Science | CL | 82.05 | 29.75 | 75 |
| | | | | | | | | Bachelor of Computer Science in Data Science | | | | |
| **Computer Science Advanced (Honours)** | 4 | ■ | | | | ■ | | Bachelor of Computer Science Advanced (Honours) | CL | 94 | 36.75 | 84 |
| **Information Technology** I | 3 | ■ | | ■ | | | | Bachelor of Information Technology | CL | 77 | 27.25 | 75 |
| **Applied Data Science** | 3 | ■ | | | | ■ | | Bachelor of Applied Data Science | CL | 84.80 | 31 | 75 |
| **Applied Data Science Advanced (Honours)** | 4 | ■ | | | | ■ Higher score | | Bachelor of Applied Data Science Advanced (Honours) | CL | 90.30 | 34 | 80 |
| **DOUBLE DEGREES** | | | | | | | | | | | | |
| **Business / Information Technology**[6] | 4 | ■ | | | ■ | | | Bachelor of Business and Bachelor of Information Technology | CL, CA | 77.25 | 27.50 | 75 |
| **Commerce / Computer Science** | 4 | ■ | | | | ■ | | Bachelor of Commerce and Bachelor of Computer Science | CL | 87.15 | 32.25 | 77 |
| | | | | | | | | Bachelor of Commerce and Bachelor of Computer Science in Data Science | | | | |
| **Commerce / Information Technology** | 4 | ■ | | | | ■ | | Bachelor of Commerce and Bachelor of Information Technology | CL | 87.05 | 32.25 | 77 |
| **Criminology / Information Technology** | 4 | ■ | | ■ | | | | Bachelor of Criminology and Bachelor of Information Technology | CL | 77.05 | 27.25 | 75 |
| **Design / Information Technology**[6] | 4 | ■ | | ■ | | | | Bachelor of Communication Design and Bachelor of Information Technology | CL, CA | 77 | 27.25 | 75 |
| | | | | | | | | Bachelor of Collaborative Design and Bachelor of Information Technology | | | | |
| | | | | | | | | Bachelor of Industrial Design and Bachelor of Information Technology | | | | |
| | | | | | | | | Bachelor of Spatial Design and Bachelor of Information Technology | | | | |
| **Engineering (Honours) / Computer Science** | 5 | ■ | | | | ■ | Chemistry or Physics | Bachelor of Electrical and Computer Systems Engineering (Honours) and Bachelor of Computer Science | CL | 86.15 | 31.75 | 76 |
| | | | | | | | | Bachelor of Software Engineering (Honours) and Bachelor of Computer Science | | | | |
| **Engineering (Honours) / Information Technology** | 5 | ■ | | | | ■ | Chemistry or Physics | Bachelor of Electrical and Computer Systems Engineering (Honours) and Bachelor of Information Technology | CL | 85.20 | 31.25 | 75 |
| | | | | | | | | Bachelor of Software Engineering (Honours) and Bachelor of Information Technology | | | | |
| **Fine Art / Information Technology**[6,7] | 4 | ■ | | ■ | | | | Bachelor of Fine Art and Bachelor of Information Technology[7] | CA, CL | RC | RC | RC |
| **Global Studies / Information Technology** | 4 | ■ | | ■ | | | | Bachelor of Global Studies and Bachelor of Information Technology | CL | 83.10 | 30.25 | 75 |
| **Information Technology / Arts**[8] | 4 | ■ | | ■ | | | | Bachelor of Information Technology and Bachelor of Arts | CL | 79.25 | 28.25 | 75 |
| **Information Technology / Science**[9] | 4 | ■ | | ■ | | | ■ | Bachelor of Information Technology and Bachelor of Science | CL | 84.65 | 31 | 75 |
| **Laws (Honours) / Computer Science** | 5.25[10] | | ■ | | | ■ | | Bachelor of Laws (Honours) and Bachelor of Computer Science | CL | 97 | 39.50 | 87 |
| | | | | | | | | Bachelor of Laws (Honours) and Bachelor of Computer Science in Data Science | | | | |
| **Laws (Honours) / Information Technology** | 5.25[10] | | ■ | ■ | | | | Bachelor of Laws (Honours) and Bachelor of Information Technology | CL | 97.05 | 39.50 | 87 |
| **Science / Computer Science**[9] | 4 | ■ | | | | ■ | | Bachelor of Science and Bachelor of Computer Science | CL | 84 | 30.50 | 75 |
| | | | | | | | | Bachelor of Science and Bachelor of Computer Science in Data Science | | | | |

# 2024 INTERNATIONAL ENTRY REQUIREMENTS

| Qualification | Bachelor of Information Technology C2000 | Bachelor of Computer Science C2001 | Bachelor of Computer Science Advanced (Honours) C3001 | Bachelor of Applied Data Science S2010 | Bachelor of Applied Data Science Advance (Honours) S3003 | Bachelor of Software Engineering (Honours) E3001 | Calculation of Score | English entry requirements |
|---|---|---|---|---|---|---|---|---|
| | Entry Score | | | | | | | |
| **All India Senior School Certificate** | 70% | 75% | 83% | 75% | 83% | 81% | Overall average of the best four academic subjects (excluding Monash University approved non-academic subjects) and result indicated as 'pass'. | 60% in English Core. |
| **2024 ATAR For International Students (Australian Year 12)** | 75 | 80 | 90 | 80 | 90 | 85 | Final ATAR as awarded by the relevant Australian state Year 12 authority. | Refer to VCE Level 1 English located on page 30. |
| **GCE A Level** | 8 | 9 | 12 | 9 | 12 | 11 | Total score by achieving either:<br>• A maximum of the best three A Level subjects completed within two years[1]. In the event where only one A Level subject has been completed (and no other A Level subjects have been completed), two AS Level subjects can be counted in place of one A Level subject however the AS Level subject must not be in the same subject area as the A Level subjects included in the calculation. OR<br>• A minimum of the best two A Level subjects completed within two years[1] plus the best two AS Level subjects. The AS Level subjects however must not be in the same subject area as the A Level subjects included in the calculation.<br>Additional guidelines:<br>Score grades as follows:<br>• A Level subjects: A*(a*) = 5, A(a) = 5, B(b) = 4, C(c) = 3, D(d) = 2, E(e) = 1, U = 0.<br>• AS Level subjects: a(a) =2.5, b(b) =2, c(c) =1.5, d(d) =1, e(e) =0.5, U = 0.<br>• N (Narrow failure) and U (Unclassified) results are not to be included in the calculation.<br>• A maximum of one bonus point is offered when achieving A* in an A Level Subject.<br>GCE A Levels must be awarded by: Cambridge International, Pearson Edexcel Council for the Curriculum, Examinations and Assessment, Oxford, Cambridge and RSA Examinations, Welsh Joint Education Committee or Assessment and Qualifications Alliance.<br>1 Subject examinations taken within two years may include more than one sitting. For example, subject examinations in June 2021 until June 2023 are acceptable. | • C grade or score of 4 in one of the following IGCSE subjects: Literature in English OR Literature (English) OR English Literature OR Cambridge First Language English 0522/0627/0990 OR World Literature OR English Language OR English Language A OR English Language B, OR<br>• C grade in Cambridge IGCSE First Language English 0500 with a grade 3 or lower in Speaking and Listening, OR<br>• B grade or score of 5 in IGCSE English as a Second Language, OR<br>• C grade or score of 4 in one of the following GCSE/GCE O Level subjects: English Language OR Literature in English OR English Literature OR English OR English Language (Syllabus B), OR<br>• C grade in one of the following GCE AS Level subjects: General Paper OR General Studies OR English General Paper OR English language OR Language and Literature in English OR Literature in English (previously known as Language and Literature) OR English Literature OR English Language and Literature, OR<br>• E grade in one of the following GCE A Level subjects: General Studies OR English General Paper OR English language OR Literature in English OR English Language and Literature OR English Literature. |
| **Hong Kong Diploma of Secondary Education** | 17 | 18 | 21 | 18 | 21 | 20 | Total score of the best five subjects[2] (Category A and C only). Scores grades as follows: Level 1 = 1, Level 2 = 2, Level 3 = 3, Level 4 = 4, Level 5 = 5 or A = 5, B=4, C=3, D=2, E=1. A maximum of 1 bonus point is offered when achieving Level 5** or Level 5* in a HKDSE Category A subject.<br>2 The highest grade will be used in the calculation in the event where individual subject examinations have been sat in multiple sittings. | Level 4 in HKDSE English Language. |
| **Indian School Certificate Examination** | 65% | 70% | 77% | 70% | 77% | 76% | Overall average of the best four academic subjects (excluding Monash University approved non-academic subjects) and results indicated as 'Pass certificate awarded'. | 60% in English. |
| **International Baccalaureate (IB) Diploma programme** | 26 | 28 | 33 | 28 | 33 | 31 | Total points as awarded on the IB Diploma Programme results. | Refer to IB Level 1 English located on page 30. |
| **Monash University Foundation Year (MUFY)** | 70% | 70% | NA | 72.5% | 80% | 76.25% | Refer to: **monashcollege.edu.au/courses/foundation-year/destination-degrees**.<br>The undergraduate entry requirements published in this brochure are for students who commence the MUFY program in 2024. | 65% in MUFY English. |

In addition to the above entry requirements (i.e. academic entry score and English language requirements) students must also satisfy prerequisite subject requirements. Refer to the individual pages in the guide for further information. The acceptable English subjects specified in the table above must be completed within three years prior to the Monash course commencement date. If you have not met the English entry requirements, visit **monash.edu/study** for information about Monash-approved English tests.

Other international qualifications entry requirements can be found at **monash.edu/prior-study**.
Please note that all entry requirements for Monash University are subject to change. Monash University reserves the right to ask students to complete an English test to meet English course requirements upon request.
For detailed international, non-school leaver requirements, and double degree entry requirements, visit **monash.edu/study**.

| Qualification | Bachelor of Information Technology C2000 | Bachelor of Computer Science C2001 | Bachelor of Computer Science Advanced (Honours) C3001 | Bachelor of Applied Data Science S2010 | Bachelor of Applied Data Science Advance (Honours) S3003 | Bachelor of Software Engineering (Honours) E3001 | Calculation of Score | English entry requirements |
|---|---|---|---|---|---|---|---|---|
| | Entry Score | | | | | | | |
| **Monash College Diploma programme** | Diploma Part 1: 75%<br>Diploma Part 2: 55% | Diploma Part 1: 80%<br>Diploma Part 2: 60% | NA | Diploma Part 1: 80%<br>Diploma Part 2: 60% | Diploma Part 1: 85%<br>Diploma Part 2: 75% | Diploma Part 1: 80%<br>Diploma Part 2: 60% | Refer to: **monashcollege.edu.au/courses/diplomas/destination-degrees**<br>The Monash College Diploma Part 1 and Part 2 entry requirements published in this guide are for students commencing their undergraduate destination degree in 2025. | Successful completion of the course provided that the course has been completed within the last three years of the Monash University commencement date. |
| **National Certificate of Educational Achievement Level 3, New Zealand** | To view NCEA entry requirements, refer to: **monash.edu/admissions/entry-requirements/nz-ncea-entry-requirements** | | | | | | | |
| **Ontario Secondary School Diploma – Grade 12, Canada** | 78.5% | 81.6% | 87.9% | 81.6% | 87.9% | 86.3% | Overall average of the best six academic Grade 12 subjects[3] (excluding workplace preparation courses and open courses). Students must achieve a minimum total of 30 credits and complete Community Involvement and Provincial Secondary School Literacy Requirement. The Ontario Secondary School Diploma is only accepted from Monash-approved schools.<br>3 The grade 12 subjects must be taken from the most recent completed Ontario Student Transcript issued by the Ontario Ministry of Education. | 50% in Grade 12 English (course code ENG4C) or English University Preparation (course code ENG4U)/ Grade 12 English (course code ENG4U). |
| **High School Diploma, Vietnam** | 8.14 | 8.28 | 8.56 | 8.28 | 8.56 | 8.49 | Overall average of all Grade 12 subjects. | Submission of an approved English test (such as an Academic IELTS or equivalent) with the required scores. Refer to the Monash Find a course to locate the Monash courses English test requirements: **monash.edu/study/courses** |
| **Advanced Placement (AP)[4]** | 6 | 7 | 8 | 7 | 8 | 7 | Total of the best two AP examinations as awarded on the Student Score Report[5] issued by the College Board. Minimum accepted score in each AP examination is 3.<br>4 If you have completed multiple American Admission Tests (i.e. SAT, AP or ACT), the test with the highest achieved scores will be used to determine if the academic entry requirement has been satisfied<br>5 All AP examinations submitted to Monash University will be considered when calculating the entry score. | Pass average in Grade 12 English or Grade 12 English Rich subject[6] or AP examination score of 3 in one of the following:<br>• AP English Language and Composition<br>• AP English Literature and Composition<br>6 The acceptance of Grade 12 English Rich subjects are subject to faculty approval. |
| **Scholastic Aptitude Test (SAT) – total Score out of 1600[4]** | 1160 | 1190 | 1290 | 1190 | 1290 | 1270 | Total score by adding the best section scores achieved in 'Evidence Based Reading and Writing' and 'Math' as awarded on the SAT Score Report[5] issued by the College Board.<br>4 If you have completed multiple American Admission Tests (i.e. SAT, AP or ACT), the test with the highest achieved scores will be used to determine if the academic entry requirement has been satisfied.<br>5 All SAT examinations submitted to Monash University will be considered when calculating the entry score, provided the SAT is marked out of 1600. | |
| **SMA3, Indonesia – 100% scale (60% pass)** | 75% | 79% | 88% | 79% | 88% | 83% | Overall average of Semester 1 and Semester 2 Grade 12 knowledge and skills results.<br>Note: Monash University undergraduate entry scores vary for SMA3 qualifications that are marked on differing grading scales. | Submission of an approved English test (such as an Academic IELTS or equivalent) with the required scores. Refer to the Monash Find a course to locate the Monash courses English test requirements: **monash.edu/study/courses** |
| **STPM, Malaysia** | 7.9 | 8.5 | 9.7 | 8.5 | 9.7 | 9.4 | Total of the best three subjects, excluding Pengajian Am (General Studies). | C grade in GCE O Level English Language – 1119 (SPM) |
| **UEC, Malaysia** | 5 | 4.2 | 2.6 | 4.2 | 2.6 | 3 | Overall average of the best five subjects. Only grades A1, A2, B3, B4, B5 and B6 to be included in calculation. C7, C8 and F9 cannot be included in the calculation. Five subjects must be included in the calculation with a score of B6 grade or higher in each subject. Score grades as follows:<br>A1=1, A2=2, B3=3, B4=4, B5=5, B6=6. It should be noted that a score of A1 is the highest score. | Submission of an approved English test (such as an Academic IELTS or equivalent) with the required scores. Refer to the Monash Find a course to locate the Monash courses English test requirements: **monash.edu/study/courses** |
| **UNSW Foundation Studies** | 7 | 7.5 | N/A | 7.5 | 8.5 | 8.25 | Final grade point average. | C grade in Academic English. |
| **University of Melbourne Trinity College Foundation Studies** | 72% | 77% | N/A | 77% | 86% | 83% | Overall average of the best four subjects (excluding English for Academic Purposes). | 65% in English and 50% in English for Academic Purposes. |

# OTHER PATHWAYS TO MONASH

Direct entry is just one way into an undergraduate IT degree at Monash. Our alternative channels offer you many more opportunities to begin your journey with us.

### Transfer from another Monash course

Already studying a degree at Monash? You can apply to transfer to an IT course if you meet the criteria. To learn more visit **monash.edu/it/future-students/how-to-apply**.

### Transfer from other universities

If you're from another university, you can apply to move to Monash as long as you meet your chosen course's prerequisites. Credit may be granted.

Search your selected degree's criteria at **monash.edu/study/courses/find-a-course**.

### Monash College

Monash College is a preferred pathway for students who want to study IT at Monash University, but narrowly miss the academic requirements for direct entry.

After completing the first year in your course at the college, you may be able to transfer to Monash University for the remainder depending on your performance.

Interested? Head to **monashcollege.edu.au** for more information.

### Technical and Further Education (TAFE)

A TAFE certificate IV or diploma can help you get admitted into an IT degree at Monash. If your previous study in a diploma qualification is assessed as being equivalent to our units, credit may be granted.

To learn more about transferring to Monash from TAFE, head to **monash.edu/it/future-students/how-to-apply**.

### Single units of higher education study

If you successfully finish two approved higher education IT units, you're eligible to apply for entry into one of our IT undergraduate courses.

You can explore our bachelor's degrees and their prerequisites via **monash.edu/study/courses/find-a-course**.

### Diploma of Higher Education studies (Monash Malaysia)

Satisfactorily completing a Diploma of Higher Education IT stream qualifies you to enter the second year of the Bachelor of Computer Science at our Malaysia campus.

To discover more about applying for this course, go to **monash.edu/it/future-students/how-to-apply**.

### Monash University English Language Centre (MUELC)

All our IT courses have minimum English language requirements. MUELC offers programs to help students meet this criteria.

Visit **monash.edu/study/courses/english-language-programs** to learn about these programs.

# HOW TO APPLY

## DOMESTIC STUDENTS

### Apply through VTAC

If you're an Australian or New Zealand citizen, or an Australian permanent resident, apply through the Victorian Tertiary Admissions Centre (VTAC).

**www.vtac.edu.au**

### Mid-year entry

If you're applying for mid-year entry, please visit our website for more information.

**monash.edu/admissions/apply/domestic-ug**

## INTERNATIONAL STUDENTS

### Apply directly to Monash University

International students must apply through the Victorian Tertiary Admissions Centre (VTAC) if they're completing:

- an Australian Year 12 qualification (for example, VCE or equivalent) in Australia or overseas
- the International Baccalaureate (IB) Diploma in Australia or New Zealand
- the National Certificate of Educational Achievement (NCEA) Level 3 in New Zealand.

If you haven't completed any of the above, you must apply for a Monash course at **monash.edu/study/how-to-apply**. Remember to select 'I'm an international student' in the top right-hand corner.

## FEES AND LOANS

You can find fees for courses on their dedicated webpages via **monash.edu/study/courses/find-a-course**.

To learn more about loans available to you, visit **monash.edu/enrolments/government-loans**.

# OUR UPCOMING EVENTS

Build your network and broaden your knowledge by attending our events.

### Victorian Careers Show

The Victorian Careers Show gives you access to resources such as lecture and study skills programs, tutoring programs and more. Attend the event to learn more about Monash!

### Inside Monash Seminars

Eager to know what it's really like to study IT at Monash? At this event, you'll hear from current students and alumni, as well as leading academics.

### Munch and Mingle

Held straight after Inside Monash, connect with fellow prospective students, current students and IT academics over food and fun games – and get a headstart in immersing yourself into the vibrant Monash IT community.

### Open Day

A not-to-be-missed event, Monash Open Day is your chance to talk with current students, meet academics and speak to our Student Services team about your future. You'll also be able to watch live demonstrations, tour our facilities and soak up the campus atmosphere.

### Change of Preference

Received your ATAR and not sure what to do next? Monash Change of Preference is designed to give you support and advice so you can make an informed decision about your future.

To learn more about our events, scan the QR code.

**monash.edu/it/events**

# READY TO DISCOVER YOUR FUTURE IN IT?

The demand for IT professionals continues to grow rapidly year on year, so, there's no better time to pursue an exciting, rewarding future in the field.

We look forward to welcoming you to Monash University.

MONASH University

**WEBSITE**
monash.edu/it

**FACEBOOK**
MonashInfoTech

**TWITTER**
MonashInfoTech

**YOUTUBE**
Monash Information Technology

**LINKEDIN**
Monash Information Technology

**INSTAGRAM**
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**TIKTOK**
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## DISCOVER MORE TO CHANGE MORE AT OUR 2023 EVENTS

### Discover Monash
Do you want to learn more about Monash, get a feel for which course is right for you, or perhaps experience what life and study would be like on one of our four campuses? We've got an event to suit you.

### Discipline and Course events
Join us to find out more about our courses, internships, career outcomes and so much more! Hear from current and past students as well as academics.

### Campus experience events
Join us at Open Day to see and experience student life at Monash. You can also tour one of our Victorian campuses throughout the year. Can't make it to a tour? That's ok, we have a virtual option for you.

### Find out more
**monash.edu/discover**

**MONASH UNIVERSITY**
monash.edu

**FIND A COURSE**
monash.edu/study

**FUTURE STUDENT ENQUIRIES**
**Australian citizens, permanent residents and New Zealand citizens**
monash.edu/study/contact

**International students**
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GROUP OF EIGHT AUSTRALIA