Information technology

DEAKIN UNIVERSITY

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

2022 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, pursue industry internships to succeed in your course, and stand out to future employers.

Contents

Published by Deakin University in March 2021. 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.[1]

1 To be confirmed in 2022 and beyond, subject to government restrictions.

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 Artificial Intelligence
- Bachelor of Business Analytics
- Bachelor of Computer Science
- Bachelor of Cyber Security
- Bachelor of Information Technology
- Bachelor of Software Engineering (Honours).

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. Our specialised labs include dedicated robotics, cyber security and VR, as well as modern, educational technologies. You'll have access to:

- **Robotics and Internet of Things (RIoT) Lab** – Equipped with the latest in computing robotics and cyber-physical systems. You'll have access to professional software products such as programming IDEs, games engines, VR and content development systems.
- **Deakin DISCovery Lab** – Featuring high-end workstations and equipment and flexible learning spaces that mimic modern-day work environments. You'll be able to work on real-industry projects in an agile project and collaborative lab set-up, giving you a taste of the real world.

Find out more at **deakin.edu.au/it-facilities**.

Your future in information technology

Explore our industry-informed courses

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

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.

Be rewarded for your hard work

A Deakin scholarship is more than just a financial boost. It is our chance to acknowledge your accomplishments and reward your hard work, setting you on the path to success at university.

Our extensive scholarship program includes three key scholarships:

- Vice-Chancellor's Academic Excellence Scholarship
- Deakin Scholarship for Excellence
- Deakin Student Support Scholarship.

We also offer a range of donor and government-funded scholarships. Each is unique with differing criteria, rewarding aspiring students from diverse backgrounds.

deakin.edu.au/scholarships

Learn from the best

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

deakin.edu.au/information-technology/research

Gain international experience

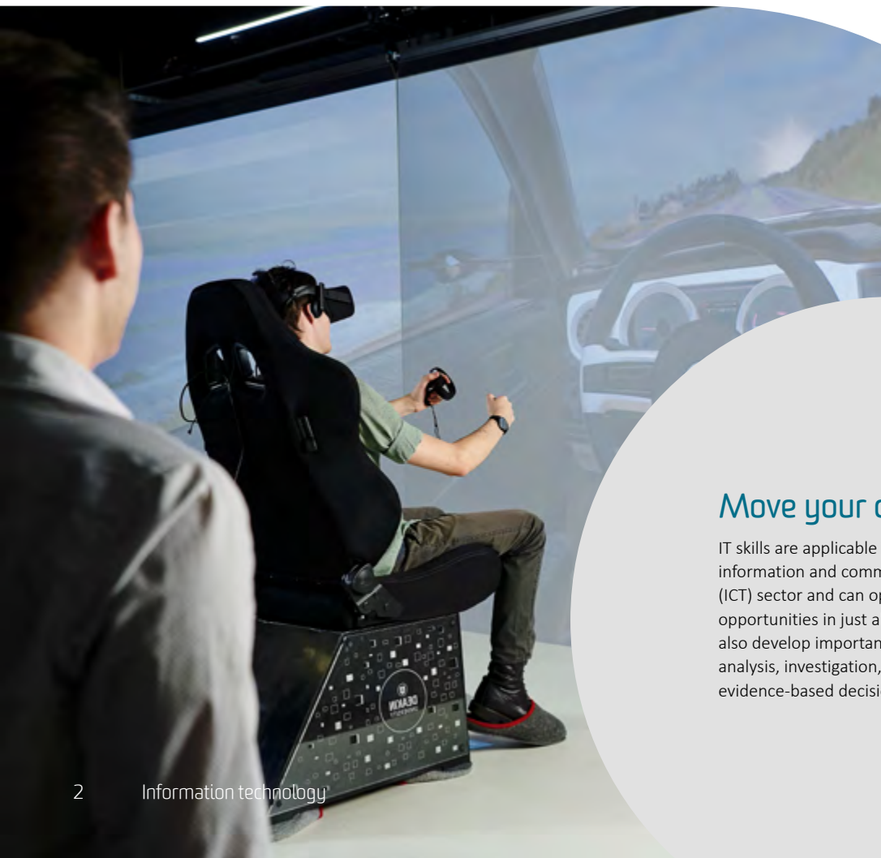
Explore our various overseas programs, including trimester abroad, short-term partner programs, faculty-led study programs, overseas internships and international volunteering opportunities.[2] Each year students have the opportunity to choose from a range of exciting programs, such as the Entrepreneurship 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.

Students will also have the opportunity to participate in virtual internship programs with our global partners such as Vellore Institute of Technology in India and Financing and Promoting Technology in Vietnam. This allows students to work on real-world projects through online platforms under the supervision of world-class professionals.

deakin.edu.au/sebe/international-wil

1 2020 Academic Ranking of World Universities.
2 To be confirmed in 2022 and beyond, subject to government travel restrictions.

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



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.

'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

Learning at Deakin through COVID-19 and beyond

As a leader in digital learning, we know our students value Deakin's connected and engaging online study environment and we also understand that many students value attending campus. At Deakin, you can be confident of not just a COVIDSafe environment, but a tailored, collaborative learning experience for each course, designed to achieve the best possible combination of online and on-campus activities whilst adhering to government regulations.

Dynamically delivered, world-class learning – it's what Deakin does best. Find out more at **deakin.edu.au/learning-at-deakin-through-covid-19**.

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 you. Corresponding courses are featured in the following pages, so you can learn more about what you'll study, available work experience opportunities and the types of careers you could pursue. 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 AI-driven software solutions that ensure artificial intelligence is ethically integrated.

Business analytics

Use technology to analyse, present and support decision-making using 'big data' held by an organisation. Business analytics looks at the way businesses structure their information architecture, and the ways people and organisations can use technology to improve their processes and workflows, and inform how to innovate their products or services.

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.

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.

Australia's #1 university career service[1]

From day one at Deakin, and well into the future after graduation, our award-winning career service – DeakinTALENT – will prepare you for the jobs of tomorrow. You'll have lifetime access to career coaching, industry networking opportunities and a comprehensive suite of digital resources that will help you become the most employable version of yourself.

deakintalent.deakin.edu.au

1 Australian Graduate Recruitment Industry Awards 2017, 2018, 2019 winner for most popular career service in Australia.

Explore our IT facilities

Explore Deakin University's IT facilities at our Melbourne Burwood Campus.

deakin.yt/it-facilities

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, networking and cloud computing and cyber security) to the creative (games design and development 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.

Software engineering

Create the smart systems of the future. You'll acquire specialised skills in computing, robotics and cyber-physical 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

Bachelor of Information Technology

S326 C 72.20 B 60.30 WP 60.15 3 T1, T2

The information technology industry is central to the way we work, learn, play, communicate and socialise. Build a strong foundation of core IT skills you can apply to multiple industries and technologies anywhere in the world. Through Deakin's Bachelor of Information Technology, you'll gain the essential skills and experience required to embark on a career in IT, while developing in-depth knowledge in a specialised area of your choosing from a range of major and minor sequences on offer.

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.

Graduates will be able to choose from specialist IT roles which align to their selected expertise such as:

- application, software or game developer
- augmented reality creator
- mobile and apps developer
- multimedia designer or developer
- network specialist
- 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 of 6–12 weeks (conditions apply, please refer to **deakin.edu.au/sebe/wil**). 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
- Creative technologies C B
- Cyber security C B WP
- Game design and development C B
- Networking and cloud computing C B WP

Minors

- Application development C B
- Creative technologies C B
- Cyber security network operations C B WP
- Embedded systems C B
- Game design C B
- Network and cloud technologies C B
- Programming C B
- Security management C B WP
- Virtual and augmented reality C B

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 2020 edition of the Australian Computer Society (ACS) Digital Pulse says that 46% 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 in increasingly high demand. In fact, the 2020 ACS Digital Pulse predicts that by 2027 there will be more than one million technology workers in Australia.

Deakin code S342
ATAR 70.00
Course duration in years 3
Trimester T

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

Course structure[1,2]

This 24-credit-point course consists of 15 core units (including a compulsory internship unit) and the completion of one of the following options:

- one IT major sequence (6 credit points) and three elective units
- an IT minor sequence (4 credit points) and five elective units
- two IT minor sequences (8 credit points) and one elective unit.

	Trimester 1	Trimester 2
Year 1	Thinking Technology and Design Exploring I.T. Real World Practices for Cyber Security Data Science Concepts	Introduction to Programming Data and Information Management Introduction to Responsive Web Apps Business Requirements Analysis
Year 2	User Centred Design Professional Practice in Information Technology Major or Minor Elective	Enterprise, Entrepreneurship and Innovation IT Placement OR Industry Based Learning Major or Elective Major or Minor
Year 3	Team Project (A) – Project Management and Practices Communicating Information Technology Innovations Major or Elective Major or Minor	Team Project (B) – Execution and Delivery Major or Minor Elective x 2

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

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 are required to undertake as part of this course.

#1 Victorian university 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).

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.
- Get a competitive edge in the job market.

Find out more at **deakin.edu.au/course/bachelor-information-technology-honours**.

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
ATAR 70.00
Course duration in years 3
Trimester T

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

Bachelor of Computer Science

S306 C NP B 63.65 3 T1, T2

Deakin's Bachelor of Computer Science equips you with the knowledge and practical skills needed to design and develop innovative software solutions to the multifaceted information and technology problems faced by our community, business and industry. Learn what it takes to create and integrate complex new computing technologies while exploring existing and emerging challenges in areas such as data analytics, machine learning, robotics, intelligent and autonomous systems, and telecommunications.

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	Discrete Mathematics Data Science Concepts Introduction to Programming Computer Systems	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	Secure Networking Advanced Algorithms Professional Practice in Information Technology System Design and Prototyping
Year 3	Team Project (A) – Project Management and Practices Data Mining and Machine Learning Elective x 2	Team Project (B) – Execution and Delivery Concurrent and Distributed Programming IT Placement or Industry Based Learning Elective

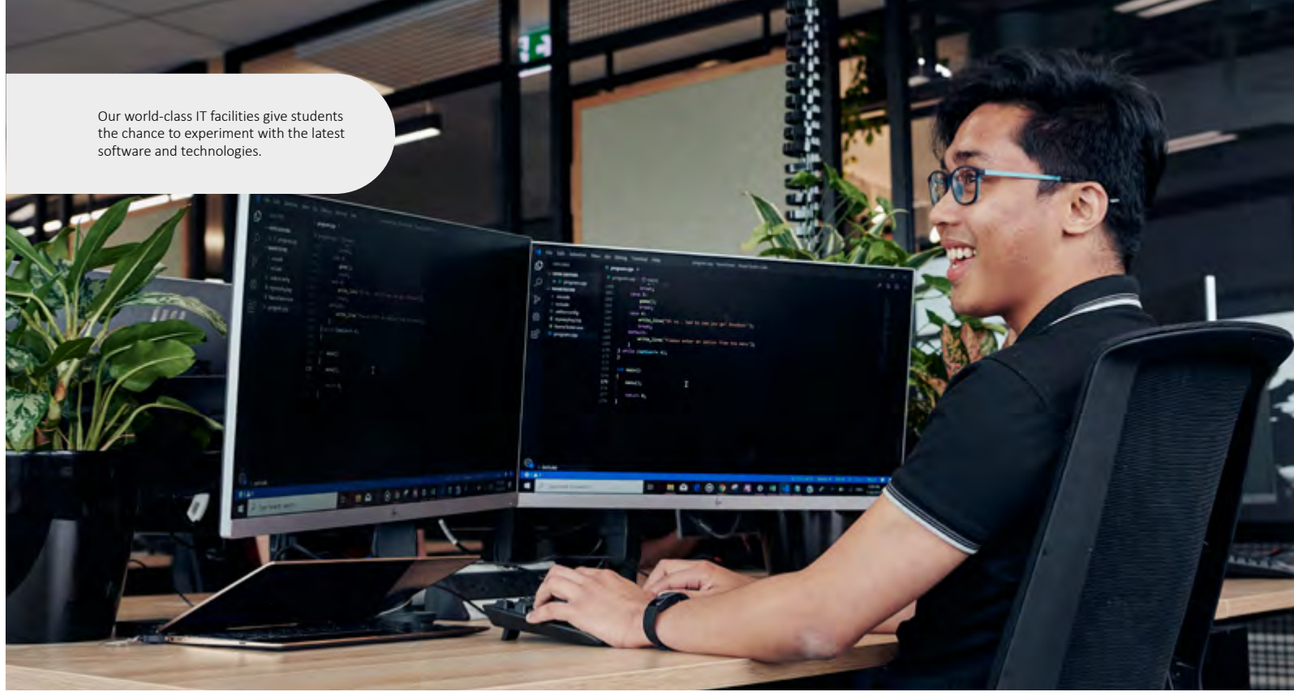
deakin.edu.au/course/bachelor-computer-science

'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 graduate
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 are required to undertake as part of this course.

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



Our world-class IT facilities give students the chance to experiment with the latest software and technologies.

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. Alternatively, high-achieving students may have the opportunity to undertake an extended, full-time, paid industry-based learning placement of 6–12 weeks (conditions apply, please refer to **deakin.edu.au/sebe/wil**).

Gain a scholarship to help you fund your degree

Barwon Water Scholarship

If you're a Geelong campus-based student commencing a full-time 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 full time 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

If you're female and about to start an undergraduate degree in industry areas including engineering, information technology and construction management, you could be eligible for an IGNITED Scholarship.

Each scholarship includes a payment of $625 per credit point over the normal duration of the course and recipients are also assigned an academic mentor.

deakin.edu.au/ignited-scholarship

Courses

Deakin code S342
ATAR 70.00
Course duration in years 3
Trimester T

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

Bachelor of Artificial Intelligence

S308 C NP B 66.55 3 T1, T2

Deakin's Bachelor of Artificial Intelligence equips you with the knowledge and skills to design, develop and evolve software solutions that harness the latest advances in artificial intelligence (AI). Get hands-on experience developing AI-driven software solutions with the support of academics who are leaders in this emerging field. Our world-class research in AI feeds directly into our classrooms, ensuring what you learn is at the cutting edge of industry expectations and capabilities.

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 skills 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 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 Computer Systems	Object-Oriented Development Introduction to Mathematical Modelling Data and Information Management Secure Networking
Year 2	Data Structures and Algorithms Artificial and Computational Intelligence Elective x 2	Concurrent and Distributed Programming 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) – Project Management and Practices Elective	Software Architecture and Scalability for Internet-Of-Things Optimisation and Constraint Programming Team Project (B) – Execution and Delivery IT Placement or Industry Based Learning

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 are required to undertake as part of this course.

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

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**

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.

The Centre's research focuses on:

- protective security and information warfare
- cybernetics and AI
- cyber physical systems and IoT
- organisational security
- privacy, identity and trust management
- digital forensics and incident management
- law, regulation and strategic policy.

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. Find out more at **www.cybercentre.org.au**.

'The hands-on learning, and having the opportunity to put what you learn into practice as part of the course, is unique to Deakin.'

Mark Jennings
Bachelor of Cyber Security graduate

Bachelor of Cyber Security

S334 C NP B 64.55 WP 67.10 3 T1, T2

Cyber security is a growing issue for individuals and businesses alike. Technology is not only pivotal to business in the 21st century, but to living everyday life. As a result, cyber security professionals are in high demand around the world. Deakin's Bachelor of Cyber Security equips you with the essential skills to investigate and combat cyber crime and cyber terrorism. This vital experience is required to address what's quickly becoming the number one criminal threat to modern-day society.

Professional recognition

The Bachelor of Cyber Security is professionally accredited with the Australian Computer Society (ACS). You will also have the opportunity to complete industry certifications within existing core units as part of your cyber security degree for no additional cost.

Certifications include:

- Certified Ethical Hacker (CEH)
- Certified Secure Programmer (ECSP)
- 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 or consultant
- security system developer or programmer
- security system manager.

Course structure[1,2]

This 24-credit-point course consists of 16 credit points of core units, a minor sequence (4 credit points) and 4 credit points of elective units.

	Trimester 1	Trimester 2
Year 1	Introduction to Programming Computer Systems Real World Practices for Cyber Security Discrete Mathematics	Object-Oriented Development Secure Networking Elective Minor
Year 2	Professional Practice in Information Technology Cyber Security Analytics Elective Minor	Secure Coding Computer Crime and Digital Forensics Industry Based Learning OR IT Placement Minor
Year 3	Team Project (A) – Project Management and Practices Malware Analysis Network Forensics Minor	Team Project (B) – Execution and Delivery System Security Ethical Hacking Elective x 2

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

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 are required to undertake as part of this course.

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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. Alternatively, high-achieving students may have the opportunity to undertake an extended, full-time, paid industry-based learning placement of 6–12 weeks (conditions apply, please refer to **deakin.edu.au/sebe/wil**).

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**

Courses

Deakin code S342
ATAR 70.00
Course duration in years 3
Trimester T

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

Bachelor of Business Analytics

M340 C NP B 72.20 3 T1, T2

Launch a career in the booming world of business insights with Deakin's Bachelor of Business Analytics. Through rigorous applied study, you'll become a confident business analytics translator capable of unlocking innovative solutions for business using data insights. In Victoria's longest-running specialised business analytics course, you'll learn practical commercial skills to interpret data and information, so you can solve complex organisational problems and create opportunities for businesses.

Professional recognition

Completion of the Bachelor of Business Analytics and associated combined courses grants eligibility for entry as a professional member of the Australian Computer Society (ACS).

Careers

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

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

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 Module (MAI010) and Academic Induction for the Bachelor of Business Analytics (MIS010) are compulsory 0-credit-point units that you are required to undertake as part of this course.

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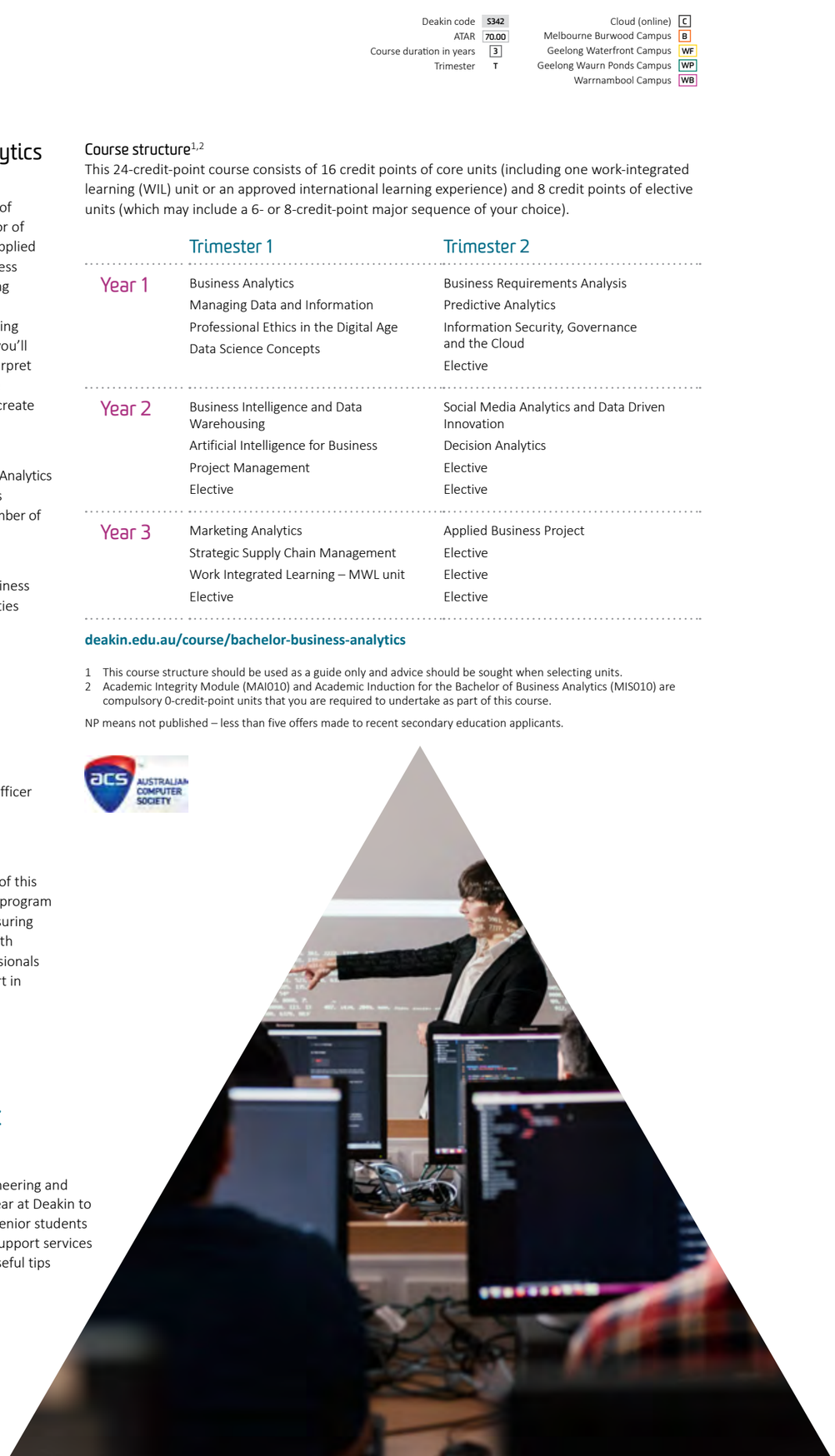
Join our Peer Support Network (PSN)

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 NP B 64.60 4 T1, T2

Create the smart software and systems of the future by studying Deakin's Bachelor of Software Engineering (Honours). The course equips you with the skills needed to build disruptive technologies that create change, making you a sought-after expert ready to solve tomorrow's business problems through creative computing solutions. Explore a broad range of exciting study areas, including robotics, algorithms, programming and software architecture, and apply your skills in world-class facilities.

Work experience

This course includes a core professional industry experience unit, where you'll be required to undertake a minimum of 30 to 60 working days of industry experience during your degree.

Professional recognition

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

Deakin has been awarded 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:

- data engineer
- DevOps engineer
- embedded systems developer
- IoT system engineer
- machine learning engineer
- mobile applications developer
- project manager
- programmer
- 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) Lab 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 24 core units and four elective units.

	Trimester 1	Trimester 2
Year 1	Engineering Physics	Software Engineering 1: Robotics Project
	Discrete Mathematics	Data Capture Technologies
	Introduction to Programming	Object-Oriented Development
	Computer Systems	Data and Information Management
Year 2	Design Fundamentals (2 credit points)	Software Engineering 2: Developing Internet-Of-Things Applications
	Data Structures and Algorithms	Concurrent and Distributed Programming
	Embedded Systems Development	Secure Networking
Year 3	Team Project (A) – Project Management and Practices	Team Project (B) – Execution and Delivery
	Robotics Application Development	Software Architecture and Scalability for Internet-Of-Things
	User Centred Design	Advanced Embedded Systems
	Elective	Elective
Year 4	Research Project A (2 credit points)	Research Project B (Thesis) (2 credit points)
	Developing Secure Internet-Of-Things Applications	Professional Engineering Practice
	Elective	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 are required to undertake as part of this course.

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

Courses

Deakin code S342
ATAR 70.00
Course duration in years 3
Trimester T

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

Bachelor of Design (Digital Technologies) A344 B RC 3 T1, T2, T3

Creative problem-solvers with a love of design and an aptitude for technical IT skills should explore our Bachelor of Design (Digital Technologies). Learn about user experience (UX), design strategies, digital technologies and interactive media, to deliver impactful digital solutions for creative and social issues in our changing world. Explore core themes including technological entrepreneurship and innovation, design thinking and collaborative practice.

Professional recognition

Deakin's Bachelor of Design (Digital Technologies) is recognised by the Design Institute of Australia (DIA), so you'll be up-to-date with the current industry practices and developments. The DIA also offers student membership and access to some of the top design events and experts in the nation.

Careers

Graduates are open to many career opportunities in creative agencies, advertising and design studios, print houses and corporate companies, taking up roles as:

- design engineers
- digital designers
- digital media designers
- graphic designers
- industrial designers
- User Interface (UI) designers
- virtual reality experience designers
- web designers.

Course structure[1,2]

This 24-credit-point course consists of 17 credit points of core units and 7 elective units.

	Trimester 1	Trimester 2
Year 1	Design Skills and Technologies 1 Design Thinking Exploring I.T. Course elective	Design Skills and Technologies 2 Introduction to Responsive Web Apps Course elective Elective
Year 2	Designing User Experience Elective x 3	Professional Practice in Design Design Laboratory Digital Technologies Design Studio Authoring of Interactive Media
Year 3	Individual Design Portfolio Design to Change the World Creative Design Studio (2 credit points)	Collaborative Design Project (2 credit points) Enterprise, Entrepreneurship and Innovation Elective

deakin.edu.au/course/bachelor-design-digital-technologies

DESIGN INSTITUTE OF AUSTRALIA RECOGNISED COURSE™

1 This course structure should be used as a guide only and advice should be sought when selecting units.
2 Academic Integrity (STP050) is a compulsory 0-credit-point units that you are required to undertake as part of this course.

RC means admission is based on a range of criteria.

Skills to get you a job

Gain a competitive edge in the workplace with real-world expertise and practical skills. Deakin is ranked Victoria's top university for skills development and teaching quality.[1]

1 2019 Student Experience Survey, UA benchmark group Victorian universities.

Combined courses

Bachelor of Arts/Bachelor of Information Technology

D310 C NP B NP WP NP 5 T1, T2

The Bachelor of Arts/Bachelor of Information Technology equips you with the transferable skills needed to move seamlessly between the roles of the future. At the same time, it'll arm you with the technical knowledge to not only negotiate, but also shape what that future looks like. Combine a diverse knowledge of the arts with the technical know-how of IT to graduate with a diverse, in-demand skillset that sets you apart.

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

Bachelor of Commerce/Bachelor of Business Analytics

D366 C NP B 81.10 4 T1, T2, T3

Data is the future of business. Deakin's Bachelor of Commerce/Bachelor of Business Analytics offers a foundation in commerce skills and business analytics know-how to help you become truly invaluable to future employers worldwide. Develop critical analysis skills to take data and turn it into strategies to drive business success. Learn how to interpret data and information, then combine it with a strong foundation in all areas of business, to unlock innovative solutions for business.

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, ensuring our graduates are employable worldwide. Commerce graduates can also apply for membership to key professional bodies (depending on units taken).

Completion of the Bachelor of Business Analytics course grants eligibility for entry as a professional member of the Australian Computer Society (ACS).

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).[1]

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

AACSB ACCREDITED
EFMD EQUIS ACCREDITED
ACS AUSTRALIAN COMPUTER SOCIETY

Bachelor of Criminology/Bachelor of Cyber Security

D380 C NP B 65.55 WP 67.80 4 T1, T2, T3[2]

Deakin's Bachelor of Criminology/Bachelor of Cyber Security is the only degree of its kind in Australia. You'll be equipped with key skills in securing data and data communications, as well as investigating and providing solutions to cyber-crime. Understand the key drivers of criminal behaviour and ways to address and prevent it while developing a skill set to take on the latest criminal threat to society in cyber-crime.

Professional recognition

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

You will also have the opportunity to complete industry certifications within existing core units as part of your cyber security degree for no additional cost.

Certifications include:

- Certified Ethical Hacker (CEH)
- Certified Secure Programmer (ECSP)
- 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.

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

ACS AUSTRALIAN COMPUTER SOCIETY

Bachelor of Laws/Bachelor of Cyber Security

D397 C NP B NP WF[3] 85.20 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 combined course. 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 two 0-credit-point units relating to safety induction program and career tools for employability and the 0-credit-point academic integrity module.

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

ACS AUSTRALIAN COMPUTER SOCIETY

1 Students are also required to complete the 0-credit-point Academic Integrity Module and Academic Induction for the Bachelor of Business Analytics unit.
2 Trimester 3 intake is not available to international students.
3 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.

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

Course and entry requirements	Campus and ATAR	Course duration	Trimester intakes	Tuition fee[1]
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 66.55	3	T1, T2	$7267
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 72.20	3	T1, T2	$7933
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 NP B 63.65	3	T1, T2	$7418
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 64.55 WP 67.10	3	T1, T2	$8152
Bachelor of Design (Digital Technologies)[5] | A344 Y12[2,3] VCE units 3 and 4 – a study score of at least 20 in English other than EAL or 25 in English (EAL) and presentation of a portfolio of work to a satisfactory standard. NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/A334	B RC	3	T1, T2, T3	$8309
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 72.20 B 60.30 WP 60.15	3	T1, T2	$7804
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 64.60	4	T1, T2	$7219
Bachelor of Arts/Bachelor of Information Technology | D310 Y12[2,3] VCE units 3 and 4 – a study score of at least 20 in English other than EAL or 25 in English (EAL). NY12[3,4] As for Year 12 or equivalent, for further information refer to deakin.edu.au/course/D310	C NP B NP WP NP	5	T1, T2	$8054
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 81.10	4	T1, T2, T3	$12,243
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 65.55 WP 67.80	4	T1, T2, T3[6]	$10,842
Bachelor of Laws/Bachelor of Cyber Security | D397 Y12[2,3] VCE units 3 and 4 – a study score of at least 30 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[7] 85.20	5	T1, T2	$11,767

1 The 2021 indicative Commonwealth Supported Place (CSP) fee is based on a typical enrolment for domestic students 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. The fees displayed do not reflect the entire cost of the course if it's completed over a number of years and does not include the Student Services and Amenities Fee or course-related equipment costs.
2 Recent secondary education applicants include current Year 12 students in 2021, as well as Year 12 graduates from 2020 and 2019.
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 2018 or earlier.
Visit **deakin.edu.au/courses** and head to the course of interest to find out further details on admission requirements.
5 To be eligible for entry into this course, applicants must present a portfolio of work to a satisfactory standard.
6 Trimester 3 intake is not available to international students.
7 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.

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RC means admission is based on a range of criteria.

Recent secondary education Y12
Non-Year 12 NY12

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

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**.

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Other useful websites

vtac.edu.au
studyassist.gov.au
myfuture.edu.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.

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Information technology