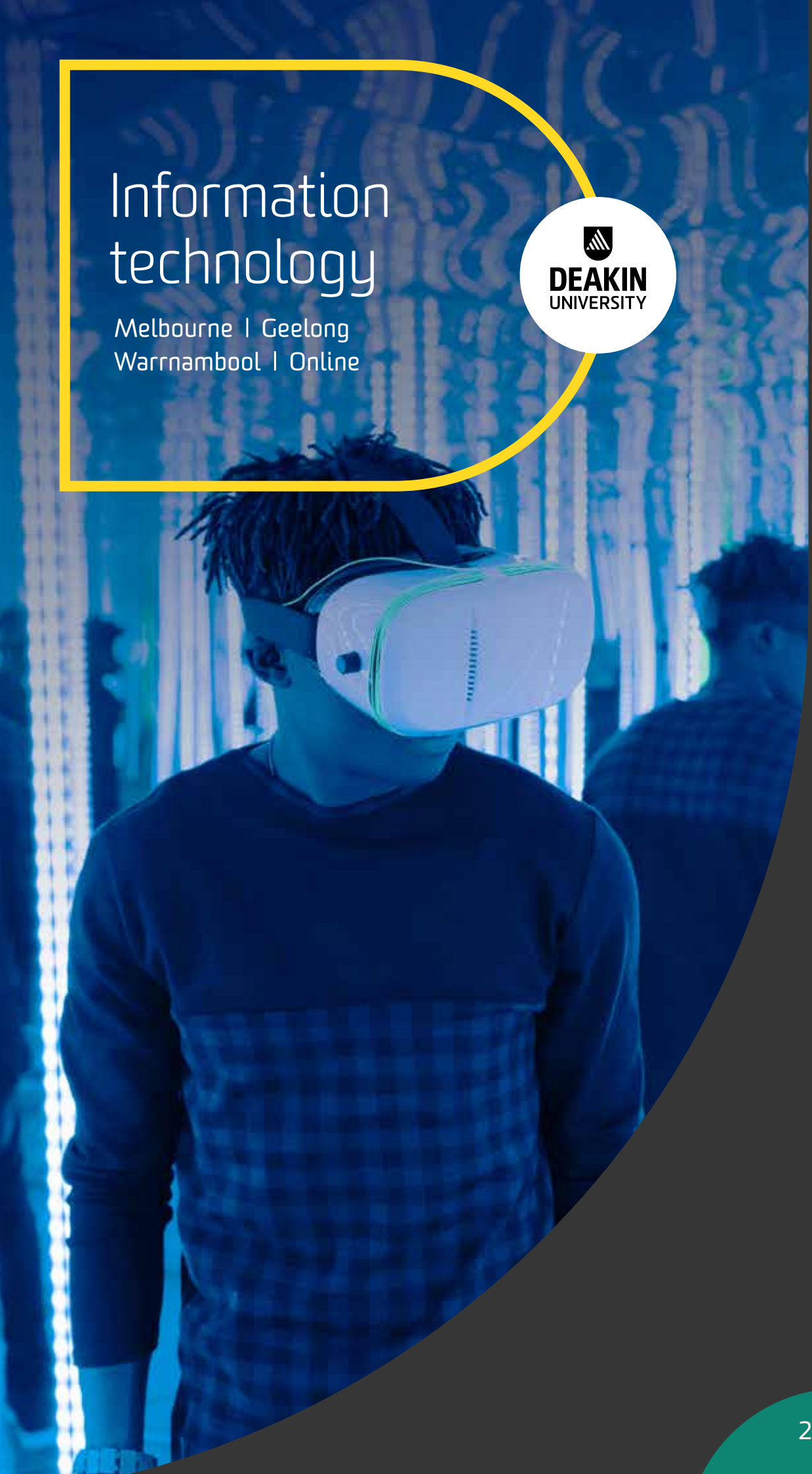


Information technology

Melbourne | Geelong
Warrnambool | Online

DEAKIN UNIVERSITY

- Artificial intelligence
- Cloud computing and networking
- Computer science
- Creative technologies
- Cyber security
- Data science
- Games and application development
- Information systems
- Information technology
- IT services and strategy
- Mathematical modelling
- Software engineering
- Virtual reality

2021 Undergraduate

Explore a constantly evolving industry

Whether you want to investigate cyber attacks or identify hidden patterns in big data, our IT courses offer an immersive learning experience. Access the latest technology and facilities and pursue industry internships to succeed in your course, and stand out to future employers.

Contents

Published by Deakin University in March 2020. While the information published in this guide was accurate at the time of publication, Deakin University reserves the right to alter, amend or delete details of course offerings and other information published here. For the most up-to-date course information, please view our website at **deakin.edu.au**.

Deakin University CRICOS Provider Code: 00113B

Your future in information technology

Practical, real-world learning

Working with the likes of local government, sports industry and cyber security consultants, you'll have the opportunity to complete industry capstone projects in your final year of study, to culminate academic and intellectual experiences through the design and execution of real-world industry projects.

You'll carry out this industry-based project in Deakin's new DISCovery Lab, created as a design thinking and ideation space for students. That's in addition to the opportunity you'll get to go out to industry through a six-week to three-month work integrated learning (WIL) internship.

Gain professional recognition

All of our IT courses are professionally accredited by the Australian Computer Society (ACS), resulting in stronger job outcomes with an industry-recognised degree.

Our IT course options are:

- Bachelor of Computer Science
- Bachelor of Information Technology
- Bachelor of Cyber Security
- Bachelor of Software Engineering (Honours)[1]
- Bachelor of Artificial Intelligence[2]

1 Our Bachelor of Software Engineering (Honours) is also provisionally accredited by Engineers Australia.
2 ACS provisional accreditation at this stage until there is a first graduate.

Enjoy state-of-the-art facilities

From day one of your course you'll have access to the latest software in fully equipped computer labs. For example, the new Robotics and Internet of Things (RIoT) studio has the latest in computing, robotics and cyber-physical systems. You'll also have access to:

- professional software products: programming IDEs, games engines, VR and content development systems
- specialised software: professional software development platforms and industry standard modelling and animation packages.

Your future in information technology

Explore our industry-informed courses

Study courses that are kept current and relevant to industry needs – informed by IT professionals from leading technology companies, business and the government sector, guiding our curriculum and teaching programs.

You'll also stay up-to-date with industry trends and network with guest speakers from key industry partners, who we host on a regular basis.

Learn from the best

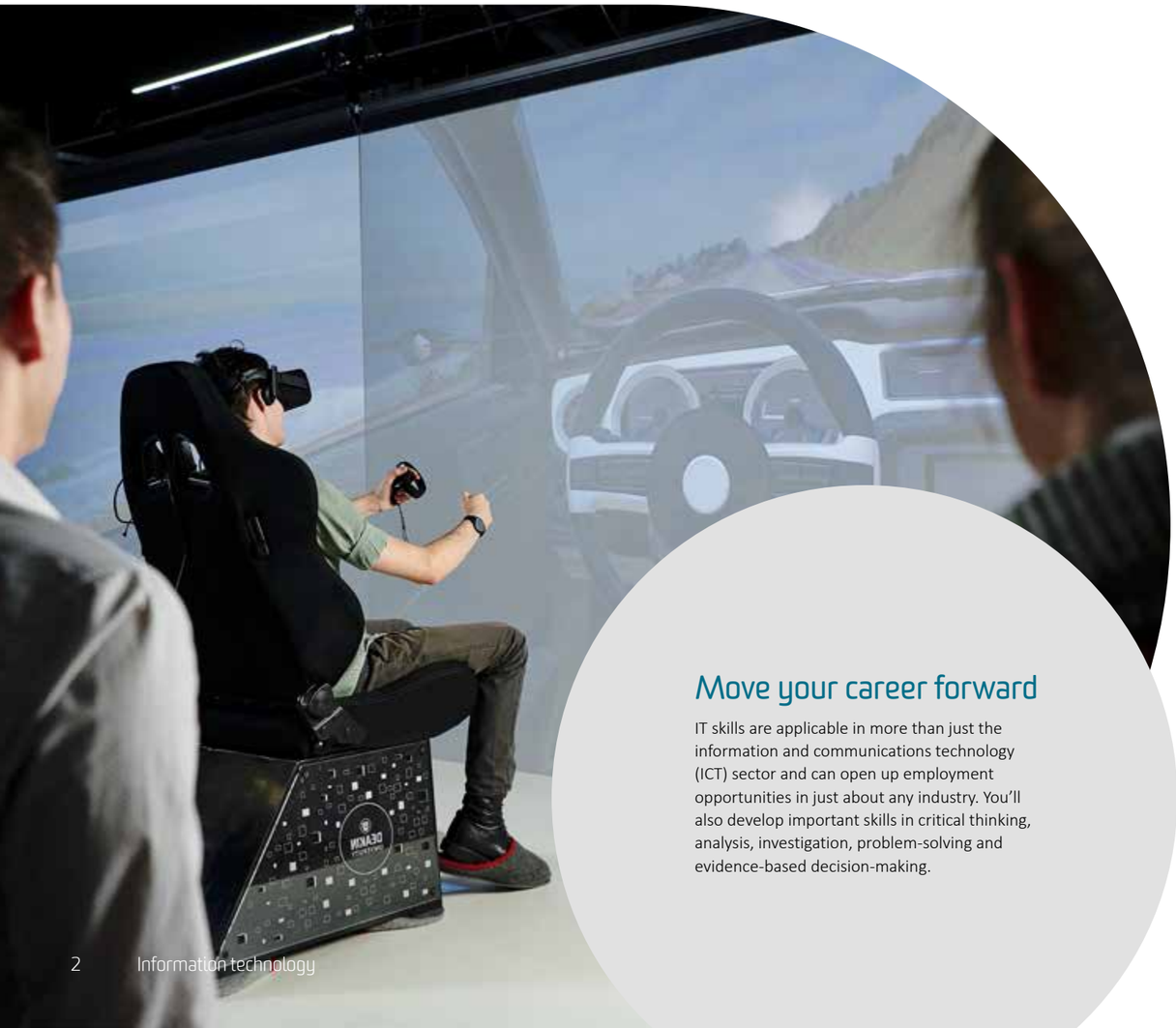
Computer science at Deakin is ranked in the top 1% of universities worldwide, reflecting teaching excellence in a critical Australian industry.

deakin.edu.au/information-technology/research

Source: 2018 Academic Ranking of World Universities

Study when and where you want

Study part or full time in Geelong and Melbourne or join the thousands of students currently studying online at Deakin's Cloud Campus. You'll learn with the same expert teachers as on-campus students, with the ultimate flexibility to study anywhere, anytime.



Move your career forward

IT skills are applicable in more than just the information and communications technology (ICT) sector and can open up employment opportunities in just about any industry. You'll also develop important skills in critical thinking, analysis, investigation, problem-solving and evidence-based decision-making.

Software Engineering students study robots in the RIoT Lab via hands-on experiential learning.

'Information technology is changing the ways in which we communicate, exercise and stay healthy. It affects how we form relationships, how we learn and how we do business.'

Professor John Yearwood
Head of School, Information Technology

Travel the world

Deakin Abroad

Explore our various overseas programs, including trimester abroad, short-term partner programs, faculty-led study programs, overseas internships and international volunteering opportunities. Each year students have the opportunity to choose from a range of exciting programs, such as the Entrepreneurship and Innovation Summer School, giving them knowledge and hands-on experience with world-renowned entrepreneurs and investors from Silicon Valley to launch new innovations in just 15 days.

deakin.edu.au/sebe/international-wil

Disciplines

Your dream course starts here. Take a look through our disciplines (also known as study areas) to choose your area of expertise. Knowing which discipline you're interested in helps career advisers find the best course for your interests. Corresponding courses are featured in the following pages, so you can learn more about what you'll study, work experience opportunities and the types of careers you could pursue. When you choose a course, you can then pick which discipline to specialise in within that course. Visit **deakin.edu.au/information-technology** for detailed discipline and course information, including a description of the units within each degree.

Artificial intelligence

Artificial intelligence (AI) is driving digital disruption and enabling us to utilise the power of machines for intelligent automation. Study at Deakin and gain the skills to develop solutions with AI at the forefront from both a technical and human perspective.

Cloud computing and networking

A major development in the IT industry, cloud computing has a huge impact on how software solutions are developed, deployed and delivered via the web. You'll learn about the concepts and technologies involved, such as virtualisation, enterprise networks and system security, and develop the expertise to work in this field. You'll also have the opportunity to learn the skills to construct and maintain network infrastructure to effectively support organisational needs in networks and clouds.

Computer science

Acquire the skills to design and develop advanced software and systems, along with the capacity to create and integrate new computing technologies that enhance effective business operations in today's digital age. You'll focus on gaining the skills necessary to develop data-driven solutions to existing and emerging problems in areas such as data science, robotics and telecommunications.

Creative technologies

Creative technologists combine innovative computing concepts with the needs and opportunities associated with a 21st century lifestyle to design the products of the future. The creative technologies major offers you the opportunity to combine your creative talents with your technical knowledge.

Cyber security

The delivery of products and services requires data to be processed, transmitted and stored in a secure cyber-environment. Join the exploratory journey and develop a sound knowledge and understanding of concepts and practices applied in cyber security, along with the capability to identify, diagnose, analyse and manage cyber security challenges. Subject areas include computer crime and digital forensics, cryptography, system security, cyber security risk management and ethical hacking. You'll also have an opportunity to undertake four industry certifications.

Data science

An integral part of decision-making in all areas of society, you can apply data science in business, finance, government, medicine, research and beyond. Learn the theory, methodologies and techniques that enable you to interpret datasets and uncover hidden patterns to make predictions, draw conclusions, drive successful initiatives and make better decisions. There is a particular focus on meaningful analyses in the face of huge amounts of data, where traditional approaches may be impractical. Subject areas include data science concepts, data capture technologies and data mining, and machine learning.

What's it really like to study IT?

Hear what students have to say about studying information technology by visiting **deakin.yt/study-it**.

Games and application development

Mix creative skills with technical programming expertise to design and develop computer games. These skills are used to develop sophisticated computer game software, create compelling interactive mobile applications and develop innovative new products and experiences. Learn how to design, build and manage computer game projects through multidisciplinary teams, using professional approaches and programming languages, within entrepreneurially-focused development environments.

Courses to careers

Visit **explore.deakin.edu.au** to kickstart your course and career exploration. With more than 600 paired courses and careers, it's the perfect destination for you to discover your future career.

Information systems

Work in a globally-significant field where you'll implement cutting-edge technologies to solve business problems. If you have a passion for new technologies, business analytics and eBusiness, a career in information systems may be for you.

Information technology

Gain the knowledge and skills necessary to keep abreast of this rapidly changing field. As well as developing a core set of IT skills that are relevant in almost every industry, you can choose from a range of IT majors, from technical (application development, cloud computing and cyber security) to the creative (games development, virtual and augmented reality and creative technologies), depending on your interests and career aspirations.

IT services and strategy

Learn how emerging technologies can be leveraged to drive digital transformation, innovation and increase business productivity. Study IT services and strategy to build your skills and help lead IT strategy and transformation initiatives.

Mathematical modelling

Develop powers of analysis, logical thinking and problem-solving, as well as a high level of numerical ability. As a graduate with sought-after skills, you'll be able to create complex mathematical models of many real-world phenomena – like tracking climate change – and put these models in practice through smart software, databases and networks.

Software engineering

Create the smart systems of the future. You'll acquire specialised skills in computing, robotics and cyberphysical systems, in preparation for a career as an innovative software engineer capable of developing the smart devices and systems of the future.

Virtual reality

Virtual and augmented reality has redefined the way we represent and interact with digital media. It can revolutionise business processes, assist in understanding complex data sets, and enhance educational and training practices without physical or geographical restrictions. The technology can provide novel therapies and treatments, support new forms of sharing and social interaction, and gaming.

Courses

Deakin code S342
Course duration in years 3
Trimester T

Cloud Campus C
Melbourne Burwood Campus B
Geelong Waterfront Campus WF
Geelong Waurn Ponds Campus WP
Warrnambool Campus WB

Bachelor of Information Technology[1] S326 C B WP 3 T1, T2

Build a strong foundation with core IT skills you can apply to multiple industries and technologies with Deakin's Bachelor of Information Technology. Focus your knowledge with a specialisation in one of our industry-relevant majors, such as: app development, cyber security, game development, and more.

Careers

IT is at the heart of innovation and productivity. It shapes the way we live, work, learn, communicate, socialise and entertain ourselves. It's no surprise then that IT graduates are in high demand globally. Information Technology gives you the contemporary knowledge, skills and experience required for a successful and satisfying career as an IT professional.

Career opportunities include:

- application, software or game developer
- augmented reality creator
- mobile and apps developer
- multimedia designer or developer
- project manager
- security architect
- solutions architect
- technical architect
- UX designer
- web designer or developer.

Alternatively, you can apply your skills in non-traditional fields, such as healthcare, education, government and business.

Work experience

This degree includes a core IT placement, where you'll be required to undertake a minimum of 100 hours in professional work experience with an approved host organisation. Alternatively, high-achieving students can undertake an extended full-time paid industry based learning placement between 6 and 12 weeks (conditions apply). You'll also work on industry projects, gaining experience in entrepreneurship and business skills.

Professional recognition

Deakin's Bachelor of Information Technology is professionally accredited with the Australian Computer Society (ACS).

Majors

- Application development C B
- Cloud computing B WP
- Creative technologies C B
- Cyber security C B WP
- Game development C B
- Virtual and augmented reality B

Course structure[2,3]

This 24-credit-point course consists of 11 core units (including a compulsory internship unit), seven elective units, and must include at least one IT major sequence.

	Trimester 1	Trimester 2
Year 1	Thinking Technology and Design Exploring I.T. Major Elective	Introduction to Programming Data and Information Management Major Elective
Year 2	User Centred Design Professional Practice in Information Technology Major Elective	Networks and Communications Major Elective x 2
Year 3	Team Project (A) – Project Management and Practices IT Placement or Industry Based Learning Major Elective	Team Project (B) – Execution and Delivery Enterprise, Entrepreneurship and Innovation Major Elective

deakin.edu.au/course/bachelor-information-technology

1 The Bachelor of Information Technology was being redeveloped at the time this publication went to print. For the latest information, please visit **deakin.edu.au/course/bachelor-information-technology**.
2 This course structure should be used as a guide only and advice should be sought when selecting units.
3 Academic Integrity (STP050), Career Tools for Employability (STP010) and Safety Induction Program (SIT010) are compulsory 0-credit-point units that you must undertake as part of this course.

#1 university in Victoria for student satisfaction

Year on year, our students are the most satisfied students of all Victorian universities[1]. We've ranked this highly for the past 10 years, with students being particularly happy with our:

- teaching
- learning resources
- student support
- skills development
- learner engagement.

1 Australian Graduate Survey 2010–2015, Graduate Outcomes Survey 2016–2019 (GOS), Quality Indicators for Learning and Teaching (QILT).

What the future holds for the IT crowd

Imagine yourself as an Information Technology (IT) professional. What do you see? A lone programmer hidden in a back office surrounded by screens? Or, a versatile business influencer?

Once upon a time, IT was the role of a single department within a business. Its role was reactive: fix problems and make sure strategy was supported by functional systems.

But today, as technology becomes more integrated into our lives, working in IT can be so much more, and can lead to a lucrative career.

The changing role of IT in the workplace

The 2018 edition of the Australian Computer Society (ACS) Digital Pulse says that 51% of Australia's tech workers are employed in non-tech industries.

Sophie McKenzie, a lecturer in Deakin's School of Information Technology, says that's because IT is everywhere.

'IT is life! All graduates, in both a personal and professional sense, will be engaging with IT on some level. In their professional life they will be engaging with IT either as an IT professional or as a part of another role,' she says.

As technology continues to fundamentally change the way many businesses operate, IT opportunities are booming. In fact, the ACS Digital Pulse predicts that the Australian economy will need another 100,000 tech workers by 2023.

Honours in information technology

Deakin's IT courses let you undertake an additional year of specialised study, so you can focus on what you're really passionate about.

- Develop an in-depth knowledge of a particular discipline through research.
- Gain entry into further research study.
- Acquire a competitive edge in the job market.

The student experience

Study from a diverse range of fields and open up employment opportunities in just about any industry. IT is a constantly evolving industry and offers an exciting future. **deakin.yt/study-it**

Courses

Deakin code S342
Course duration in years 3
Trimester T

Cloud Campus C
Melbourne Burwood Campus B
Geelong Waterfront Campus WF
Geelong Waurn Ponds Campus WP
Warrnambool Campus WB

Bachelor of Computer Science

S306 C B 3 T1, T2

Deakin's Bachelor of Computer Science equips you with the knowledge and practical skills required to design and develop innovative software solutions to complex information and technology problems faced by our community, business and industry.

Professional recognition

The Bachelor of Computer Science is professionally accredited by the Australian Computer Society (ACS), providing international recognition and graduate eligibility for membership of the ACS.

Course structure[1,2]

This 24-credit-point course consists of 19 core IT units and five elective units.

	Trimester 1	Trimester 2
Year 1	Algorithms and Computing Systems Discrete Mathematics Data Science Concepts Introduction to Programming	Data and Information Management Data Capture Technologies Object-Oriented Development Elective
Year 2	Embedded Systems Development Artificial and Computational Intelligence Data Structures and Algorithms Elective	Networks and Communications Advanced Algorithms Professional Practice in Information Technology System Design and Prototyping
Year 3	Team Project (A) – Project Management and Practices[3] Data Mining and Machine Learning Elective x 2	Team Project (B) – Execution and Delivery[3] Programming Paradigms IT Placement[3] or Industry Based Learning Elective

deakin.edu.au/course/bachelor-computer-science

'I like that we use real industry tools and packages in the data science classes and I appreciate how available the teaching staff are. Getting involved with the Deakin Incubator Group was a great experience and gave me a chance to get into a real project with unique challenges.'

Chris Williams
Bachelor of Computer Science student
New Colombo Plan Scholarship recipient

1 This course structure should be used as a guide only and advice should be sought when selecting units.
2 Academic Integrity (STP050), Career Tools for Employability (STP010) and Safety Induction Program (SIT010) are compulsory 0-credit-point units that you must undertake as part of this course.
3 Offered in Trimesters 1, 2 and 3.

Careers

You'll be ready for employment in organisations engaged in:

- artificial intelligence and machine learning
- robotics application development
- technology innovation.

You'll graduate with career options such as:

- data scientist
- database specialist
- innovation lead
- project manager
- software analyst
- software developer
- solutions architect
- technology consultant.

As a computer science graduate, you'll enter one of the most exciting and dynamic industries, with opportunities in areas such as:

- cognitive computing and intelligent systems,
- emerging technologies
- robotics and autonomous systems.

As your experience develops, you'll also be well prepared to progress into project management positions.

Work experience

This course includes a core IT placement unit, where you'll undertake a minimum of 100 hours in professional work experience with an approved host organisation. You can also work on industry projects, gaining experience in entrepreneurship and business skills.

Gain a scholarship to help you fund your degree

Barwon Water Scholarship

If you're a Geelong campus-based commencing student studying an undergraduate degree in one of the following disciplines: engineering, commerce, finance, information technology, public relations, journalism or human resource management, we encourage you to apply for this scholarship. This scholarship is valued at $2000 per year, with a total scholarship value of $6000.

deakin.edu.au/barwon-water-scholarship

Barwon Water Scholarship for Women in STEM

Female students commencing their first year of study in a course offered by the Faculty of Science, Engineering and Built Environment at the Geelong Waurn Ponds Campus or Geelong Waterfront Campus, are encouraged to apply for a Barwon Water Scholarship for Women in STEM. This scholarship is valued at $2000 per year, with a total scholarship value of $6000.

deakin.edu.au/barwon-water-women-scholarship

IGNITED Scholarship for women in engineering

If you're female and about to start an undergraduate degree in information technology, you could be eligible for an IGNITED Scholarship. Each scholarship is valued at $5000 per year over the normal duration of the course and recipients are also assigned an academic mentor.

deakin.edu.au/ignited-scholarship

Courses

Deakin code S342
Course duration in years 3
Trimester T

Cloud Campus C
Melbourne Burwood Campus B
Geelong Waterfront Campus WF
Geelong Waurn Ponds Campus WP
Warrnambool Campus WB

Bachelor of Cyber Security[1]

S334 C B WP 3 T1, T2

Technology is pivotal to doing business in the 21st century and central to the society we live in and as a result, cyber security professionals are in high demand. Gain the technical skills needed to investigate and combat cyber crime and cyber terrorism, as it becomes more important than ever that the data and systems providing digital services are safeguarded by ethical and skilled cyber security professionals.

Professional recognition

The Bachelor of Cyber Security is professionally accredited with the Australian Computer Society (ACS). You will be able to undertake four industry certifications as part of your cyber security degree for no additional cost.

Certifications include:

- Certified Ethical Hacker (CEH)
- Certified Security Analyst (ECSA)
- Computer Hacking Forensic Investigator (CHFI)
- Cybersecurity Fundamentals (CSX).

These industry certifications are recognised globally and prove your competence and proficiency in these highly skilled cyber security areas.

Careers

Career options include work as a:

- cryptographer
- information security auditor
- IT security engineer
- project manager
- security analyst
- security consultant
- security system developer or programmer
- security system manager.

Course structure[2,3]

This 24-credit-point course consists of 17 core units and seven elective units.

	Trimester 1	Trimester 2
Year 1	Exploring I.T. Thinking Technology and Design Real World Practices for Cyber Security Elective	Data and Information Management Introduction to Programming Elective x 2
Year 2	Professional Practice in Information Technology Discrete Mathematics Cyber Security Analytics Elective	Networks and Communications Cryptography Computer Crime and Digital Forensics Cyber Security Management
Year 3	Team Project (A) – Project Management and Practices Ethical Hacking IT Placement or Industry Based Learning Elective	Team Project (B) – Execution and Delivery System Security Elective x 2

deakin.edu.au/course/bachelor-cyber-security

1 The Bachelor of Cyber Security was being redeveloped at the time this publication went to print. For the latest information, please visit **deakin.edu.au/course/bachelor-cyber-security**.
2 This course structure should be used as a guide only and advice should be sought when selecting units.
3 Academic Integrity (STP050), Career Tools for Employability (STP010) and Safety Induction Program (SIT010) are compulsory 0-credit-point units that you must undertake as part of this course.

Work experience

This course includes a core IT placement unit, where you'll be required to undertake a minimum of 100 hours in professional work experience with an approved host organisation. You can also work on industry projects, gaining experience in entrepreneurship and business skills.

The student experience

Gain the skills to understand cyber issues and ways to identify, diagnose and resolve these challenges in systems and data we use daily for business and communication. **deakin.yt/cyber-sec**

'The teaching staff at Deakin have always been accessible, and more often than not will go the extra mile for you when able to.'

Mark Jennings
Bachelor of Cyber Security student

World-leading research at the Centre for Cyber Security Research and Innovation (CSRI)

We're passionate about training tomorrow's technology leaders, helping to advance industry, maintaining our graduates' competitive edge and ultimately benefitting the world.

What we learn through research also strengthens the quality of the teaching and learning experiences our students enjoy, given that we conduct research across a range of disciplines.

CSRI engages with industry and government through collaborative research projects, providing protection from major cyber security threats facing Australia and the world.

Right now, the Centre's research focuses on:

- protective security and information warfare
- cyber analytics and AI
- cyber physical systems and IoT
- organisational security
- privacy, identity and trust management
- forensics and incident management.

Through its research and outreach activities, CSRI models and informs cyber security policy development for government and business, and raises cyber safety awareness levels in the community.

Bachelor of Artificial Intelligence S308 C B 3 T1

Deakin's Bachelor of Artificial Intelligence will equip you with the knowledge and skills necessary to design, develop, and evolve software solutions that take advantage of the latest advances in artificial intelligence (AI).

Work experience

This course includes a compulsory work placement where you will be required to undertake a minimum of 100 hours in industry, providing professional work experience with an approved host organisation. Elective units may also provide additional opportunities for work integrated learning experiences.

Careers

AI offers an exciting future for students as more industries spend time and money on improving what they do through learned behaviour and operating efficiencies. However, this is the tip of the iceberg and many more challenging real-world problems remain to be solved.

Graduates will have the specialist knowledge and be equipped to work on the design, development and operation of software solutions involving AI, across a broad range of industry sectors. You may find employment in roles such as a data scientist, data analyst, AI technology software engineer, AI ethicist or an AI architect, to name a few.

Course structure[1,2]

This 24-credit-point course consists of 20 core units and 4 credit points of electives.

	Trimester 1	Trimester 2
Year 1	Introduction to Programming Introduction to Artificial Intelligence Discrete Mathematics Algorithms and Computing Systems	Object-Oriented Development Introduction to Mathematical Modelling Data and Information Management Networks and Communications
Year 2	Data Structures and Algorithms Artificial and Computational Intelligence Elective x 2	Programming Paradigms Linear Algebra for Data Analysis Professional Practice in Information Technology Elective
Year 3	Advanced Topics in Artificial Intelligence Data Mining and Machine Learning Team Project (A) – Management and Practices Elective	Software Architecture and Scalability for Internet-of-things Optimisation and Constraint Programming Team Project (B) – Execution and Delivery IT Placement

deakin.edu.au/course/bachelor-artificial-intelligence

1 This course structure should be used as a guide only and advice should be sought when selecting units.
2 Academic Integrity (STP050), Career Tools for Employability (STP010) and Safety Induction Program (SIT010) are compulsory 0-credit-point units that you must undertake as part of this course.

The student experience

Gain the skills to develop cutting-edge AI-driven software solutions and how to use the power of machines for intelligent automation and new-world thinking. **deakin.yt/ai**

Courses

Deakin code S342
Course duration in years 3
Trimester T

Cloud Campus C
Melbourne Burwood Campus B
Geelong Waterfront Campus WF
Geelong Waurn Ponds Campus WP
Warrnambool Campus WB

Bachelor of Business Analytics

M340 C B 3 T1, T2

Launch a career in the booming world of big data with Deakin's Bachelor of Business Analytics. Through rigour and applied study, you'll learn how to become a data translator creating innovative solutions for common business.

Professional recognition

The Bachelor of Business Analytics is accredited by the Australian Computer Society (ACS), recognising that Deakin graduates will be qualified for professional practice in information and communications technology (ICT).

Careers

As a graduate you can work across business and scientific fields. Career opportunities include:

- business analyst
- business intelligence specialist
- computer system analyst
- data analyst
- digital transformation consultant
- information analyst
- information manager/information officer
- market analyst
- predictive modeller.

Work experience

Work experience is a core component of this degree. The Work Integrated Learning program connects students with employers, ensuring you have every opportunity to work with other business analytics students and professionals each trimester – giving you a head start in your career.

Course structure[1,2]

This 24-credit-point course consists of 16 credit points of core units (including one work integrated learning (WIL) unit or an approved international learning experience) and 8 credit points of elective units (which may include a 6 or 8-credit-point major sequence of your choice).

	Trimester 1	Trimester 2
Year 1	Business Analytics Managing Data and Information Professional Ethics in the Digital Age Data Science Concepts	Business Requirements Analysis Predictive Analytics Information Security, Governance and the Cloud Elective/major
Year 2	Business Intelligence and Data Warehousing Artificial Intelligence for Business Project Management Elective/major	Social Media Analytics and Data Driven Innovation Decision Analytics Elective/major Elective/major
Year 3	Marketing Analytics Strategic Supply Chain Management Work Integrated Learning – MWL unit Elective/major	Applied Business Project Elective/major Elective/major Elective/major

deakin.edu.au/course/bachelor-business-analytics

1 This course structure should be used as a guide only and advice should be sought when selecting units.
2 Academic Integrity (MAI010) and Academic Induction for the Bachelor of Business Analytics (MIS010) are compulsory 0-credit-point units that you must undertake as part of this course.

Join our Peer Support Network (PSN)

Sign up to the Faculty of Science, Engineering and Built Environment's PSN in your first year at Deakin to get support and guidance from more senior students in your course. You'll learn about the support services and facilities available, while gaining useful tips about studying at Deakin.

deakin.edu.au/sebe/peer-support

Bachelor of Software Engineering (Honours)

S464 C B 4 T1, T2

Create the smart software and systems of the future and safeguard your career by driving digital transformation as an innovative software engineer. As a software engineering student at Deakin, you'll gain specialised skills in robotics, cyber-physical systems and the internet-of-things. Upon graduation, you'll be well-equipped to find work developing and implementing state-of-the-art smart systems or frameworks into various existing industries such as health, fitness and travel.

Work experience

This course includes a core professional industry experience unit, where you'll be required to undertake a minimum cumulative total of at least 60 working days of industry experience during your degree. You can use your elective units to apply for an industry-based learning position or alternatively, a short-term Career or STEM Placement to work on industry projects, gaining experience in entrepreneurship and business skills.

Professional recognition

This course has been designed in accordance with Engineers Australia's and the Australian Computer Society's professional accreditation requirements. Deakin has been awarded accreditation for the Bachelor of Software Engineering (Honours) with the Australian Computer Society (ACS). Deakin has been awarded provisional accreditation for the Bachelor of Software Engineering (Honours) with Engineers Australia.

Careers

Graduates will be equipped to find employment in diverse areas of software engineering. You'll be able to develop and implement state-of-the-art smart devices, systems and application frameworks for industries including health, agriculture, manufacturing and transport.

This can lead to employment in roles such as:

- business analyst
- data engineer
- DevOps engineer
- embedded systems developer
- IoT system engineer
- machine learning engineer
- mobile applications developer
- project manager
- software engineer
- software developer
- systems architect
- web applications developer.

Software engineering meets robotics

Robotics and cyber-physical systems are a rapidly growing commercial technology sector, with products like self-driving cars, fitness trackers and drones being launched in recent years. From Mars rovers and smart homes and cities, to robotic surgery and precision agriculture, software engineers combine software systems and embedded hardware to create solutions that fill a vital role in the development of smart and innovative technologies.

Your ideas and creativity will flourish in our state-of-the-art facilities, including Deakin's $1.2 million Robotics and Internet of Things (RIoT) studio featuring a range of devices, robotics and drones.

The student experience

Learn to shape the software systems of the future and drive digital transformations as an innovative software engineer. **deakin.yt/software-eng**

Course structure[1,2]

This 32-credit-point course consists of 23 core units and four elective units.

	Trimester 1	Trimester 2
Year 1	Engineering Physics Discrete Mathematics Introduction to Programming Algorithms and Computing Systems	Software Engineering 1: Robotics Project Data Capture Technologies Object-Oriented Development Data and Information Management
Year 2	Design Fundamentals (2 credit points) Data Structures and Algorithms Embedded System Development	Software Engineering 2: Developing Internet-Of-Things Applications Programming Paradigms Networks and Communications
Year 3	Team Project (A) – Project Management and Practices Robotics Application Development Elective x 2	Software Engineering 3: Designing User-Centric Internet-Of-Things Application Software Architecture and Scalability for Internet-of-things Team Project (B) – Execution and Delivery
Year 4	Honours Research Project A (2 credit points) Developing Secure Internet-Of-Things Applications Elective	Honours Research Project B (2 credit points) Professional Engineering Practice Elective

deakin.edu.au/course/bachelor-software-engineering-honours

1 This course structure should be used as a guide only and advice should be sought when selecting units.
2 Academic Integrity (STP050), Career Tools for Employability (STP010), Introduction to Safety and Project Oriented Learning (SEJ010) and Safety Induction Program (SIT010) are compulsory 0-credit-point units that you must undertake as part of this course.

Courses

Deakin code S342
Course duration in years 3
Trimester T

Cloud Campus C
Melbourne Burwood Campus B
Geelong Waterfront Campus WF
Geelong Waurn Ponds Campus WP
Warrnambool Campus WB

Bachelor of Commerce

M300 C B WF WB 3 T1, T2, T3[1]

Become a confident business leader for today and the future by studying Deakin's Bachelor of Commerce, a degree dedicated to professional preparation and real industry experiences that foster your business mindset. With nine majors and a global reputation, the Bachelor of Commerce opens up opportunities in nearly every area of business and government across Australia and overseas.

Study relating to information technology within the Bachelor of Commerce is encompassed with the management information systems specialisation (major or minor) and business analytics specialisation (minor only).

deakin.edu.au/course/bachelor-commerce

Note: Not all majors and minors are available at all campuses.

Bachelor of Science[2]

S320 B WP 3 T1, T2

Deakin's Bachelor of Science prepares you for the exciting world of scientific discovery. Forge your own unique path by choosing from a range of specialisations to solve tomorrow's global issues through science and discovery.

If you're interested in IT, consider undertaking a major in mathematical modelling. It will give you a strong critical knowledge base and help you develop powers of analysis, logical thinking and problem solving, as well as a high level of numerical ability. An honours year is available for high-achieving students upon completion of this degree.

deakin.edu.au/course/bachelor-science

Combined courses

Bachelor of Commerce/ Bachelor of Business Analytics

D366 C B 4 T1, T2, T3[3]

Develop critical analysis skills to take data and turn it into strategies to drive business success with Deakin's Bachelor of Commerce/Bachelor of Business Analytics. Learn how to interpret data and information, then combine it with a strong foundation in all areas of business. Graduate with practical skills that will be an asset to companies all over the world.

Professional recognition

Deakin Business School is in the top 1% of business schools globally by holding both AACSB and EQUIS accreditations. These prestigious accreditations are awarded to business schools that meet strict standards of quality, academic and professional excellence, and demonstrate a commitment to ongoing improvement and innovation in their courses, ensuring our graduates are employable worldwide.

Commerce graduates can apply for membership to these key professional bodies (depending on units taken):

- Association of Chartered Certified Accountants (ACCA)
- Association of Financial Advisers (AFA)
- Australian Human Resources Institute (AHRI)
- Australian Marketing Institute (AMI)
- Certified Practising Accountants (CPA)
- Chartered Accountants Australia and New Zealand (CA ANZ)
- Financial Adviser Standards and Ethics Authority (FASEA)
- Financial Planning Association of Australia (FPA)
- Institute of Managers and Leaders (IML)
- Institute of Public Accountants (IPA).

Course structure

32 credit points – 16 credit points (Bachelor of Business Analytics) and 16 credit points (Bachelor of Commerce, including at least one commerce major).

deakin.edu.au/course/bachelor-commerce-bachelor-business-analytics

Skills to get you a job

Gain a competitive edge in the workplace with real-world expertise and practical skills. Deakin is ranked the #1 university for both generic skills and good teaching in Victoria.[1]

1 Graduate Outcomes Survey 2019.

'The open communication that the teaching staff have with their students – through the discussion boards or via email, phone or consultation – were always most helpful to me.'

Caitlin Sauza
Bachelor of Cyber Security student

Bachelor of Criminology/ Bachelor of Cyber Security

D380 C B WP 4 T1, T2, T3[3]

Deakin's Bachelor of Criminology/Bachelor of Cyber Security is the only degree of its kind in Australia. You'll become equipped with key skills in securing data and data communications, as well as investigating and providing solutions to cybercrime. Understand the inner workings of criminal behaviour while developing a skill set to take on what's quickly becoming the number one criminal threat to society.

Professional recognition

The Bachelor of Cyber Security has Cybersecurity Professional accreditation with the Australian Computer Society (ACS).

You will be able to undertake four industry certifications as part of your cyber security degree for no additional cost.

Certifications include:

- Cybersecurity Fundamentals (CSX)
- Computer Hacking Forensic Investigator (CHFI)
- Certified Ethical Hacker (CEH)
- Certified Security Analyst (ECSA).

These industry certifications are recognised globally and prove your competence and proficiency in these highly skilled cyber security areas.

Course structure

32 credit points – 16 credit points (Bachelor of Criminology) and 16 credit points (Bachelor of Cyber Security). In addition you will be required to complete four 0-credit-point units relating to work placements, safety induction, and academic integrity.

deakin.edu.au/course/bachelor-criminology-bachelor-cyber-security

Bachelor of Laws/Bachelor of Cyber Security

D397 C B WF[4] 5 T1, T2

Protect society from the growing threat of cybercrime by studying Australia's only combined laws and cyber security degree. Through Deakin's Bachelor of Laws/Bachelor of Cyber Security, you can explore roles in both fields or use your dual expertise to become an in-demand cyber lawyer, capable of handling the complex issues of our evolving digital world.

Professional recognition

The Bachelor of Laws is designed to satisfy the university component of the requirements to become an Australian lawyer set by the Victorian Legal Admissions Board (VLAB). In addition to completing an approved LLB degree, you'll need to work for one year as a legal trainee or undertake a practical legal training (PLT) course.

The Bachelor of Cyber Security has Cybersecurity Professional accreditation by the Australian Computer Society (ACS) – Australia's leading professional association for the information and communication technology sector – as part of this double degree. Students who are members of the ACS will receive international recognition for their skills, as well as professional development opportunities, networking and information resources.

Course structure

40 credit points – 16 credit points of core units from the Bachelor of Cyber Security and 24 credit points from the Bachelor of Laws. In addition, you will be required to undertake three 0-credit-point units relating to academic integrity, a safety induction program and career tools for employability.

deakin.edu.au/course/bachelor-laws-bachelor-cyber-security

1 Trimester 3 intake is only available at the Melbourne Burwood Campus, Geelong Waterfront Campus and Cloud Campus. Students commencing at the Geelong Waterfront Campus will be required to enrol in units offered in Cloud (online) mode in Trimester 3. For international students, Cloud Campus and Melbourne Burwood Campus only.
2 The Bachelor of Science was being redeveloped at the time this publication went to print. For the latest information, please visit **deakin.edu.au/course/bachelor-science**.
3 Trimester 3 intake is not available to international students.
4 Students enrolled at the Geelong Waterfront Campus in this combined course will be required to undertake some units of study at Geelong Waurn Ponds Campus.

Course and entry requirements	Campus and ATAR	Course duration	Trimester intakes	Fee[1]
Bachelor of Information Technology | S326 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/S326	C 63.10 B 60.45 WP 60.60	3	T1, T2	$9453
Bachelor of Computer Science | S306 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/S306	C 73.30 B 63.20	3	T1, T2	$9443
Bachelor of Artificial Intelligence | S308 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL and a study score of at least 20 in one of maths: mathematical methods (any) or maths: specialist mathematics. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/S308	C NP B 65.30	3	T1	$9527
Bachelor of Cyber Security | S334 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/S334	C NP B 63.20 WP 62.35	3	T1, T2	$9344
Bachelor of Business Analytics | M340 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/M340	C NP B 70.80	3	T1, T2	$9589
Bachelor of Software Engineering (Honours) | S464 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL and a study score of at least 20 in one of maths: mathematical methods (any) or maths: specialist mathematics. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/S464	C NP B 64.40	4	T1, T2	$9527
Bachelor of Commerce | M300 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/M300	C 71.40 B 80.00 WF[5] 70.00 WB[6] 62.85	3	T1, T2, T3[7]	$10,959
Bachelor of Science | S320 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/S320	B 65.35 WP 60.00	3	T1, T2	$9366
Bachelor of Criminology/Bachelor of Cyber Security | D380 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/D380	C NP B 61.30 WP 63.35	4	T1, T2, T3[8]	$8236
Bachelor of Laws/Bachelor of Cyber Security | D397 Y12[2,3] VCE units 3 and 4 – a study score of at least 35 in English (EAL) or 25 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/D397	C NP B NP WF NP	5	T1, T2, T3[8]	$10,545
Bachelor of Commerce/Bachelor of Business Analytics | D366 Y12[2,3] VCE units 3 and 4 – a study score of at least 25 in English (EAL) or 20 in English other than EAL. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/D366	C NP B 81.60	4	T1, T2, T3[8]	$10,681

1 The 2020 indicative Commonwealth Supported Place (CSP) fee is based on a typical enrolment for an Australian domestic student enrolled in two trimesters of full-time study, or 8 credit points, unless otherwise indicated. This fee should be used as a guide only and is subject to change.
2 Recent secondary education applicants include current Year 12 students in 2020, as well as Year 12 graduates from 2019 and 2018.
3 International student entry requirements can be found at: **deakin.edu.au/international-students**.
4 There are four categories under which non-Year 12 applicants may apply to Deakin:
– applicants with higher education study
– applicants with Vocational Education and Training (VET) study
– applicants with work and life experience
– applicants who completed Year 12 in 2017 or earlier.
Visit **deakin.edu.au/course** and head to the course of interest to find out further details on admission requirements.
5 Students enrolled at the Geelong Waterfront Campus cannot commence their studies in Trimester 3.
6 Not all majors are available at the Warrnambool Campus and some units may need to be taken online at the Cloud Campus.
7 Melbourne Burwood Campus, Geelong Waterfront Campus and Cloud Campus only. Students commencing at the Geelong Waterfront Campus will be required to enrol in units offered in Cloud (online) mode in Trimester 3. For international students, Cloud Campus and Melbourne Burwood Campus only.
8 Trimester 3 intake is not available to international students.

NP means not published – less than five offers made to recent secondary education applicants.

Cloud Campus C
Melbourne Burwood Campus B
Geelong Waterfront Campus WF
Geelong Waurn Ponds Campus WP
Warrnambool Campus WB
Recent secondary education Y12
Non-Year 12 NY12

Contact us

We're here to help

We have staff at each of our campuses who are more than happy to answer your general queries.

Prospective student enquiries

Domestic students
1800 693 888
myfuture@deakin.edu.au

International students
+61 3 9627 4877
study@deakin.edu.au

Discover Deakin

To stay up to date with all course information sessions and events for prospective undergraduate students, visit **deakin.edu.au/discover-deakin**.

Social media at Deakin

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twitter.com/Deakin
twitter.com/DeakinSEBE
twitter.com/DeakinBusiness
instagram.com/DeakinUniversity
Search Deakin University

Other useful websites

vtac.edu.au
studyassist.gov.au
myfuture.edu.au
youth.gov.au
youthcentral.vic.gov.au

Deakin understands that evidencing and articulating your capabilities is vital to gaining opportunities. Deakin Hallmarks are prestigious University awards that recognise students' outstanding achievements and capabilities that are key to employment success. After graduating, they offer students the opportunity to differentiate themselves to employers. To find out more visit **deakin.edu.au/hallmarks**, including how Hallmarks are awarded.

Communication · Digital literacy · Teamwork · Critical thinking · Problem solving · Self management · Global citizenship · Creativity · Digital innovation · Entrepreneurial thinking · Leadership