STUDY AREA

COMPUTING, MATHS AND TECHNOLOGY

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

JAMIE POWERS INNOVATION

Bachelor of Information Technology and Bachelor of Business student Jamie is passionate about diversity, inclusion and making a big impact. As a student mentor, she's focusing on guiding students through user experience and human-centric methodologies when developing STEM-based solutions, and inspiring them to explore interests in these industries early on. Looking to the future, Jamie sees business and technology as a great tool to empower young people. One of her aspirations is to encourage people to learn more about the environment and how it affects our health. She plans to make this happen through developing programs and collaborating with organisations who are making a positive impact to the ecosystem.

Jamie

Bachelor of Information Technology/
Bachelor of Business

COMPUTING, MATHS AND TECHNOLOGY

The computing, maths and technology industries are at the cutting-edge of new thinking, and are central to the way we work, learn, communicate, socialise and entertain ourselves. They're industries that require critical, creative thinkers. Our degrees teach you the skills required to develop technology and systems to aid advancements in almost any area you can think of. You could work for a big global corporation like Google or Apple, or build your own business and become one of the world's most innovative entrepreneurs.

newcastle.edu.au/study/computing-maths-and-technology

TOP 250

in the world for Mathematics[1]

86.6%

of Computing and Information Systems graduates found employment within four months[2]

ERA 5

rated well above world standard for Applied Mathematics and Statistics[3]

DEGREE OPTIONS

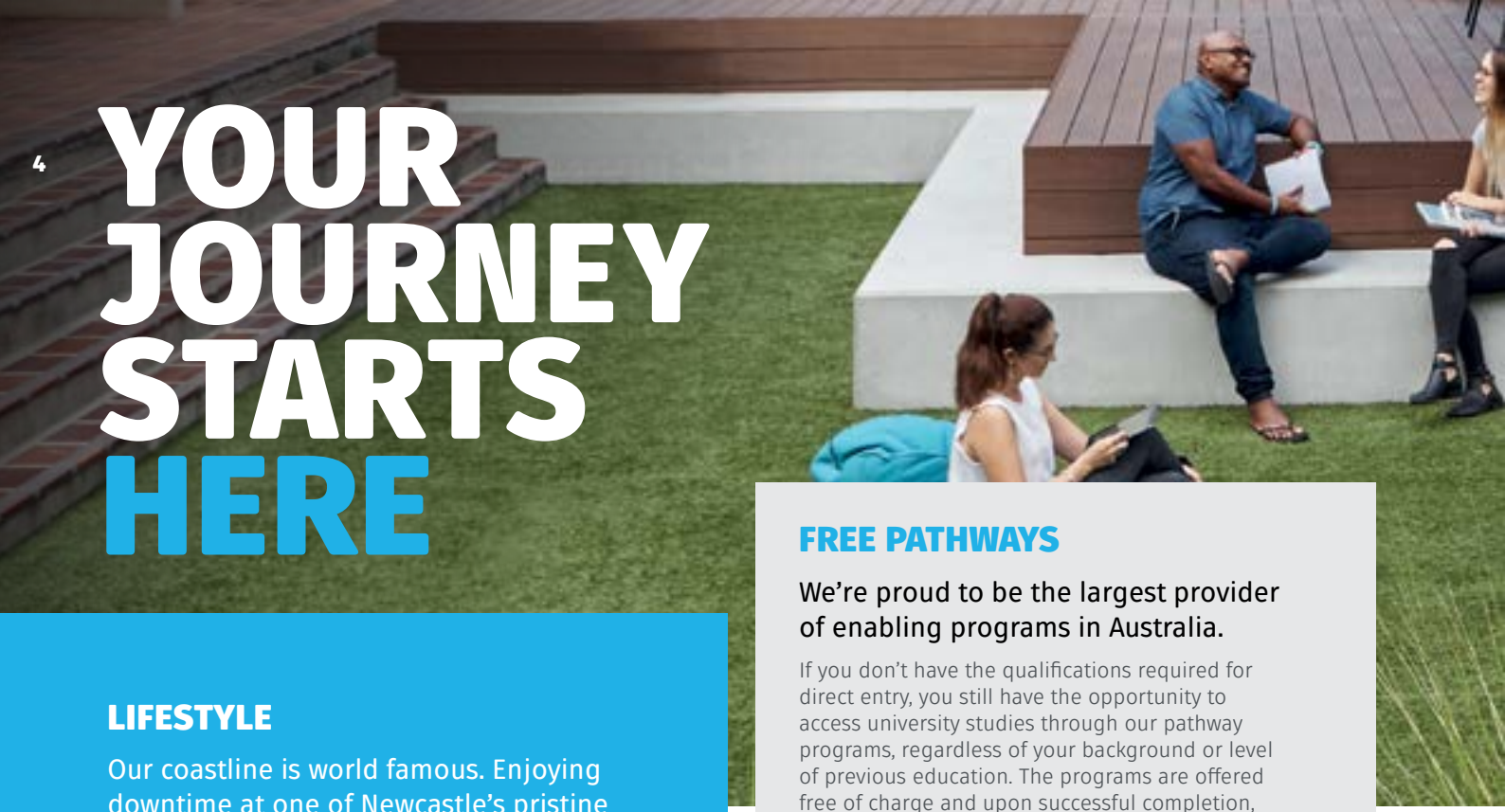
Bachelor of Computer Science
Bachelor of Information Technology
Bachelor of Mathematics
Bachelor of Mathematics (Advanced)
Bachelor of Technology (Renewable Energy Systems)

ALSO CONSIDER

Bachelor of Computer Systems Engineering (Honours)
Bachelor of Software Engineering (Honours)

1 QS World University Rankings by Subject 2019 2 QILT Graduate Outcomes Survey 2017 - 2019 3 Excellence in Research Australia 2018

YOUR JOURNEY STARTS HERE



LIFESTYLE

Our coastline is world famous. Enjoying downtime at one of Newcastle's pristine beaches and three coastal baths is made easy with long stretches of uncrowded sand, accessible public transport, and plenty of free parking. A creative hub, Newcastle is home to the bright ideas of countless innovators and entrepreneurs. Enjoy all that Newcastle has to offer – a dynamic art and music scene, chilled-out cafes, eclectic markets, microbreweries and small bars. The people are friendly, the beaches are picture perfect and the coffee culture is taken seriously.

CAMPUS LIFE

On campus, you have access to a wide range of cafes, food outlets and bars. The University is also home to over 150 clubs, societies and social groups – giving you the chance to regularly participate in fun activities.

Great health and fitness facilities await you at The Forum University (Callaghan) and Harbourside (Newcastle City). You'll find a 50m indoor heated swimming pool, fitness classes, state-of-the-art equipment, indoor courts and casual or structured social sport competitions all year. No matter which campus you study at, there's always something happening during the semester. There are plenty of events from Orientation Party to festivals and local gigs. You could attend study workshops, guest lectures or kick back and enjoy watching a movie by moonlight.

newcastle.edu.au/uonstudentliving

ACCOMMODATION

While the thought of moving away from your home town to study might seem daunting, we're here to make this transition as easy as possible. We offer students secure, affordable and comfortable accommodation while studying.

newcastle.edu.au/accommodation

FREE PATHWAYS

We're proud to be the largest provider of enabling programs in Australia.

If you don't have the qualifications required for direct entry, you still have the opportunity to access university studies through our pathway programs, regardless of your background or level of previous education. The programs are offered free of charge and upon successful completion, you're guaranteed entry to over 40 undergraduate degrees at the University of Newcastle.

- **Newstep**
  If you didn't complete Year 12, or missed the chance to get the marks needed for university entry, our Newstep program offers the perfect pathway between secondary schooling and university. Study on campus at Newcastle or the Central Coast.
- **Open Foundation**
  If you've never studied at university before and you're considering a degree qualification after time in the workforce or caring for family, or just looking to further your interests, our Open Foundation program can help make this happen.
- **Yapug - Aboriginal and Torres Strait Islander Students**
  Yapug is a pathway program providing Aboriginal and Torres Strait Islander people with skills for entry into undergraduate degrees, including a pathway into Medicine. Start your university experience in a culturally appropriate learning environment, supported by Indigenous peers and staff.

newcastle.edu.au/enabling

YEAR 12 SUBJECT SPOTLIGHT EARLY ENTRY PROGRAM

We believe that your ATAR doesn't define who you are – it is your unique passions, abilities and ambitions that matter. Our Year 12 Subject Spotlight program rewards you with an early offer for your hard work and strong results in individual subjects related to your degree. So, you can take some of the stress out of your final school exams, knowing your ATAR isn't all that matters.

There is no separate application for the program – simply apply through UAC to qualify You can find more information on subjects aligned to specific degrees online.

newcastle.edu.au/subject-spotlight

STUDY ABROAD

Are you keen to take your studies around the world?

When you study here, you'll have the chance to travel and get credit for your degree at the same time. There are opportunities for international experiences across every area of study, whether it's an overseas exchange program, study tour or work placement. Discover new cultures, try new food and make friends from all over the world. With more than 100 partner universities across all major continents, it really is the chance of a lifetime.

newcastle.edu.au/studyoverseas

CAREER-READY GRADUATES

Sometimes it's best to dive straight in. That's why exciting industry experience and Work Integrated Learning is at the core of all our degrees. Our strong partnerships with local and global organisations ensure everything you study is shaped by the real world and you graduate ready for a career in your field. Our Career Services Team are also on hand to help you out with everything from resumes and employment workshops to advice on your career goals.

THE MA & MORLEY SCHOLARSHIP PROGRAM

Promoting sustainability has always been a priority for Michela. A budding environmentalist in primary school, she extended her reach at high school, starting a sustainability group and designing a recycling education program for all commencing students. She was also a regular volunteer with the Youth Environment Council and Adelaide Youth At The Zoo, working on conservation projects. Attracted to field work and research, Michela worked alongside University of Newcastle researchers in the Earth Watch Vanishing Frogs student challenge in 2018. Studying a Bachelor of Science and Bachelor of Mathematics will further her ability to turn her passions into a career.

Michela Skipp
Bachelor of Mathematics/Bachelor of Science
Ma & Morley Scholar

SCHOLARSHIPS

You might be bursting with new ideas, passion and potential. But without support, attending university can sometimes seem impossible.

The University of Newcastle's scholarship programs have been designed to provide this support and give you the opportunity to develop your talent and explore your potential.

We have over 1,000 individual scholarships on offer including:

- scholarships for academic achievement
- support for individuals facing financial hardship and educational disadvantage
- support for Indigenous students
- opportunities to travel, perform, play sport, relocate, or gain global experience.

Visit the website to find a scholarship that fits for you

newcastle.edu.au/scholarships

SHAPING FUTURES SCHOLARSHIPS

The Shaping Futures Scholarship Fund provides support for students who are most in need – helping them to overcome disadvantage to pursue and maintain their achievements.

Scholarships are offered to academically gifted students facing educational disadvantage such as financial hardship, relocation from a regional or remote area, a long term or recurrent medical condition or illness, carer or sole parenting responsibilities, an asylum seeker recently completing a University of Newcastle enabling program, or a combination of these factors.

ABORIGINAL AND TORRES STRAIT ISLANDER SCHOLARSHIPS

The Aboriginal and Torres Strait Islander Scholarships were established through contributions from the University, industry donors, community organisations and the annual Reconciliation Scholarship Dinner Dance. These scholarships provide Australian Aboriginal and Torres Strait Islander students financial support to assist with completing their studies.

newcastle.edu.au/scholarships

BACHELOR OF

COMPUTER SCIENCE

newcastle.edu.au/degrees/bachelor-of-computer-science

Computer scientists work on challenging programming tasks, developing new software technologies and sophisticated new online systems.

Computer science is fundamental to many everyday technologies like mobile phones, learning systems, online shopping, navigation systems, social media, computer games and programmable appliances. The Bachelor of Computer Science produces innovative and resourceful computer scientists who are experts at complex problem solving. They work across fields such as artificial intelligence, robotics, computer graphics, digital forensics, bioinformatics, web development, cryptography and data security.

Computer science is a high-growth industry with a myriad of career opportunities. Jobs exist all over the world in almost every industry, from IT to business manufacturing, defence and many more.

You will also have the opportunity to specialise your degree by studying one of four majors in either Data Science, Computer Systems and Robotics, Software Development and Cyber Security.

2020 SELECTION RANK

78.70 | Median 85.40

CAREER EXAMPLES

- Application Development Manager
- Business Intelligence Director
- Computer Software Program Manager
- Cybersecurity Advisor
- Data Scientist
- Games Developer
- Security Architect
- Software Architect

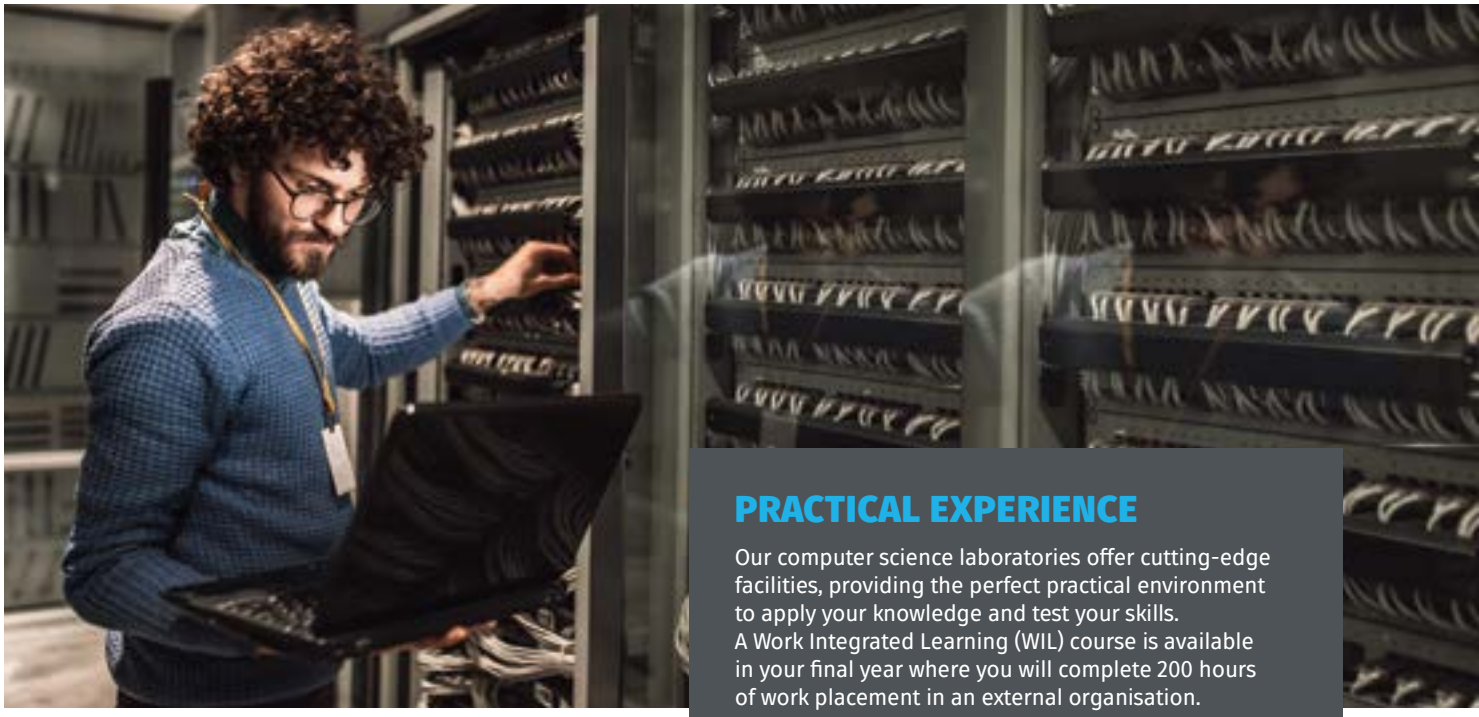
PROFESSIONAL RECOGNITION

Accredited by the Australian Computer Society.

COMBINE THIS DEGREE WITH

- Bachelor of Computer Systems Engineering (Honours)
- Bachelor of Mathematics

ACCREDITED PROGRAM



PRACTICAL EXPERIENCE

Our computer science laboratories offer cutting-edge facilities, providing the perfect practical environment to apply your knowledge and test your skills.
A Work Integrated Learning (WIL) course is available in your final year where you will complete 200 hours of work placement in an external organisation.

SHARLENE'S STORY

Bachelor of Computer Science (Honours) alumnus Sharlene embraced every opportunity she could while studying at the University of Newcastle. From internships to outreach programs, her experience has led to a career she never thought possible. Enrolling in the degree with limited programming experience, Sharlene refined her skills with extra computing courses and work on live projects.

It was an internship at Bohemia Interactive Simulations that had the biggest impact on Sharlene's study and future career. She had the chance to put her theoretical learning into practice – creating automated tests to investigate the different aspects of training simulations used by military organisations and defence to train soldiers. Following the internship, she was offered a position as a Quality Assurance Engineer with the company.

During her studies, Sharlene also sought ways to inspire other young girls to pursue careers in STEM industries – joining the high school outreach program HunterWiSE.

For Sharlene, being able to see her work on programs or applications in action and the impact she's had on other students has been the most rewarding part of her journey.

Sharlene
Bachelor of Computer Science (Honours), 2019

TRANSFORMING CYBERSPACE SECURITY

As more and more individuals, enterprises and governments conduct business online, securing cyberspace is more critical than ever.

Professor Vijay Varadharajan is a global expert on cybersecurity, spending the past 20 years sharing his expertise in Australia. In his current role as Global Innovation Chair in Cybersecurity at the University of Newcastle, he is working to position the University at the forefront of cybersecurity, through research, education and external engagement. He is a highly-regarded member of cybersecurity boards across the world and past roles saw him contribute to technologies that generated over a billion dollars in revenue.

The need to secure cyberspace grows exponentially each day and Professor Varadharajan is using his experience to not just look at research but translate it into practical solutions for society.

Professor Varadharajan
Global Innovation Chair in Cybersecurity,
School of Electrical Engineering and Computing

VR SOLUTIONS FOR THE DEFENCE INDUSTRY

A spatial scientist, Dr Karen Blackmore is always on the lookout for innovative solutions to help keep up with the demands of society. With a passion for problem-solving, Dr Blackmore is transforming the training industry by making best use of virtual reality technology.

Stemming from a career designing 3D environments and teaching game design, she has now taken an educational stance on how virtual reality technology and gaming programming can be used to train for real-world situations. Dr Blackmore has forged a solid partnership with the Defence Simulation Centre to provide simulation-based training as a tool for preparing our defence personnel before deployment.

After realising a definite skill shortage in the defence space, she is developing new ways to ensure information technology students can fill this void. Dr Blackmore has led a Memorandum of Understanding with the University of Newcastle where Honours students in the IT program can collaborate with the Defence College on projects. Dr Blackmore is guiding students on a new path to better job prospects.

Dr Karen Blackmore
Associate Professor
School of Electrical Engineering and Computing (Information Technology)

BACHELOR OF

INFORMATION TECHNOLOGY

newcastle.edu.au/degrees/bachelor-of-information-technology

Information technology (IT) is all about developing, building and maintaining software systems to meet the challenges faced by society and seizing the opportunities that new technology creates.

With the Bachelor of Information Technology, you could specialise in business technology and manage large and complex software systems for big corporations and government. Or focus on cloud architecture, software, mobile and app development for a wide range of industries – even your own startup. If you're passionate about media and entertainment, you could create exciting games, animations and digital content.

You'll also have the opportunity to undertake Work Integrated Learning industry placements and complete a major IT project with an industry partner during your studies.

IT graduates work across almost every industry and not-for-profit organisation. You could go on to work for organisations like Google, Amazon, Facebook or Apple.

Information Technology also offers a one-year Honours program to students based on merit.

2020 SELECTION RANK

62.50 | Median 70.60

CAREER EXAMPLES

- Games Designer/Animator
- Infrastructure Business Analyst
- Mobile App Designer
- Software Developer
- Systems Analyst
- Web Developer

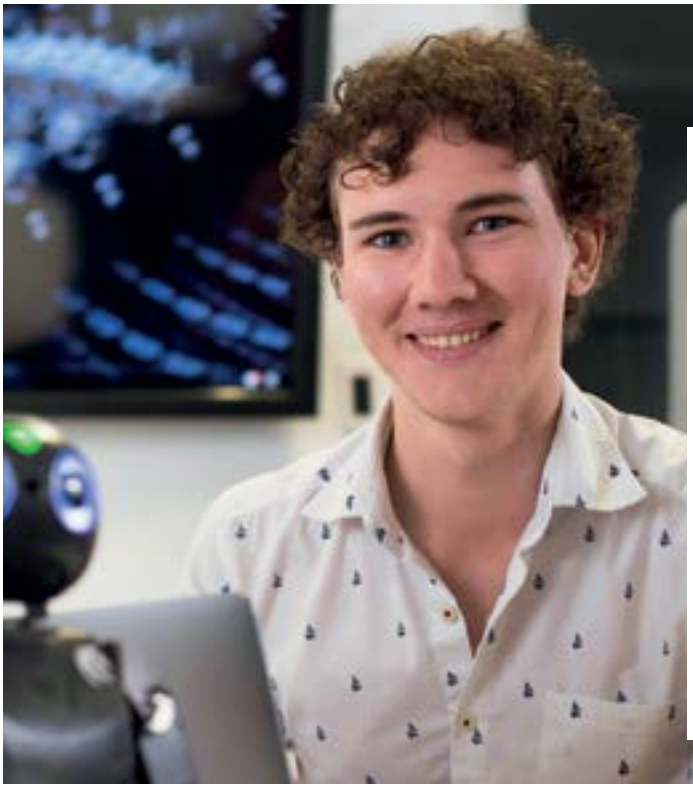
PROFESSIONAL RECOGNITION

Graduates are eligible to apply for membership with the Australian Computer Society.

COMBINE THIS DEGREE WITH

- Bachelor of Business

ACCREDITED PROGRAM



CONNOR'S STORY

For his Honours project, Connor developed an app to streamline the carer-to-client relationship. Using this app, clients can have reminders scheduled, get notified when their carer is just around the corner and also access carer profiles and emergency information at their fingertips.

Carers can use the app to schedule their day, bill appointment times and view client details.

During his studies, Connor was awarded a scholarship through the Australian Government's Innovation Connections program which allowed him to collaborate with industry on projects.

Connor
Bachelor of Information Technology (Honours) alumnus, 2017

USING IT IN EVERYDAY SITUATIONS

The Australian Computer Society has identified that the demand for information and communications technology employees in Australia is predicted to grow by almost 100,000 workers by 2023.

The University of Newcastle's Associate Professor Marc Adam is an expert in Computing and IT and is helping educate the next generation of students – preparing them to meet the demands of this rapidly growing industry. He is using his research in the field of human-centred computing to inform teaching practises and inspire students to see the potential of computing and information technology applications in everyday situations.

His interdisciplinary research and teaching investigates how technology can be designed to create positive impact and empower users in a variety of fields including health, education and business.

For Associate Professor Adam, ensuring students have a robust understanding of this approach, and how it can be applied to the real-world, will mean that graduates are work-ready and equipped with the knowledge and experience needed to tackle the challenges facing the industry.

Associate Professor Marc Adam
School of Electrical Engineering and Computing

COMPUTING AND IT PROFESSIONALS

Computer scientists, software engineers and information technologists can work across a variety of industries. When working together on specific projects, they each have a different role to play.

Here's a snapshot of how these roles collaborate and the responsibilities of each role in different industries.

COMPUTER SCIENTIST

GAMING

In game production, a computer scientist will solve complex problems that arise in specific modules of the game. In an artificial intelligence module, the computer scientist might make the enemy behave in clever ways – for example hiding behind obstacles rather than just walking towards the player.

In the case of an enemy army, they will make decisions about which strategy it follows and how this should be implemented in code.

In a real-world environment simulation module, a computer scientist helps to make the physics of the game – jumps, explosions, and objects breaking – more realistic.

HEALTH

In the health industry, computer scientists help develop algorithms to answer complex questions. For example, can we automatically spot tumours in scans? How can we identify these tumours from surrounding tissues? Can we use patient health records to work out who is most likely to develop a particular illness?

Computer scientists might also work on answering more fundamental questions like, can we model the human brain? Could we use this to make software (virtual assistants) more useful? How can we use this software to further our learning?

BUSINESS & SECURITY

Computer scientists can use their mathematic and algorithm skills to develop solutions for common to complex problems. For example, they might use data analysis to find ways to automatically detect when someone's credit card is being misused. They could look for ways to use facial recognition in environments like banks to monitor and track an individual's movements. They could then use this information to create systems that offer a better or more personalised customer experience.

Computer scientists also have the skills to help answer some larger social questions like, what patterns can we find in the ways people communicate on the internet, can we predict how people will vote in elections or can we identify criminal networks?

DEFENCE

In the defence industry, it's common for complex problems to arise and it's often up to a computer scientist to help solve them. For example, an F18 pilot and radar picks up several enemy aircrafts in your vicinity, which one should be your priority? Computer science techniques are used to analyse radar data to find attack formation patterns and help the pilot identify the most critical threat.

Computer scientists might also help identify the difference between friendlies and enemies in the battlefield through artificial intelligence techniques or use algorithms and optimisation to determine how to move troops, equipment and supplies around an area of operations.

IT PROFESSIONAL

GAMING

An IT professional can work in several areas in gaming. They might work in graphics design to create appealing game visuals. They could even help make decisions on the communication protocol to be used for games that have the option of multiple players over the internet.

HEALTH

The IT professional could be involved in the development of a user-friendly graphical interface, as well as deciding which data visualisation tool should be used.

If the system needs to be deployed to a medical setting like a hospital, the IT professional will also make decisions about the infrastructure required. For example, computer equipment specifications, data storage, communication via cable/wireless and remote access to data.

BUSINESS & SECURITY

In business, IT professionals are normally responsible for the design of the infrastructure required for a software solution to be deployed.

For businesses, it's important to be able to communicate effectively and efficiently with customers, so IT professionals might be required to work on web and database design depending on the size of the company and its specific requirements.

App development is also an important area where IT professionals are required.

DEFENCE

In the defence industry, IT professionals can work with military IT infrastructure building and support, as well as designing and implementing frontend (webpages) and backend (databases) solutions.

They might also help decide what the most suitable security solution is for a specific need. IT professionals have a broad knowledge of existing software solutions for security, visualisation, data analysis and are highly skilled in deciding which software should be used for particular applications.

SOFTWARE ENGINEER

GAMING

In gaming, a software engineer will organise and control the entire game creation process. They will decide which groups or technical teams will implement each part of the game and the requirement for each team.

The software engineer will determine milestones for stages of the game development and test strategies to ensure the game doesn't have any bugs when it's released to the public.

HEALTH

In the health industry, software engineers might create the systems that clinicians will use to assist them in identifying tumours or other illnesses. For example, they could turn academic research into a software that is easy to use, without bugs and with the level of cybersecurity required for handling medical data.

Yet again, the entire software development process is often controlled by a software engineer.

BUSINESS & SECURITY

Software engineers work with businesses to build new software systems using a controlled process. Each phase of the development is tracked – new features added to the software and modifications are recorded and documented, so the entire process is auditable.

Software engineers develop large scale software with hundreds of millions of lines of code. Software engineers are also excellent communicators, pitching both ideas and company products to industry or investors.

DEFENCE

Defence systems are naturally complex and large scale – think about the software that goes in an F18 fighter jet.

Comprehensive software testing is a priority for the defence industry since errors in software embedded in military equipment can cause catastrophic failures with life-threatening consequences.

BACHELOR OF

MATHEMATICS

newcastle.edu.au/degrees/bachelor-of-mathematics

The Bachelor of Mathematics attracts the very best problem-solvers – those who analyse things critically and are eager to make technological discoveries.

Through this degree, you might mathematically model the way diseases spread to find a cure for malaria or search for algorithms to speed up computations. You will use your skills in technology, creativity and logic to push the boundaries and make a difference in society.

2020 SELECTION RANK

85.00 | Median 90.05

CAREER EXAMPLES

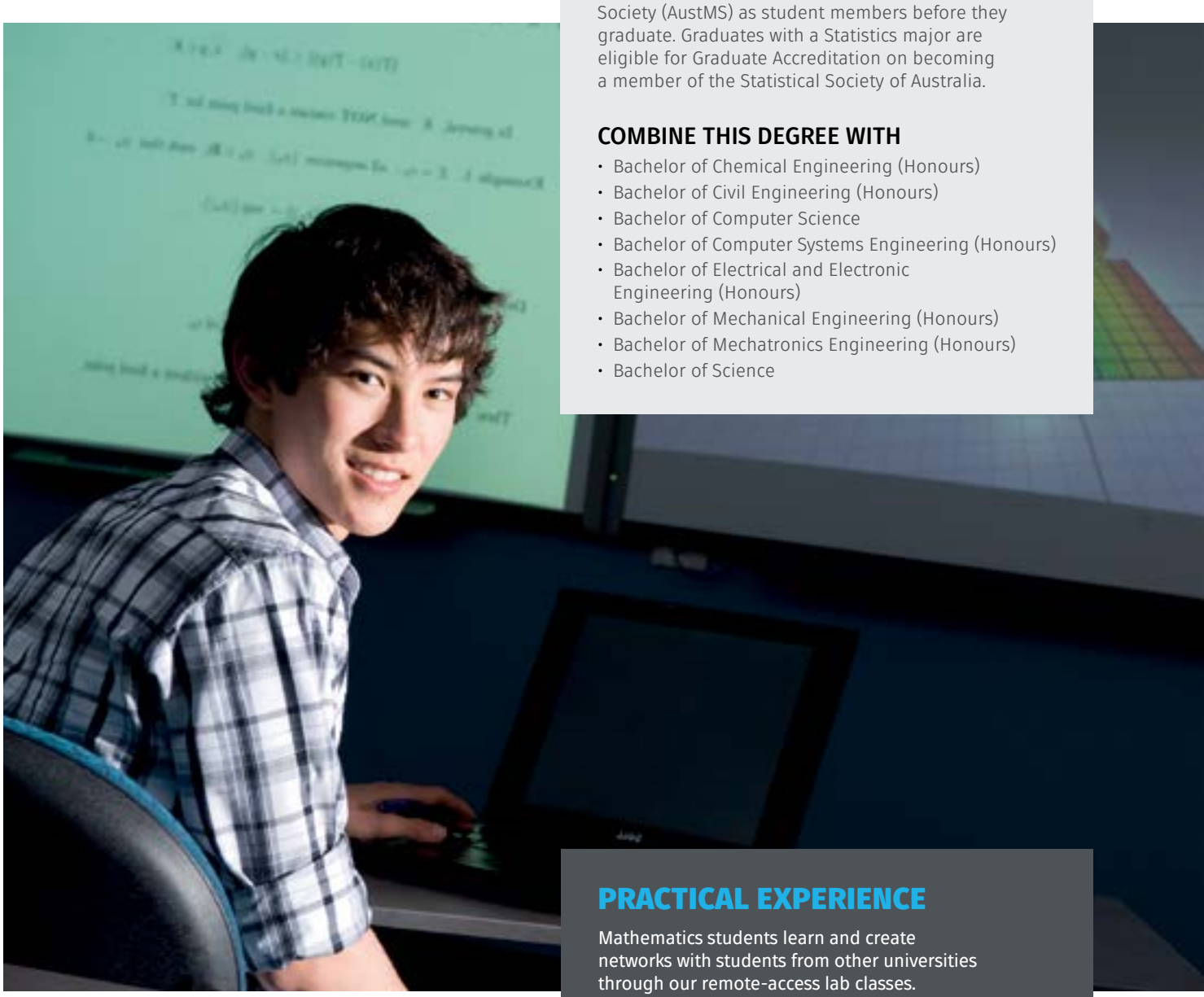
- Data Mining Analyst
- Economic/Social Statistician
- Investment Banker/Stockbroker

PROFESSIONAL RECOGNITION

Students may join the Australian Mathematical Society (AustMS) as student members before they graduate. Graduates with a Statistics major are eligible for Graduate Accreditation on becoming a member of the Statistical Society of Australia.

COMBINE THIS DEGREE WITH

- Bachelor of Chemical Engineering (Honours)
- Bachelor of Civil Engineering (Honours)
- Bachelor of Computer Science
- Bachelor of Computer Systems Engineering (Honours)
- Bachelor of Electrical and Electronic Engineering (Honours)
- Bachelor of Mechanical Engineering (Honours)
- Bachelor of Mechatronics Engineering (Honours)
- Bachelor of Science



PRACTICAL EXPERIENCE

Mathematics students learn and create networks with students from other universities through our remote-access lab classes.

A CALCULATED APPROACH TO COMPUTER RESEARCH

Professor George Willis is a world-renowned mathematician. He is a true innovator and a creator of new mathematics.

While his early work was in functional analysis, more recently his research is aimed at developing the algebraic theory of zero-dimensional symmetry. Recognised for being a leader in mathematics research, Professor Willis was awarded a $2.8 million grant to support his project which works to create tools for understanding the geometry of large networks.

He is at the forefront of new mathematics which is benefiting the fields of computer science and data structures and potentially optimising computer performance. If you have a head for mathematics, Professor Willis can help you push the boundaries of traditional mathematical research.

Professor George Willis
ARC Australian Laureate Fellow
School of Mathematical and Physical Sciences

BACHELOR OF

MATHEMATICS (ADVANCED)

newcastle.edu.au/degrees/bachelor-of-mathematics-advanced

Are you a problem-solver? A critical thinker? Maybe you want to use your analytical skills to make innovative technological discoveries?

The Bachelor of Mathematics (Advanced) will prepare you for a career far beyond the norm and outside the conventional roles of a mathematician. You'll join a high achieving cohort and build on your previous knowledge in logic, mathematical modelling, experimental design and data analysis.

Enhancing your learning with industry experience, you'll build professional connections which will increase your career outcomes. You can work in a wide range of fields including communications, international finance and the futures market, the energy sector, or even medical and health research.

2020 SELECTION RANK

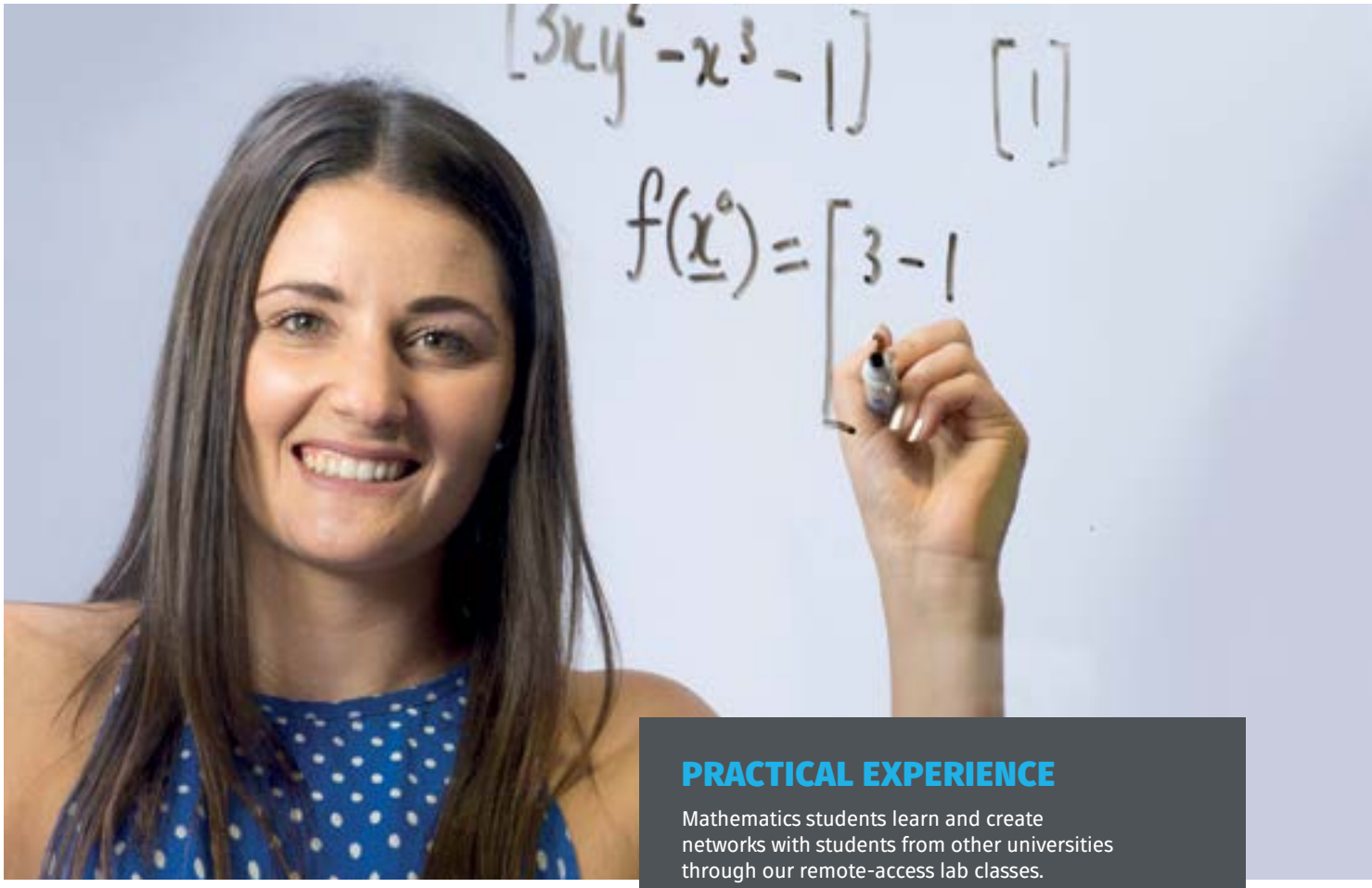
95.00 | Median 98.35

CAREER EXAMPLES

- Algorithm Designer
- Data Mining Analyst
- Economic/Social Statistician
- Investment Banker/Stockbroker
- Nuclear Physicist
- Risk or Strategy Analyst

PROFESSIONAL RECOGNITION

Students may join the Australian Mathematical Society (AustMS) as student members before they graduate. Graduates with a Statistics major are eligible for Graduate Accreditation on becoming a member of the Statistical Society of Australia.



PRACTICAL EXPERIENCE

Mathematics students learn and create networks with students from other universities through our remote-access lab classes.

HAYDEN'S STORY

From forecasting the weather, to finding the perfect fix for a wobbly table at a restaurant, Hayden always loved how maths could be used to solve real-world challenges. So, when it came to choosing a degree, a combined Bachelor of Science and Bachelor of Mathematics seemed like the perfect fit.

Throughout his studies, Hayden has put theory into practice with exciting results – like using complex statistical time series analysis to forecast international tourism in Australia.

After completing his Bachelor's degrees, Hayden went on to do an Honours research project and was awarded the 2019 Masson Memorial Prize Scholarship to help him continue his great research. He is now undertaking a PhD at the University of Newcastle.

Hayden

Bachelor of Mathematics/Bachelor of Science (Honours), 2019

BACHELOR OF

TECHNOLOGY (RENEWABLE ENERGY SYSTEMS)

newcastle.edu.au/degrees/bachelor-of-technology-renewable-energy-systems

Engineers and technologists research and develop creative ways to transform renewable energy into usable power.

They are vital in the design of sustainable technologies as well as their implementation. They include geothermal heat sources, carbon capture and storage, mineral sequestration, photovoltaics, polymer cells, oxyfuel technologies and wind turbines.

This pathway program will allow you to build on the knowledge gained from your TAFE Associate Degree of Engineering (Renewable Energy Technologies), and finish with a Bachelor of Technology (Renewable Energy Systems) after one year of university study.

2020 SELECTION RANK

N/A | Median N/A

CAREER EXAMPLES

- Energy Consultant or Advisor
- Renewable Energy Project Officer
- Solar Energy Systems Designer
- Thermal Energy Systems Manager
- Wind Energy Technician

PROFESSIONAL RECOGNITION

Graduates are eligible for assessment as an Engineering Technologist (subject to course endorsement by Engineers Australia).

CAREER OPPORTUNITIES

Engineers in the field of renewable energy work on a variety of technologies such as solar, wind and geothermal energy and their integration into systems. You could work for an energy company, a consultancy, a renewable energy equipment manufacturer, a research and development organisation or a government department.

The University of Newcastle's New Colombo Plan Scholarship recipients for 2018 Georgia Fardell, Sophie Austin, Jack Shearer and Zachary Groth, with The Honourable Julie Bishop, MP. Not shown: Olivia Gallimore and Andrew Sunol.

NEW COLOMBO SCHOLARS

In 2018, six exceptional students from the University of Newcastle were announced as New Colombo Scholars.

The scholarship offers the opportunity for students to gain international work placement experience, broadening their horizons and establishing strong international partnerships. Georgia and Zachary were two scholarship recipients who represented the areas of computing, maths and IT.

GEORGIA

Bachelor of Science/Bachelor of Mathematics

Georgia is completing a combined Bachelor of Mathematics and Bachelor of Science degree. Following an initial trip to Japan as part of a Rotary International Youth Exchange in 2014, Georgia's interest in the country was ignited. The scholarship will allow her to return to Japan to intern with key players in the solar industry while studying at Tokyo Metropolitan University.

ZACHARY

Bachelor of Science/Bachelor of Mathematics

Zachary is another extraordinary mind - completing a double degree in mathematics and science. Through the scholarship, he will be able to strengthen his combined passion for educating young people and sharing his love of mathematics. He will benefit from an academic mentorship from our esteemed exchange partner, Nanyang Technological University in Singapore.

RELATED DEGREES

You may also be interested in the following degree that touches on the Computing, Maths and Technology study area.

BACHELOR OF COMPUTER
SYSTEMS ENGINEERING (HONOURS)

Computer systems engineers combine creativity with technology to develop solutions to some of the world's greatest challenges – you might find yourself developing advanced computing equipment for industrial and/or business systems.

For further Information on this program refer to the **Engineering** brochure

or visit **newcastle.edu.au/study/engineering**

BACHELOR OF
SOFTWARE ENGINEERING (HONOURS)

Software engineering is behind much of the everyday technology we take for granted – from our iPads, computer software and mobile phones through to digital televisions, computer games and online banking.

For further information on this program refer to the **Engineering** brochure

or visit **newcastle.edu.au/study/engineering**

CONNECT WITH OUR GLOBAL ALUMNI NETWORK

#UONalumni

Spanning 144 countries, the University of Newcastle's global alumni network is making a positive difference to the world.

This diverse group of global professionals provides invaluable support for our students by sharing their time and expertise. Whether it's through a mentoring program, industry experience or attending a networking event, you'll be inspired and empowered by those who have blazed the trail before you. And, when you graduate, you'll be in good company. You will join this outstanding group of over 148,000 alumni around the world. Because wherever you are, whatever you're doing, you are always part of our global alumni community.

IF YOU'RE READY TO CHASE YOUR DREAMS AND THRIVE, NOW IS THE TIME.

For full information and to find out how to apply, visit **newcastle.edu.au/study**

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