MONASH University

INFORMATION TECHNOLOGY

2022 UNDERGRADUATE COURSE GUIDE

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 recognise 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.

FIVE STARS FOR FULL-TIME EMPLOYMENT
79% OF GRADUATES ARE EMPLOYED FULL-TIME WITHIN FOUR MONTHS OF COMPLETING THEIR COURSE.*

MONASH RANKS IN THE TOP 100 IN THE WORLD FOR COMPUTER SCIENCE AND INFORMATION SYSTEMS.**

MONASH IS 66TH IN THE WORLD FOR GRADUATE EMPLOYABILITY.***

CONTENTS

Course information fast facts

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

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

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

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

*Good Universities Guide (2020)
**QS World University Rankings by Subject (2021)
***QS Graduate Employability Rankings (2020)

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.

$65K

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

Higher than the average for all industries.

72%

Graduates employed full-time within four months of finishing a computing and information systems degree.

Higher than the average for all study areas.

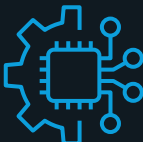Graduate Outcomes Survey, Quality Indicators for Learning and Teaching (2020)

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

MARKETING AUTOMATION SPECIALIST
Blend marketing acumen with digital technology to help organisations achieve their goals.

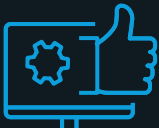### ROBOTICS ENGINEER (SOFTWARE)
Build and deploy automation software to optimise business processes.

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

DATA SCIENTIST
Draw insights from data and spot critical trends to inform strategic business decisions.
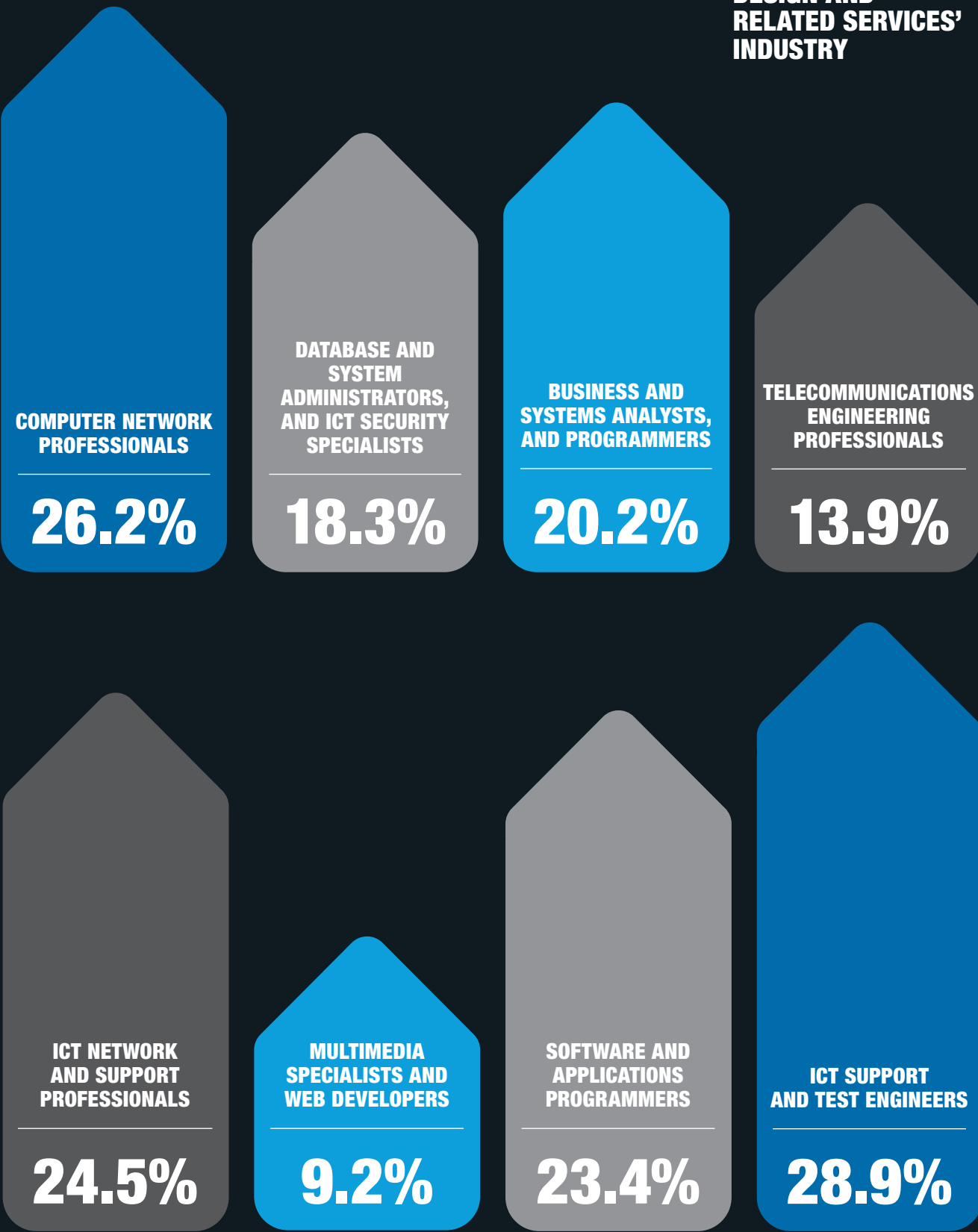
CYBERSECURITY SPECIALIST
Protect important information by identifying, monitoring and eliminating vulnerabilities in an organisation's software and hardware.

Jobs on the Rise Reports, LinkedIn (2021)

STRONG PREDICTED GROWTH TO 2024

17.6%
AUSTRALIA'S 'COMPUTER SYSTEM DESIGN AND RELATED SERVICES' INDUSTRY

COMPUTER NETWORK PROFESSIONALS
26.2%

DATABASE AND SYSTEM ADMINISTRATORS, AND ICT SECURITY SPECIALISTS
18.3%

BUSINESS AND SYSTEMS ANALYSTS, AND PROGRAMMERS
20.2%

TELECOMMUNICATIONS ENGINEERING PROFESSIONALS
13.9%

ICT NETWORK AND SUPPORT PROFESSIONALS
24.5%

MULTIMEDIA SPECIALISTS AND WEB DEVELOPERS
9.2%

SOFTWARE AND APPLICATIONS PROGRAMMERS
23.4%

ICT SUPPORT AND TEST ENGINEERS
28.9%

Occupation Projects – five years to May 2024, Australian Government Department of Employment, Skills, Small and Family Business (2019)

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.

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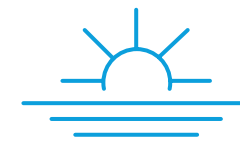
DOUBLE DEGREES TO DOUBLE YOUR HORIZONS
Spanning a range of areas such as arts, commerce and law, our double degrees help you develop multidisciplinary skills and enhance your career prospects. Even better, they're faster to complete than two separate courses.

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.

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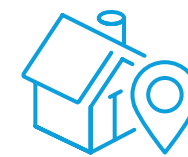
COMFORTABLE, CONVENIENT ACCOMMODATION
If you're coming from interstate, overseas or rural Victoria, we have on- and off-campus living options across Clayton, Caulfield, Parkville, the CBD, Peninsula and their surrounding suburbs.

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

VALUABLE RESOURCES FOR RICHER LEARNING
Whether you're writing a case study, preparing for an exam or giving an oral presentation, we have a wide variety of resources to help you excel in your course – available through the Monash website.
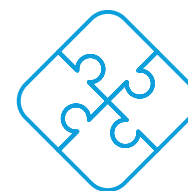
ACCESS TO ONE-OF-A-KIND FACILITIES
Monash has some of the best IT facilities around. One of them is the cutting-edge Woodside Building for Technology and Design, which is helping us create a more sustainable future. This means you'll have the latest and greatest equipment and spaces to complement your learning.

SCHOLARSHIPS TO PROMOTE 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.

MORE OPPORTUNITIES TO MAKE NEW FRIENDS
There are many clubs and societies in our faculty and across the university. Whether you're interested in cybersecurity or gaming, you'll have plenty of opportunity to connect with other students.

ALL THE AMENITIES AND SERVICES YOU NEED
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.

OUR TECH SQUADS PROGRAM
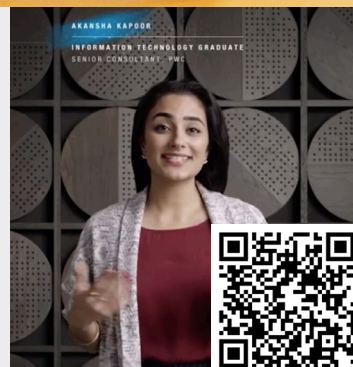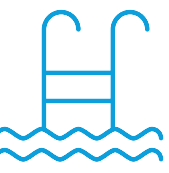
Support from day one
Tech Squads provides new students with a place to network, participate in social activities, compete in competitions and have fun with peers!

The program is designed to help you transition into university life through student mentors and helpful support services.

Akansha's story
Scan the QR code to learn more about alumni Akansha Kapoor's time at Monash – and how she's now excelling at PwC.

youtu.be/1FlbFjozzAg

AKANSHA KAPOOR
INFORMATION TECHNOLOGY GRADUATE
SENIOR CONSULTANT

GAIN HANDS–ON EXPERIENCE AND A COMPETITIVE EDGE

We always focus on translating theory into practice. As one of our IT students, you'll get the chance to apply your knowledge and skills to a real-world project – while working with a leading organisation.

Through one of the programs below, you'll:

- reinforce and augment everything you learn in the classroom
- hone your leadership, communication, problem-solving, management and technical skills
- develop wider, more informed perspectives and mature as a person
- gain greater insight into the business world
- give yourself an advantage in the job market
- get a taste of a rewarding career in IT.

Industry-Based Learning (IBL)

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

Having prepared countless students to launch their careers with confidence, this initiative lets you complete a placement (or two) with one of our leading partners – such as PwC, ANZ or Deloitte.

This program is open to high-performing international and domestic students. Formally assessed and credited, each IBL placement is worth three units in your degree. What's more, you'll receive a $18,000 scholarship for every six-month placement you do.

To learn more,
scan the QR code
monash.edu/it/ibl

Industry Experience Studio Project units

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

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.

To learn more,
scan the QR code
bit.ly/monashIE

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,
scan the QR code
miti.monash.edu

" 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 challenging yet 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 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.

Explore our immersive learning spaces in the Woodside Building for Technology and Design.
bit.ly/ITwoodside

Interested in learning abroad?
Scan the QR code
monash.edu/study-abroad

MEET PEOPLE WHO SHARE YOUR PASSIONS

We have a range of clubs, societies and groups 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.
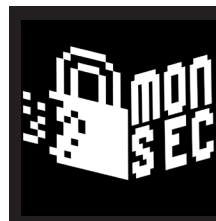
MonSec

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 Electronic Gaming Association (MEGA)

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.

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.
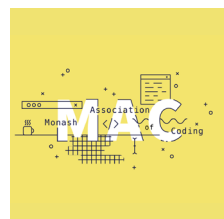
Monash Association of Coding (MAC)

Love games? Then you'll love MEGA. As the premier gaming club at Monash, MEGA hosts weekly gaming sessions that allow friends and strangers to bond over their shared passion for this activity.

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 Energy Club

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

Monash DeepNeuron

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

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 disciplines – 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 digital 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 create greater choice in your future.

Arts
The rapid growth of the IT industry calls for people who deeply understand the social and human factors that are shaping it. By studying arts, you'll develop the expertise needed 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 a corporate setting.

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 what it takes 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	•	•	•	•	•		•	•	•	•
Computer networks and security	•	•	•	•	•	•	•	•	•	•
Games development	•	•	•	•	•		•	•	•	•
Interactive 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?
Contrary to popular belief, 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 in a double degree, the required units from one course count as electives in the other.

Bachelor of
INFORMATION TECHNOLOGY

COURSE CODE: C2000

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.

" 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.

Computer networks and security

Learn how to design, develop and monitor computer networks to protect important information systems.

With this in-demand expertise, you'll be able to deliver security software and measures required for organisational resilience.

Games development

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.

Interactive media

Under a design-led, studio-based approach, gain skills in digital imaging, sound, video, 3D modelling and interactive media.

By completing this specialisation, you'll be prepared to thrive in creative fields such as web development, social media, visualisation, app development and animation.

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

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.

Cybersecurity

Develop a wealth of knowledge in protecting private and public networks, sensitive information and private communications. Completing a minor in cybersecurity is ideal if you see yourself working in an enterprise or government body where this expertise is non-negotiable.

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.

IT for business

Equip yourself with practical IT skills that will enhance your career prospects in business. In this minor, you'll develop valuable programming expertise and IT literacy to help you thrive in a business environment.

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.

Clayton

3 years full-time
6 years part-time

February and July (and October for international students)

ATAR[1] : 84.20
IB[1]: 29
MG[1]: 80

Specialist

Depending on your specialisation, you'll be awarded either the:
- Bachelor of Computer Science
- Bachelor of Computer Science in Data Science

DOUBLE DEGREES
- Commerce
- Engineering (Honours)[2]
- Laws (Honours)
- Science

PREREQUISITES
VCE
English: Units 3 and 4 with either:
- a study score of at least 27 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.

CRICOS: 079336A

1. The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2021 or an estimate (E).
2. Not available with all majors and specialisations. Refer to **monash.edu/study** for full details.

Accredited by the Australian Computing Society.

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

handbook.monash.edu/2021/ courses/C2001

Bachelor of
COMPUTER SCIENCE

COURSE CODE: C2001

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

The Bachelor of Computer Science is a degree that could take you anywhere. Flexible and practical, this course will teach you how to think creatively and analytically in equal measure. You'll also 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 your clients and advising them on how IT can meet their business objectives. You'll also help improve the structure and efficiency of their 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.

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.

Clayton

4 years full-time
8 years part-time

February

ATAR[1] : 96
IB[1]: 37
MG[1]: 90

Specialist

Bachelor of Computer Science Advanced (Honours)

PREREQUISITES
VCE
English: Units 3 and 4 with either:
- a study score of at least 27 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.

CRICOS: 085350G

1 The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2021 or an estimate (E).

Accredited by the Australian Computing Society.

Bachelor of
COMPUTER SCIENCE ADVANCED (Honours)

COURSE CODE: C3001

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:

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.

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

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.

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.

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.

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

MONASH IS RANKED IN THE TOP 100 IN THE WORLD FOR COMPUTER SCIENCE AND INFORMATION SYSTEMS.
QS World University Rankings by Subject (2021)

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

handbook.monash.edu/2021/ courses/C3001

" 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

Left course info box

- Clayton
- 3 years full-time
  6 years part-time
- February
- ATAR[1] : 84.40
  IB[1]: 30
  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 27 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.

CRICOS: 099359F

1. The scores provided should be used as guides only and are either the lowest selection rank to which an offer was made in 2021 or an estimate.

Bachelor of
APPLIED DATA SCIENCE

COURSE CODE: 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.

Bachelor of
APPLIED DATA SCIENCE ADVANCED (Honours)

COURSE CODE: S3003

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.

Right course info box

- Clayton
- 4 years full-time
  8 years part-time
- February
- ATAR[1] : 91.20
  IB[1]: 33
  MG[1]: 90
- 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 27 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: Higher score in Level 3

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

CRICOS: 099360B

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.

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.

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

handbook.monash.edu/2021/courses/S2010

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

handbook.monash.edu/2021/courses/S3003

Course details

- Clayton
- 4 years full-time
  8 years part-time
- February and July
- **ATAR[1]:** 87.05
  IB[1]: 31
  MG[1]: 86
- Specialist
- Bachelor of Software Engineering (Honours)
- Faculty of Engineering

DOUBLE DEGREES

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

PREREQUISITES

VCE
English: Units 3 and 4 with either:
- a study score of at least 27 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

Science: Chemistry or physics

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

CRICOS: 001722B

Accredited by the Australian Computing Society.

ENGINEERS AUSTRALIA

Accredited by Engineers Australia

Bachelor of
SOFTWARE ENGINEERING (Honours)

COURSE CODE: E3001

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 2021 or an estimate (E).
2 Not available with all majors and specialisations. Refer to **monash.edu/study** for full details.

ALWAYS BEEN THERE TO SUPPORT ME

Having fascinated me since eighth grade, I chose software engineering because I realised how important software is and how it's key to making a positive impact on society.

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/2021/courses/E3001

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

To study a Monash undergraduate course, you need to have completed specific subjects to certain standards. These are known as prerequisite subjects.

PREREQUISITE SUBJECTS

The table below outlines subject and grade requirements for VCE, IB and other qualifications. Remember that some courses have special requirements, such as folios, special admission tests and interviews.

	English		Mathematics			Science
	■ Level 1	■ Level 2	■ Level 1[6, 7]	■ Level 2[7]	■ Level 3	■ Science approved list[2]
VCE	Units 3 and 4: a study score of at least 27 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 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: • English A: Literature, or • English A: Language and Literature, or • Literature and Performance, OR At least 3 in one of the following HL subjects: • English A: Literature, or • English A: Language and Literature, OR At least 5 in one of the following SL subjects: • English AB, or • English B, OR At least 4 in the following HL subject: • English B.	At least 5 in one of the following SL subjects: • English A: Literature, or • English A: Language and Literature, or • Literature and Performance, OR At least 4 in one of the following HL subjects: • English A: Literature, or • English A: Language and Literature, OR At least 6 in one of the following SL subjects: • English AB, or • English B, OR At least 5 in the following HL subject: • English B.	At least 3 in any mathematics subject at SL or HL level.	At least 4 in one of the following SL subjects: • Mathematics, or • Math Studies, or • Mathematics: Applications and Interpretations, or • Mathematics: Analysis and Approaches, OR At least 3 in one of the following HL subjects: • Mathematics: Applications and Interpretations, or • Mathematics, or • Further Mathematics, or • Mathematics: Analysis and Approaches.	At least 4 in one of the following SL subjects: • Mathematics, or • Mathematics: Analysis and Approaches, OR At least 3 in one of the following HL subjects: • Mathematics: Applications and Interpretations, or • Mathematics, or • Further Mathematics, or • Mathematics: Analysis and Approaches.	At least 4 at SL or 3 at HL in Science approved list, unless otherwise stated.
Other qualifications	English (Australian Year 12 equivalent).	Higher score in English (Australian Year 12 equivalent).	Mathematics (Australian Year 11 equivalent).	Mathematics (Australian Year 12 equivalent).	Higher level mathematics (Australian Year 12 equivalent).	One of biology, chemistry, environmental science, physics, geography, psychology or higher level mathematics (all Australian Year 12 equivalent 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 | PE – Peninsula | PA – Parkville.
RC – Range of criteria.
E – Estimated: the provided score is estimated and is to be used as a guide only.

1   Duration is based on a standard full-time load of 48 credit points per annum.
2   Science approved list: **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), Further Mathematics (HL only), Geography, Mathematics: Analysis and Approaches (HL only), Mathematics: Applications and Interpretations (HL only), Physics or Psychology.
3   Indicative – The provided score is the 2019 lowest ATAR to which an offer was made, or and Estimate (E), and is to be used as a guide only.
4   Depending on your Arts major, you may take the Arts component at Clayton or Caulfield.
5   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.
6   Level 2 and 3 mathematics subjects can also be used to satisfy Level 1 mathematics prerequisite requirements.
7   Level 3 Mathematics subjects can also be used to satisfy Level 1 and Level 2 mathematics prerequisite requirements.
8   IT units will be taught at Clayton campus.
9   This course has additional selection requirements. For further details, see **monash.edu/study**.
10 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.

DOMESTIC ADMISSIONS AND ATARS

Course	Duration (years)[1]	English Level 1	English Level 2	Maths Level 1	Maths Level 2	Science Level 3	Science Approved list[2] or specified	Degree awarded	Location	Indicative[3] ATAR	Indicative[3] IB score	Monash Guarantee
SINGLE DEGREES												
Engineering M	4	■			■		Chemistry or Physics	Bachelor of Software Engineering (Honours)		87.05	31	86
Computer Science	3	■			■			Bachelor of Computer Science		84.20	29	80
								Bachelor of Computer Science in Data Science				
Computer Science Advanced (Honours)	4	■			■			Bachelor of Computer Science Advanced (Honours)		96	37	90
Information Technology I	3	■	■					Bachelor of Information Technology	CL	80.30	28	75
Applied Data Science	3	■			■			Bachelor of Applied Data Science		84.40	30	75
Applied Data Science Advanced (Honours)	4	■				30+ in Math Methods or Specialist Maths		Bachelor of Applied Data Science Advanced (Honours)		91.20	33	90
DOUBLE DEGREES												
Business / Information Technology[8]	4	■		■				Bachelor of Business and Bachelor of Information Technology	CL, CA	85.30	30	75
Commerce / Computer Science	4	■			■			Bachelor of Commerce and Bachelor of Computer Science	CL	97.90	39	88
								Bachelor of Commerce and Bachelor of Computer Science in Data Science				
Commerce / Information Technology	4	■			■			Bachelor of Commerce and Bachelor of Information Technology	CL	92.65	34	86
Criminology / Information Technology	4	■	■					Bachelor of Criminology and Bachelor of Information Technology	CL	80.40	28	75
Design / Information Technology[8]	4	■	■					Bachelor of Communication Design and Bachelor of Information Technology	CL, CA	80.25	28	78
								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	90.05	33	88
								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	88.80	32	86
								Bachelor of Software Engineering (Honours) and Bachelor of Information Technology				
Fine Art / Information Technology	4	■	■					Bachelor of Fine Art and Bachelor of Information Technology[9]	CA, CL	E: 80.10 RC	E: 28 RC	TBC
Global Studies / Information Technology	4	■	■					Bachelor of Global Studies and Bachelor of Information Technology	CL	87	31	85
Information Technology / Arts[4]	4	■	■					Bachelor of Information Technology and Bachelor of Arts	CL	88	31	75
Information Technology / Science[10]	4	■	■				■	Bachelor of Information Technology and Bachelor of Science	CL	88.80	32	75
Laws (Honours) / Computer Science	5.25[5]		■		■			Bachelor of Laws (Honours) and Bachelor of Computer Science	CL	97	38	94
								Bachelor of Laws (Honours) and Bachelor of Computer Science in Data Science				
Laws (Honours) / Information Technology	5.25[5]		■	■				Bachelor of Laws (Honours) and Bachelor of Information Technology	CL	97.65	39	94
Science / Computer Science	4	■			■			Bachelor of Science and Bachelor of Computer Science	CL	85.45	30	TBC
								Bachelor of Science and Bachelor of Computer Science in Data Science				

2022 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 Physical Education) and result indicated as 'pass'.	60% in English Core.
2022 ATAR For International Students (Australian Year 12)	75	80	90	80	90	87.5	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 of a maximum of the best three A Level subject examinations taken within two years#. Two AS Level subjects can be counted in place of one A Level subject, provided that the subject has not been taken at A Level, and there is at least one A Level subject included in the calculation. AS Level results cannot be used to replace a poor performance in an A Level subject. Score A Level grades as follows: A*(a*)=5, A(a)=5, B(b)=4, C(c)=3,D(d)=2, E(e)=1, U=0. Score AS Level grades as follows: a(a)=2.5, b(b)=2, c(c)=1.5, d(d)=1, e(e)=0.5, U=0. N (Narrow failure) and U (Unclassified) are not to be included in the calculation. A maximum of 1 bonus point is offered when achieving A* in an A Level subject. 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. # Subject examinations taken within two years may include more than one sitting. For example, subject examinations in June 2020 until June 2022 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 • C grade in Cambridge IGCSE First Language English 0500 with a grade 3 or lower in Speaking and Listening, OR • B grade in IGCSE English as a Second Language, OR • C grade 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 • C grade in one of the following GCE AS Level subjects: General Paper OR General Studies OR English language OR Language and Literature in English OR Literature in English OR English Literature OR English Language and Literature, OR • E grade in one of the following GCE A Level subjects: General Studies 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# (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. # 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 Physical Education) and results indicated as 'Pass certificate awarded'.	60% in English.
International Baccalaureate (IB) Diploma	26	28	33	28	33	31	Total final score as awarded on the final official transcript.	Refer to IB Level 1 English located on page 28.
Monash University Foundation Year (MUFY)	70%	70%	NA	72.5%	80%	76.25%	To calculate the average mark required for the Monash University destination degree, refer to the 'How to calculate your Foundation Year score' information available at: **monashcollege.edu.au/courses/foundation-year/destination-degrees**. The undergraduate entry requirements published in this brochure are for students who commence the MUFY program in 2020.	65% in MUFY English.
Monash College Diploma	Diploma Part 1: 75% Diploma Part 2: 55%	Diploma Part 1: 80% Diploma Part 2: 60%	NA	Assessed case by case	Assessed case by case	Diploma Part 1: 80% Diploma Part 2: 60%	To calculate the average mark required for the Monash University destination degree, refer to the relevant diploma program information available at **monashcollege.edu.au/courses/diplomas/destination-degrees** The Monash College Diploma Part 1 and Part 2 entry requirements published in this guide are for students commencing their undergraduate destination degree in 2021.	Successful completion of the course provided that the course has been completed within the last two years of the Monash University commencement date.

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 two 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 accepted English proficiency 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 proficiency 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							
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# (excluding workplace preparation courses and open courses). Students must achieve a minimum total of 30 credits and complete Community Involvement. # 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).
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 language proficiency 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 language proficiency test requirements: **monash.edu/study/courses**
Advanced Placement (AP)	6	7	8	7	8	7	Total of the best two AP examinations undertaken during Grades 9 to 12 of the American High School Diploma. If more than AP examinations have been completed, only the best two AP examinations will be used in the calculations. Minimum accepted score in each AP examinations is three. The following documents must also be submitted: • Advanced Placement examination issued by the College board. • Official final academic transcript and Diploma Certificate for the American High School Diploma (or equivalent Australian Year 12 qualification[2]).	Pass average in Grade 12 English or Grade 12 English Rich subject# or AP examination score of 3 in AP English Language and Composition and AP English Literature and Composition (a score of 3 must be achieved in each AP examination). # The acceptance of Grade 12 English Rich subjects are subject to faculty approval.
Scholastic Aptitude Test (SAT) – total Score out of 1600	1160	1190	1290	1190	1290	1270	Total score obtained by adding the best scores^^ achieved for 'Evidence Based Reading and Writing' and 'Math' across all SAT examinations submitted to Monash University. The following documents must also be submitted: • SAT examination issued by The College Board, and • Official final academic transcript and Diploma Certificate for the American High School Diploma (or equivalent Australian Year 12 qualification[2]). ^^In order for the final score to be calculated all SAT scores must be marked out of 1600.	
SMA3, Indonesia – 100% scale (60% pass)	80%	83%	88%	83%	88%	87.5%	Overall average of Semester 1 and Semester 2 Grade 12 results. Note: Monash University undergraduate entry scores vary for SMA3 qualifications that are marked on differing grading scales.	Submission of an approved English language proficiency 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 language proficiency 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: 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 language proficiency 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 language proficiency 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.

1 Additional Requirements for AP and SAT: The American High School Diploma or American Admission Test cannot be accepted independently for admission into Monash University. The American High School Diploma must be regionally accredited by one of the following bodies: National Center for Education Statistics, Cognia (previously known as Advanced Ed), Middle States Association of Colleges and Schools, New England Association of Schools and Colleges, North Central Association of Colleges and Schools (now merged with Cognia), Northwest Commission on Colleges and Universities, Northwest Accreditation Commission (now merged with Cognia), Western Association of Schools and Colleges, Southern Association of Colleges and Schools (now merged with Cognia). If a student has undertaken multiple American Admission Tests (i.e. SAT, AP or ACT), the test with the highest achieved scores will be considered as meeting Monash University undergraduate entry requirements.

2 Students who have undertaken an American Admissions Test (i.e. SAT, AP or ACT) with another international qualification (equivalent to an Australian Year 12) will be considered for Monash University undergraduate admission, however the qualification or American Admission Test with the highest achieved score will be used to determine whether the student has met the entry requirements. Students who have undertaken an accredited final secondary school leaving award that is not equivalent to an Australian Year 12 may be considered for Monash University undergraduate admission only with an approved American Admissions Test however higher entry scores will apply.

3 To locate the relevant Monash College Diploma program for entry into the listed undergraduate degrees visit **monashcollege.edu.au/courses/diplomas/destination-degrees**.

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.

Visit **monash.edu/it/future-students/how-to-apply** to learn more.

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

For mid-year entry, apply directly to Monash. **monash.edu/admissions/apply/domestic-ug**

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**.

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.

UPCOMING EVENTS

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

Do it with DATA: Tackling climate change

Now considered the most valuable resource on earth, data is a strong contender in the battle against humanity's greatest challenge – climate change.

If you want to combine your interest in maths with your passion for sustainability, 'Do it with DATA: Tackling climate change' is the place to start.

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.

Conquering Code

Coding is the language of the future. At this workshop for women high school students, you'll learn from incredible women role models studying IT at Monash while enhancing your skills in this area.

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.

Take CTRL

In this one-day boot camp, you'll discover where an IT degree can take you. Joining like-minded students, you'll take part in exciting workshops, hear from alumni, build your network and experience innovative technologies.

Monash Tech Talks

Deepen your knowledge. Join the conversation. We're proud to host a selection of high-profile speakers and world-renowned experts to share their insights and ideas on emerging technology. These unmissable events will show you how IT will impact your world – and shape the future.

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/about-us/ news-and-events

MONASH University

GROUP OF EIGHT AUSTRALIA