Study Area

Computing, Maths and Technology

THE UNIVERSITY OF NEWCASTLE AUSTRALIA

Randeep, India
Bachelor of Information Technology

Why study with us

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. Our degrees teach you the skills required to develop innovative technology and systems. With opportunities for industry placement across all degrees, you will graduate ready to make an impact. You could work for a big global corporation like Google or Apple, help protect the security of cyberspace, or become an entrepreneur and build your own business.

89.5%

of postgraduate Computing and Information Systems students satisfied with their skills development[1]

86.3%

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

86.5%

of postgraduate Computing and Information Systems students satisfied with learning resources[1]

See the website for a full list of our degree options and programs

1 Student Experience Survey 2018 and 2019 2 Graduate Outcomes Survey 2018-2020

Bachelor of Computer Science

CRICOS code	001604G
Duration	3 yrs FT
Locations	Newcastle – Callaghan
Indicative annual fee	2021 A$36,236 2022 A$37,141
IELTS	IELTS overall minimum - 6.0 IELTS section minimum - 6.0
Intake	S1, S2
Practical experience	Opportunities available

Course overview

Computer scientists develop software, online systems and work on many everyday technologies like mobile phones, learning systems, online shopping, navigation systems, social media, computer games and smart appliances. This course will suit you if you are interested in complex problem-solving and working in fields such as artificial intelligence, robotics, computer graphics, digital forensics, bioinformatics, web development, cryptography and data security.

What you will study

Choose to specialise in one of the following majors:

- Computer Systems and Robotics
- Cyber Security
- Software Development

Professional recognition

Accredited by the Australian Computer Society.

Career opportunites/outcomes

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.

Some typical positions include:

- Application Development Manager
- Business Intelligence Director
- Computer Software Program Manager
- Cyber Security Advisor
- Games Developer
- Security Architect
- Software Architect

See the website for more information about this degree.

Bachelor of Computer Systems Engineering (Honours)

CRICOS code	092848A
Duration	4 yrs FT
Locations	Newcastle – Callaghan
Indicative annual fee	2021 A$38,220 2022 A$39,176
IELTS	IELTS overall minimum - 6.0 IELTS section minimum - 6.0
Intake	S1, S2
Practical experience	Opportunities available

Course overview

As a computer systems engineer, you will combine creativity and problem solving with your interest in computing and networks. Graduates have a unique skill set in hardware design, software design, communications systems, and networks. These skills are essential in rapidly growing fields like the Internet of Things, autonomous vehicles, and machine learning. With this degree, you might find yourself developing advanced computing hardware and software for diverse industrial sectors including intelligent transport, e-health, aviation, and civic infrastructure, which are the building blocks of modern society.

What you will study

Become job-ready through four professional practice courses and diversify your skills with an elective pathway.

Build critical technical engineering skills in:

- internet of things
- embedded systems
- communication networks
- computer and electrical engineering
- software engineering
- programmable logic design
- electronics design
- cyber security

Professional recognition

Professional recognition through Engineers Australia. You will be qualified as a professional engineer, meaning graduates have greater opportunities for international mobility.

Career opportunites/outcomes

Computer systems engineering is flexible and diverse. Graduates might choose to focus on hands-on fieldwork, design and development, or pursue a leadership role managing people and projects.

Some typical positions include:

- Cloud Computing Engineer
- Computer Systems Engineer
- Cyber Security Engineer
- Electronics Engineer
- Embedded Systems Developer
- ICT Engineer
- Network Engineer

Students have the option for further study with a Master of Professional Engineering (see page 95 of the International Prospectus).

See the website for more information about this degree.

Bachelor of Information Technology

CRICOS code	044439E
Duration	3 yrs FT
Locations	Newcastle – Callaghan Singapore
Indicative annual fee	2021 A$35,810 2022 A$36,706
IELTS	IELTS overall minimum - 6.0 IELTS section minimum - 6.0
Intake	S1, S2 – Callaghan T2, T3 – Singapore
Practical experience	Opportunities available

Course overview

Information technology (IT) involves developing, building and maintaining software systems to meet the challenges faced by society and seizing the opportunities that new technology creates. The Bachelor of Information Technology prepares you for a diverse career, you could specialise in business technologies and manage complex systems for big corporations and government. If you are passionate about media and entertainment, you could even create exciting games, animations and digital content.

What you will study

You will develop skills in:

- web technologies
- programming
- databases
- management
- computer-human interaction
- systems analysis and design
- business analysis

Plus, you will choose from one of the following majors, designed to meet industry's evolving IT needs:

- Business Technology
- Systems Development

Professional recognition

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

Career opportunites/outcomes

IT graduates work in a wide range of industries including cloud architecture, software, mobile and application development. You could go on to work for organisations like Google, Amazon, Facebook or Apple.

Some typical positions include:

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

See the website for more information about this degree.

Master of Cyber Security

CRICOS code	0100135
Duration	2 yrs FT Accelerated options available
Locations	Newcastle – Callaghan
Indicative annual fee	2021 A$40,231 2022 A$41,237
IELTS	IELTS overall minimum - 6.5 IELTS section minimum - 6.0
Intake	S1, S2
Practical experience	Opportunities available

Course overview

Develop the in-demand skills needed to protect and defend organisational networks in almost any field. Securing cyberspace from attacks has become a critical need in the 21st century to enable people, enterprises and governments to interact and conduct their business. There is a significant shortage of cyber security expertise throughout the world. This program is designed to provide you with a working knowledge of important security standards, techniques to exploit the current systems and networks, and expertise in the design of secure systems and their application to real-world problems.

What you will study

You will gain extensive knowledge in the areas of cyber systems and infrastructures and their applications. Develop skills in:

- data security
- system and network security
- security attacks – analysis and mitigation strategies
- security standards and practices in industry
- engineering complexity

Career opportunites/outcomes

There is currently a major shortage of cyber security workers, with leading independent and not-for-profit organisation AustCyber estimating that Australia could need almost 18,000 additional cyber security workers by 2026 (Australian Cyber Security Growth Network's Sector Competitiveness Plan 2018).

Career examples include:

- Cryptographer
- IT Security Engineer
- Security Analyst
- Security Consultant
- Security System Developer
- Security System Manager

See the website for more information about this degree.

Master of Information Technology (MIT)

CRICOS code	083517F
Duration	2 yrs FT Accelerated options available
Locations	Newcastle – Callaghan Sydney Online
Indicative annual fee	2021 A$40,257 2022 A$41,263
IELTS	IELTS overall minimum - 6.5 IELTS section minimum - 6.0
Intake	T1, T3
Practical experience	Opportunities available

Course overview

Develop the critical knowledge and skills required to work as an IT professional. As well as providing foundational IT skills for entrants with limited IT experience, the Master of Information Technology (MIT) provides opportunities for experienced IT professionals to enhance their skills. Apply your learning to technology-driven areas including communications, management, and business and entrepreneurship. This broad, flexible and technical program will offer you exciting and diverse career opportunities and challenges. Choose to specialise in Business Analytics or Management Information Systems or opt for no specialisation and create your own pathway through our list of directed courses.

Those with a degree in a cognate area can apply for credit and take this degree in accelerated mode (1-1.5 years).

What you will study

With the flexibility to tailor your degree to best suit your career development needs, you will graduate ready for the workplace.

Develop skills in:

- database management
- systems analysis and design
- process analysis and problem solving
- object orientated programming
- project planning and management
- professional practice in IT

Professional recognition

This degree is accredited by the Australian Computer Society.

Career opportunites/outcomess

Career examples include:

- Business Analyst
- Database Developer
- Software Developer
- Systems Analyst
- Web Developer

See the website for more information about this degree.

Computing, Maths and Technology

	CRICOS	Duration (Years, semesters or trimesters)	Location	Intakes	IELTS Overall Minimum/ Section Minimum	2021 Indicative Annual Fee A$^	2022 Indicative Annual Fee A$^
Bachelor of Computer Science	001604G	3	N	S1, S2	6.0/6.0	**$36,236**	**$37,141**
Bachelor of Computer Systems Engineering (Honours)	092848A	4	N	S1, S2	6.0/6.0	**$38,220**	**$39,176**
Bachelor of Computer Systems Engineering (Honours)/Bachelor of Computer Science	088927C	5	N	S1	6.0/6.0	**$37,622**	**$38,562**
Bachelor of Computer Systems Engineering (Honours)/Bachelor of Mathematics	088928B	5	N	S1	6.0/6.0	**$37,170**	**$38,099**
Bachelor of Information Technology	044439E	3	N SG	S1, S2 T2, T3	6.0/6.0	**$35,810**	**$36,706**
Bachelor of Information Technology/ Bachelor of Business	072216K	4	N	S1, S2	6.0/6.0	**$33,579**	**$34,418**
Bachelor of Mathematics*	001608D	3	N	S1, S2	6.0/6.0	**$34,540**	**$35,404**
Bachelor of Mathematics (Advanced)	0100472	3	N	S1	6.0/6.0	**$36,325**	**$37,233**
Bachelor of Mathematics/Bachelor of Science	098541E	4	N	S1, S2	6.0/6.0	**$35,726**	**$36,619**
Graduate Certificate in Information Technology	096443A	2 trimesters	N, S, Online	T1, T3	6.5/ 6.0	**$20,281**	**$20,788**
Master of Cyber Security #	0100135	4 semesters	N	S1, S2	6.5/ 6.0	**$40,231**	**$41,237**
Master of Information Technology (MIT) #	083517F	6 trimesters	N, S, Online	T1, T3	6.5/ 6.0	**$40,257**	**$41,263**

KEY FOR LOCATIONS

NC Newcastle – City
N Newcastle – Callaghan
CC Central Coast – Ourimbah
S Sydney
SG Singapore

KEY FOR INTAKES

S1 Semester 1
S2 Semester 2
T1 Trimester 1
T2 Trimester 2
T3 Trimester 3
W Winter

\# Accelerated degree options available based on individual student backgrounds.
* End-on Honours is a separate and additional year of study following the completion of a bachelor degree. This is a very different experience to the earlier years of study. There are fewer formal classes and more individual work. Honours can be course work based, research based, or a combination of the two. Admission requirements for End-On Honours vary by program, but often require a minimum GPA.
> Graduates of Bachelor of Education programs are subject to the accreditation guidelines of your home country. Completing an Australian degree does not ensure employment as a teacher in Australia.

newcastle.edu.au/international

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1300 275 866 (inside Australia)

University of Newcastle

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Callaghan
University Drive,
Callaghan NSW 2308

Sydney Campus
55 Elizabeth Street,
Sydney NSW 2000

Newcastle City Campus
NUspace
Corner Hunter and Auckland Streets,
Newcastle NSW 2300

Singapore Campus
6 Temasek Boulevard,
#10-02/03, Suntec Tower 4,
Singapore 038986

Central Coast Campus
Ourimbah
Chittaway Road,
Ourimbah NSW 2258

Connect on WeChat

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