# Information Technology







# Welcome to UTS Information Technology

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#### Faculty snapshot

11,166	total number of enrolments
7690	undergraduate enrolments
2509	postgraduate coursework enrolments
967	higher degree research enrolments

#### UTS at a glance (2020)

2198	higher degree research
10,203	postgraduate coursework
33,858	undergraduate, enabling and
	non-award

#### UTS student diversity

29%	are 25 or older
49%	are female

50% were born outside of Australia

Please note the above numbers are approximate as of January 2020.

#### Connect with us



UTSFEIT



utsengineeringandit



UTSFEIT

#### **Acknowledgement of Country**

UTS acknowledges the Gadigal People of the Eora Nation and the Boorooberongal People of the Dharug Nation upon whose ancestral lands our campuses stand. We would also like to pay respect to the Elders both past and present, acknowledging them as the traditional custodians of knowledge for these Lands.

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# Why information technology at UTS?

### Experience the UTS difference.

#### **INDUSTRY-FOCUSED LEARNING**

Nothing prepares you better than real industry experience. Climb the ladder faster by combining theory and practice in an internship connected to your degree.

#### **FUTURE READY**

You're at uni to become one of the creators of the future. Do that in the most forward-thinking spaces and hi-tech, future-first laboratories available. Ours!

#### A FOOT IN THE DOOR

Get an internship that will help fuel your future with one of our 1,000 partner companies. Our team will help you secure it. The UTS internship team is here to help you turn access into valuable work experience. It's this type of know-how that sets you apart from your peers when you graduate.

#### **SEE YOUR IDEAS FLOURISH**

TIME Magazine, Snapchat, Reddit, Facebook, Google, Dropbox, WordPress and Yahoo were all founded in universities. Be where opportunities happen. 40% of Sydney's tech start-ups are in our neighbourhood and we offer dedicated services and programs to mentor students with ideas and ambitions.

#### **EXPAND YOUR HORIZONS**

Every door in the world is open to you right now. Keep it that way. Use our Global Exchange, International Studies course or Beyond UTS International Leadership Development (BUILD) program with its overseas volunteering placements, to lay down the foundations for a global career.

#### **DO SOMETHING THAT MATTERS**

Choose the Honours program and you'll work on research that could change the world for millions of people. Visit **uts.edu.au/it-honours** to find out more and learn about the real-world projects you could be involved in.

#### PROFESSIONAL FROM DAY ONE

Step one listen, step two do. IT subjects are delivered by industry professors who understand the importance of practice. Be a true professional from the start, by applying your skills to real industry challenges, hackathons and showcases.



256 exchange agreements in 43 countries

## 69th in the world for graduate employability

(QS Graduate employability Rankings 2020)

5 star rated

for excellence









UTS was awarded 5 stars in all 7 categories (QS Stars Rating 2018-2021)

NO.

in Australia for Computer Science & Engineering

Academic Ranking of World Universities (ARWU) 2020

UTS ranked Australia's #1 young uni

\*QS World University Rankings Top 50 Under 50, 2021

**Top 150** universities

globally

QS World University Rankings 2021

NO. 29

in the world for Computer Science

Academic Ranking of World Universities (ARWU) 2020

# World-class facilities

#### **ENGINEERING AND IT BUILDING**

Every space in the building is designed to turn traditional learning on its head to embed technology and enhance creativity, entrepreneurship and collaboration. Digitally equipped classrooms, collaborative theatres and study spaces adapt to support group work, technology-enabled activities and practice-based learning.

The building is a living, breathing laboratory, embedded with revolutionary technology and purpose-built to spark creativity and collaboration. Everything you need to take on tomorrow is right here, all under one roof.

#### **UTS DATA ARENA**

Data comes to life in the building's interactive 3D UTS Data Arena. It is a 3D data visualisation arena showcasing the latest in immersive technology. It enables a unique method for the exploration and visualisation of data. The facility allows researchers to observe interrelationships, patterns and anomalies not normally seen in 2D format.

#### **PROTOSPACE**

A 900m² additive and advanced manufacturing facility that actively supports education, exploration and innovation. This unique lab is unlocking the next generation of manufacturing opportunities, giving UTS students access to cutting-edge 3D technologies, software and technical expertise.

#### **LABORATORIES**

Whatever engineering field you've got your eye on, we've got fully specced-up lab spaces to hone your skills. The building contains civil, electrical, information and mechanical. information and communication technology laboratories, where you can gain hands-on practical experience.

#### **TECH LAB**

A brand new research facility that brings together transdisciplinary research on a large scale, with a focus on developing and applying new techniques around digital transformation and IoT.



#### **LEARNING PRECINCT**

In between classes, you can study or conduct group work in the FEIT Learning Precinct, where you can also access teachers for support, get your hands on reference materials and other resources.



# SOFTWARE DEVELOPMENT STUDIO

A rich environment to become professionally competent via a collaborative industry software development experience.

#### **UTS LIBRARY**

The library has expanded to include an underground storage system that uses robots to retrieve books, freeing library space for student collaboration and quiet study. This upgrade is part of the UTS City Campus Master Plan, a \$1 billion investment to re-develop UTS.

#### **UTS STARTUPS**

UTS Startups includes an entrepreneurship program designed to give you start-up skills and provide you with access to resources that help launch the entrepreneurs of the future. Learn more at **startups.uts.edu.au** 

# Internships

## The Diploma in Information Technology Professional Practice gives you practical, hands-on work experience.

## Let a degree at UTS Faculty of Engineering and IT give you the edge.

When you choose to study at the UTS Faculty of Engineering and IT, you get to experience the best of both worlds - a great degree and the chance to complete internships alongside your course.

Students who enrol in the Bachelor of Science in IT complete the Diploma in Information Technology Professional Practice as part of their program. The internship is a structured program, consisting of one ninemonth internship alongside your IT course.

Bachelor of IT Co-operative Scholarship students complete two six-month internships as part of their scholarship.

#### **GAIN REAL-WORLD EXPERIENCE**

Internships are structured programs that give you valuable hands-on work experience. You get to see how the technical knowledge you learn at uni is applied in practice. It's the perfect way to explore the world of work to learn more about the type of job options and career paths available to you.

#### **DEVELOP EFFECTIVE SOFT SKILLS**

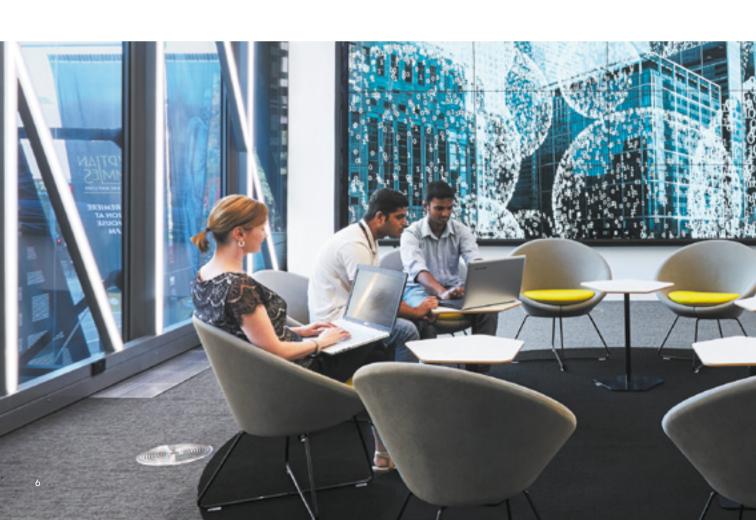
Working in a professional environment is much more than applying what you're learning at uni, it's also a chance to develop your soft skills in the workplace. Skills such as teamwork, communication, time management, adaptability and problem solving are all traits that potential employers look for and can help you land a job.

#### **BUILD VALUABLE NETWORKS**

An internship as part of your IT degree is a chance to make valuable connections and start building your industry network. Your internship work colleagues may become lasting contacts who would let you know about potential job opportunities and act as your mentors and referees in the future.

#### **CREATE A JOB-WINNING RESUME**

Completing internship programs as part of your UTS degree means you're able to offer something different on your resume by including your industry-relevant work experience. It's a sure-fire way to get you noticed by potential employers when looking for that all important first job out of uni.



# Internship FAQs

# Q. WHAT IS THE DIPLOMA IN INFORMATION TECHNOLOGY PROFESSIONAL PRACTICE?

With the Diploma in Information Technology Professional Practice, you can undertake a minimum of nine months IT work experience in addition to your course.

The Diploma is available to students enrolled in the following courses:

- Bachelor of Science in Information Technology
- Bachelor of Science in Games Development
- Bachelor of Computing Science (Honours)
- Bachelor of Science in Information Technology combined degrees

## Q. WHAT SUPPORT DO I HAVE SECURING AN INTERNSHIP?

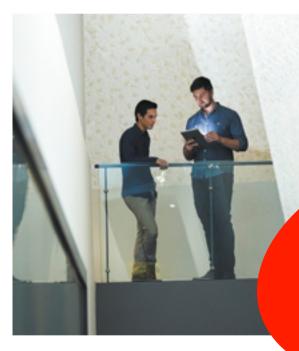
The careers team are available to assist you with your job search. We maintain links with more than 1000 organisations offering both scholarships and internships, the latter being advertised on our in-house jobs portal, CareerHub. We also offer opportunities to find mentors, meet contacts, and build networks that will prove invaluable in your career. You will also receive support from the School of Professional Practice and Leadership.

## Q. WHAT ARE THE BENEFITS OF AN INTERNSHIP?

An internship provides you with a unique opportunity to put practice into practice. This means you get to test and refine your practical skills as well as build business acumen around your communication, teamwork and creative skills.

## Q. HOW MANY HOURS SHOULD I COMMIT TO MY INTERNSHIP?

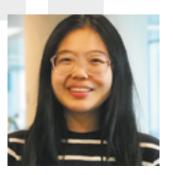
An internship is similar to a full-time job. You'll be expected to commit to the contracted hours of employment during this time. Don't worry, there are no other compulsory classes during this time so you can solely focus on your work placement.



# Our staff are here to help

You're not on your own when looking for internships. Dedicated staff are available to assist you with resume writing, interview skills and job finding strategies.

# Clarissa Lim Bachelor of Information Technology Co-operative Scholar



"The experience you gain during your internship helps you develop a clearer understanding of what businesses are looking for. Hopefully, this gives you an edge when you enter the job market as you'll have a better idea of how to answer interview questions and how your skills match the needs of a business."

# Careers

# Information Technology is your passport to success. Start your career journey at UTS.

#### PREPARE FOR THE FUTURE

Today's IT professionals are programming, networking, analysing and building. They are pioneering business and technical solutions for computer hardware, software, electronics, telecommunications, e-commerce and computer services.

## THE FUTURE HAS NEVER LOOKED BRIGHTER FOR THE IT INDUSTRY

Technology continues to infiltrate every aspect of our lives, and there's no signs of it slowing down. Your IT degree will prepare you for a fast-paced digital future, giving you the knowledge and developing the skills you need for any industry or your own start-up.

If you're interested in working in technology, the opportunities are endless. In fact, the IT sector is one of the biggest contributors to Australia's national economy with predicted growth until 2020.

## WHAT DO YOU NEED TO WORK IN IT?

IT is not just about computers, especially if you're interested in one day creating your own start-up.

You've got to know how the business works. Here are a few tips on what you need to work in IT:

- good communication skills and to enjoy dealing with people
- creative thinking and problem solving skills
- to be motivated and results-driven
- to be a team player
- to be willing to learn new things and adapt to an ever-changing environment
- a mix of business and technical skills
- an understanding of how a business works - IT is not just about computers

172,400

new IT related jobs are predicted to be created over the next five years to May 2024

Department of Employment, 2019 Industry Employment Projections

# Mitchell Tuck Bachelor of Science in Information Technology



"After graduating college with an Advanced Diploma in Network Security, I wanted to dive deeper into the field of cybersecurity and found that UTS was offering the perfect course.

When I am about to commit to something, I always research the best and most practical option available."

# Prepare for the future

# Robotics, artificial intelligence and automation are all around us, revolutionising the way we live and work.

The demand for skilled IT professionals is growing exponentially to meet these emerging tech trends. Check out the top skills needed to meet this demand.

#### **SOFTWARE DEVELOPER**

Software developers are the creative minds behind computer programs and algorithms.

The programs must be secure and continuously tested to ensure code is released consistently, at a high quality and fast, ensuring clients and customers have a seamless and safe experience across applications.

Smart solutions, robots, machine learning, artificial intelligence, autonomous vehicles and advanced enterprise solutions are increasing the demand for custom software solutions.

Prepare with a Bachelor of IT Co-operative Scholarship or Bachelor of Science in IT, Diploma in IT Professional Practice or Bachelor of Computing Science (Honours)

#### CYBERSECURITY EXPERT

Advances in inter-connectivity, smart technology and online services are increasing the chances of cyber threats. In fact, according to the 2016 PwC Global Economic Crime Survey, cybercrime is ranked second most reported economic crime in the world.

Cyber security experts are tasked with simulating, tracking and targeting hackers.

Prepare with the Bachelor of Science in Information Technology and major in Networking and Cybersecurity.

#### **DATA ANALYST**

The Internet of Things is predicted to have 50 billion 'things' connected to the net by 2020. These 'things' include mobile phones, home appliances, healthcare devices, lights, wearable devices, engines and machinery.

As the demand for data grows, so will the demand for data analysts. An analyst has deep analytical skills with an ability to identify patterns and draw conclusions and insights to inform business decisions.

Prepare with the Bachelor of Science in Information Technology and major in Data Analytics.

#### **VIRTUAL REALITY DESIGNER**

The world of virtual and augmented reality is changing fast and becoming more accessible and wide-spread. Aside from the gaming industry, VR is also being used in the engineering, architecture, construction, education, medical and military industry for 3D design, simulations and training.

Prepare with a Bachelor of Science in Games Development.

#### **ARTIFICIAL INTELLIGENCE**

Al is enhancing human decision-making, by powering computer systems with human intelligence. This includes machine learning, where humans teach computer programs to learn by finding patterns in data. The more data available, the better the performance!

For instance, Google Assistant recognises your speech, provides search results and gives you recommendations on music and movies according to your search history.

Clinicians are also benefiting from Al by using complex pattern recognition to determine tailored treatments for patients, using billions of dimensions of DNA.

As technology advances and Al breakthroughs occur, we can expect further integration into our daily lives. Think automated transport, social robots, virtual personal assistants and advanced health detection.

Prepare with the Bachelor of Computing Science (Honours).



# Bachelor of Science in Information Technology, Diploma in Information Technology Professional Practice

**2020 Selection rank\*:** 80.40

**Duration:** 4 years full-time

6 years part-time^

Available intakes: Autumn (February), Spring (July)

 UAC code:
 603200

 UTS course code:
 C10345

 CRICOS Code:
 084259M

^Part-time study option is not available to international students

**Assumed knowledge:** HSC (or equivalent)
Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

**Professional recognition:** Graduates are eligible to apply for professional-level membership of the Australian Computer Society

**Honours:** Available as an additional year (full time) to meritorious students

# Take charge of your future in a world of disruptive technologies.

With the Bachelor of Science in Information Technology, Diploma in Information Technology Professional Practice you'll learn how to innovate today so that you can help shape tomorrow.

This program sees you combine theoretical knowledge and practical skills in both computing and business analysis to bridge the gap between business needs and innovation. The course allows you to develop a strong grounding in the fundamentals of IT, while specialising with an IT major and pursuing additional interests through a second IT major, sub-majors or elective subjects. You can even choose electives from other faculties and/or undertake an exchange session overseas.

#### Combine your degree with:

Bachelor of Business, see page 22
Bachelor of Arts in International Studies, see page 24
Bachelor of Laws, see page 26
Bachelor of Creative Intelligence and Innovation, see page 28

# Rachel Coster Bachelor of Science in Information Technology Diploma in IT Professional Practice



"UTS has been super inclusive - the Accessibility Service has supported me so much. I've had a really good time working with the team, having my own advisor, and I'm really grateful to them. You can regularly check in by email, and if you have any problems, they can help or rearrange assessments for you.

I've been working in the field for nearly five years now. I spent a year working in application development, a year in game development, six months in cyber security and now I'm a software engineer consultant."

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

#### **MAJORS**

Choose up to two majors from the following:

- Business Information Systems Management
- Data Analytics
- Enterprise Systems Development
- Interaction Design
- Networking and Cybersecurity

#### **SUB-MAJORS**

Choose up to two sub-majors from the following:

- Business Information Systems Management
- Computer Games and Animation
- Data Analytics
- Enterprise Systems Development
- Interaction Design
- Network Security
- Networking and Cybersecurity
- sub-majors from the faculties of Arts and Social Sciences, Business, and Science

#### WHY CHOOSE THIS COURSE?

As well as learning theory, you'll get the chance to practice it. You will gain:

- strong technical skills in IT
- skills in business analysis, problem solving, teamwork and communication
- exposure to real IT problems employers look for graduates with industry experience
- the opportunity to undertake a minimum of nine months' work experience with the Diploma in Information Technology Professional Practice

#### **CAREERS**

- Business analyst
- Computer game designer/animator
- Cloud specialist
- Data analyst
- Database designer/manager
- IT architect
- IT project manager
- Network administrator/manager
- Software developer
- Systems analyst
- Web developer
- Interaction designer

Core (8 subjects)	Major (8 subjects)	Electives (8 subjects)	Diploma in Information Technology Professional Practice
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	Choose one major from the following:  - Business Information Systems Management  - Data Analytics  - Enterprise Systems Development  - Interaction Design  - Networking and Cybersecurity	Choose:  - a second IT major  OR  - 2 sub-majors (IT or from another faculty)  OR  - 1 sub-major and 4 electives  OR  - 8 electives  Students may also undertake a global exchange overseas.	A 9-12 month work placement and supporting subjects at UTS.

# Majors and sub-majors

The major you choose will typically influence the career path you take after university. A major consists of eight subjects and allows you to specialise in your chosen area of IT.

## Business Information Systems Management

These days, the private sector is increasingly looking for graduates who can use IT to provide solutions that add value to their business and improve competitiveness.

You'll focus on the business side of IT. You'll learn how to use appropriate design approaches to develop Information Communication Technologies for all types of business activities. Specialise in managing the integration of Information Communication Technologies into business and society, and take leadership roles in their implementation.

#### **YOU WILL LEARN:**

- how to run an IT business and systems
- how to design IT for all types of enterprises and business activities
- how to manage the integration of IT into a business

#### **SUBJECTS INCLUDE:**

Design systems, project management, contract/vendor management, organisational theory, accounting and finance.

### **Data Analytics**

This major is all about technology services and integrates the mathematical and IT foundations for developing and applying business analytics systems. Data analytics is an emerging and rapidly expanding area, where mathematics and statistical methods interact with powerful information technologies to improve the flow of massive amounts of data for business.

#### YOU WILL LEARN:

- how to use data and mathematics to solve business problems
- about data mining; business intelligence systems; image processing; and applications of artificial intelligence

## Enterprise Systems Development

This major introduces the practice of designing, creating and maintaining software. You'll get to apply technologies and practices from computer science, design, project management, and other fields to produce effective, reliable and engaging applications in an enterprise context.

#### YOU WILL LEARN:

- how to design, analyse, implement, test and deploy software systems
- how to build software systems in an enterprise context
- teamwork, project management and quality assurance

## Networking and Cybersecurity

As the cyber landscape advances, so does the need for greater security measures that provide the framework protecting the very fabric of our new smart society.

This major equips computer network and systems engineers of the future with technical knowledge and a deep understanding of the principles of security concerned with technology services. You will develop key skills in secure network administration to protect personal and commercial data and protect organisations against imminent cyber threats.

#### **YOU WILL LEARN:**

- security fundamentals and cybersecurity, including subject options in digital forensics and mobile platform security
- the essentials of routing and switching in both wired and wireless networks
- server administration and cloud computing infrastructure
- building and securing the Internet of Things (IoT)
- options to learn advanced topics like software defined networks, advanced routing and multilayer switching
- hands-on networking skills using equipment from leading vendors



## Interaction Design

Focus on user experience and the design of interactive systems. You'll develop the practical skills to translate design concepts into working systems, as well as the necessary creative and social skills to ensure that what they create has a positive impact on the world.

#### **YOU WILL LEARN:**

- human-centred approaches to interaction design
- how to create interactive systems that support rich user experiences
- how to examine user experiences and evaluate interface effectiveness

# Sub-majors

You can also take one of the five majors listed as a sub-major (which consists of four rather than the eight subjects required for a major). Please note that Computer Graphics and Animation and Network Security are only offered as a sub-major.

# Computer Graphics and Animation

This sub-major provides you with the theoretical and practical knowledge required to understand and build modern computer graphics applications. You can choose to learn about 3D animations, rendering techniques and computer game design and programming, and you'll also have the option to complete a computer graphics project.

UTS graduates who've completed this sub-major have worked on Academy Award-winning films for special effects, such as The Matrix, King Kong, Avatar and Happy Feet (which also won the Academy Award for Best Animated Feature Film in 2007).

## **Network Security**

This sub-major gives students the opportunity to master both theoretical and practical aspects of modern security technologies and practices. It includes security fundamentals, network security, digital forensics, as well as applying security skills in devices such as routers and servers.

# Bachelor of Information Technology Co-operative Scholarship

This program is not open to international students

Selection rank: This is a co-operative scholarship.
Selection is based on a combination of ATAR and interview\*

Additional selection criteria apply. See 'how to apply' on page 15.

\*Your ATAR is just one component of your application, but an important one. We balance our selection criteria against one another, so if you excel in the application and industry interview it can compensate for a lower academic score. Historically, students with an ATAR of 85-99.95 have been offered a BIT Co-operative Scholarship.

Duration: 3 years (full-time)

Available intakes: Autumn (February)

**UAC code:** 603210 **UTS course code:** C10143

**Assumed knowledge:** HSC (or equivalent) Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

**Professional recognition:** Graduates are eligible to apply for professional-level membership of the Australian Computer Society

**Honours:** Available as an additional year (full time) to meritorious students

# The Bachelor of IT is your first step towards IT leadership.

The BIT is a three-year fast-tracked Co-operative Scholarship aimed at high achieving students who are pursuing a career in technology leadership.

Students are paid \$49,500 over the three-year program and complete two internships with leading technology employers in first and third year.

Graduates from this course are highly sought after and report excellent starting salaries and exciting career prospects. In fact, many students even find work before they graduate.

Designed with help from our industry sponsors, this scholarship offers a strategic business focus, allowing you to develop strong technical skills combined with an in-depth understanding of business practice and technical skills, and an advanced appreciation of the role of IT within today's business environment.

#### CAREERS

- Associate Developer
- Business Analyst
- Information Systems Manager
- Project Manager
- Commercial Manager

# Oliver Moor Graduate, Bachelor of IT Co-operative Scholarship



"I never wanted to go into a traditional nine to five job. I wanted to always be self-employed and have my own company. Doing a degree in technology was the best way to do that, because most new companies are technology-based.

I'm currently working in marketplace operations for Uber Eats. The app was built in the US, so essentially I look at how we can make that relevant and more efficient in the Australia-New Zealand marketplace. In my spare time I'm developing two different startups – one of them I'm about to dive into full-time."

## WHO SHOULD APPLY FOR THE BIT CO-OPERATIVE SCHOLARSHIP?

Students who are:

- excellent communicators with good interpersonal skills
- motivated, with the capacity to progress to a senior level of management
- all-round achievers who can demonstrate initiative by their involvement in activities like peer support, school council, debating, mooting, music, scouts, community work or sports
- interested in IT you don't need to have completed an IT subject in the HSC

#### **HOW TO APPLY**

There are two steps:

- 1. Complete the BIT Application form at bit.uts.edu.au
- 2. List the BIT as a preference on your UAC application

Short-listed applicants will be invited to attend an industry interview.

Official offers will be released to applicants with the highest combined results from interview and selection rank.\*

#### **INDUSTRY SPONSORS**

- Allianz
- American Express
- AMP
- ASIC
- ASX
- Campaign Monitor
- Commonwealth Bank
- CSR
- CUSCAL
- IBM
- ING Bank of Australia
- InLoop
- Integrity Life Australia
- KPMG
- Macquarie Bank

- Macquarie Group Services
- Nielsen
- Nine Digital
- Nine Entertainment Co.
- Origin Energy
- PWC
- Publicis Sapient
- Reserve Bank of Australia
- TAL
- Venntifact
- Westpac Banking
- Corporation Winning Group
- WiseTech Global
- Woolworths Group

Core (8 subjects)	Software Development Studio & Electives (6 subjects)	Sub-major (4 subjects)	Work-integrated learning
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	<ul> <li>Software Development Studio 1 and 2</li> <li>Electives</li> </ul>	Choose one sub-major from the following:  Business Information Systems Management  Data Analytics  Enterprise Systems Development  Interaction Design  Network Security  Networking and Cybersecurity	<ul> <li>Industry Experience 1 (BIT)</li> <li>Industry Experience 2 (BIT)</li> <li>Professional IT Practice Preparation 1</li> <li>Professional IT Practice Preparation 2</li> <li>Work Integrated Learning (BIT)</li> <li>Work Integrated Learning Capstone</li> </ul>

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

# Bachelor of Computing Science (Honours)

2020 Selection rank\*: 80.3

**Duration:** 4 years (full-time)

Available intakes: Autumn (February), Spring (July)

 UAC code:
 603230

 UTS course code:
 C09119

 CRICOS code:
 092896D

Assumed knowledge: HSC (or equivalent)
Mathematics Extension 1 and any 2 units of English

Recommended Year 12 subjects: English Advanced

**Professional recognition:** Graduates are eligible to apply for professional-level membership of the Australian Computer Society

# Prof Michael Blumenstein Associate Dean (Research Strategy & Management) Faculty of Engineering & Information Technology



"The Bachelor of Computing Science (Honours) is designed for students with a strong foundation in mathematics who wish to develop their research potential with a view to pursuing higher degree by research studies in the future."

#### Drive innovation with real-world experience.

This premier degree has been developed in collaboration with the software industry to ensure students graduate with the skills required to pursue highly technical careers in artificial intelligence, cybersecurity, data science or quantum computing.

With an emphasis on next generation technologies, computer scientists solve deep problems in computing. They theorise, design, develop and apply computing and software for advanced programs.

You'll work in a studio environment, applying theoretical knowledge to real-world problems. In years three and four of the course, you'll also develop research skills through computing science studio subjects and specialist subjects, culminating in an honours project in your final year of study.

The Honours component is a one-year, research-based program devoted to a research project. It is the first step towards a career in research, and a unique opportunity for students to explore research opportunities at UTS.

#### **CHOOSE A MAJOR:**

- Artificial Intelligence and Data Analytics
- Business Information Systems Management
- Cybersecurity and Privacy
- Enterprise Systems Development
- Interaction Design
- Mathematical Analysis
- Networking and Cybersecurity
- Operations Research
- Quantum Information Science
- Statistics

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

#### WHY CHOOSE THIS COURSE?

As a Bachelor of Computing Science (Honours) student, vou'll develop:

- the ability to theorise, design, develop and apply computing and software for advanced programs
- advanced cognitive, technical and communication skills required for a highly rewarding career
- opportunities to work in research. The combination of core computing science subjects, IT majors, electives and research subjects will prepare you to embark on a PhD.

#### PREPARE FOR THE FUTURE

- Intelligent robots
- Deep learning
- Artificial Intelligence
- Quantum computing
- IoT Security
- Digital Forensics

#### **CAREERS**

You will have diverse career opportunities locally and internationally across a range of industries, including science, health, engineering, finance, transport and telecommunications.

- Data scientist
- Artificial Intelligence expert
- Machine learning specialist
- Software designer
- Web development
- Interface designer
- Information systems management
- Network management
- Systems engineer
- Security operations
- Professional computing science researcher

# Mustafa Barodawala Bachelor of Computing Science (Honours)



"I wanted to study in an area that focuses on technology, but also mathematics. In computing science, maths is the foundation of how we analyse different programs, algorithms, and even different computational systems.

Having this unique way of approaching problems allows computer scientists to thoroughly investigate a problem, such as find some hidden-in-plain sight sort of pattern in a data analytics problem, or rule out potential algorithms immediately by predicting their run-time and space requirements."

Year 1		Year 2		Year 3		Year 4	
Session 1	Session 2	Session 3	Session 4	Session 5	Session 6	Session 7	Session 8
Mathematics (Core)		IT (Core)		IT (Major)	Honours Project Preparation	Honours Project	
				IT (Major)		Honours Project	IT (Major)
IT (Core)		IT (Major)		IT (Core)	Elective	IT (Core)	IT (Major)
		Comp. Sci. Studio	IT (Major)	Comp. Sci. Studio		Elective	

# Bachelor of Science in Games Development

Be part of the largest global entertainment industry, make games for social good, or apply your specialist skills to any IT field.

2020 Selection rank\*: 80.3

**Duration:** 3 years full-time

6 years part-time^

**Available intakes:** Autumn (February)

 UAC code:
 603225

 UTS course code:
 C10229

 CRICOS code:
 057197M

^Part-time study option is not available to international students

Assumed knowledge: HSC (or equivalent)
Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

**Professional recognition:** Graduates are eligible to apply for professional-level membership of the Australian Computer Society

**Honours:** Available as an additional year (full time) to meritorious students

Evolving technology is changing the face of the interactive entertainment industry, giving unprecedented opportunities. Today's games are sophisticated computer programs that often connect thousands of players through virtual worlds and consist of detailed 3D graphics, realistic physics and complex artificial intelligence.

In this program, you'll develop a sound education in all aspects of information technology as well as the diverse skills necessary for a career in games development. In doing so, graduates are equipped with a wide range of skills that can be applied to a diverse set of IT careers, such as practical problem-solving skills, the application of theory and cutting-edge research to a real-world context, programming across a variety of languages, professional verbal and written communication, and an awareness of the principles of ethics in the IT sector.

#### WHY CHOOSE THIS COURSE?

At UTS you won't just learn the theory, but will also practice it. You will gain:

- enhanced work-ready expertise in games development and other IT fields
- creative freedom and practical problem-solving skills based on leading-edge IT theory
- communication skills in a variety of forms including written, verbal, online and technical literacies
- exposure to a wide range of cutting edge research in games, including artificial intelligence, serious games and gamification, computer graphics, and more
- an understanding of industry through showcase events and industry interaction

#### **CAREERS**

- Game developer
- Interaction designer
- Graphics programmer
- Exer-game/edu-game research engineer
- Artificial intelligence in games researcher
- Virtual/augmented reality developer
- Simulation/visualisation specialist
- Software engineer
- Data analyst
- Cybersecurity analyst
- IT project manager

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

#### Course structure

Core (8 subjects)	Games Development (10 subjects)	Electives (6 subjects)
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	<ul> <li>Advanced Games Programming</li> <li>Advanced Interaction Design</li> <li>Applications Programming</li> <li>Data Structures and Algorithms</li> <li>Fundamentals of Interaction Design</li> <li>Game Design Studio 1</li> <li>Game Design Studio 2</li> <li>Introduction to Computer Game Design</li> <li>Introduction to Computer Game Development</li> <li>Introduction to Computer Graphics</li> </ul>	Choose:  - 1 sub-major and 2 electives  OR  - 6 electives

#### Edward Su Bachelor of Science in Games Development



"My advice to inspiring game-makers would be that at university you really need to get involved and start making games as soon as possible, even if they're not great. Also to network with people, because the gaming industry in Australia right now is quite small."

# Bachelor of Information Systems

2020 Selection rank\*: 81.45

**Duration:** 3 years (full-time) 6 years part-time^

Available intakes: Autumn (February), Spring (July)

 UAC code:
 603215

 UTS course code:
 C10395

 CRICOS code:
 0100483

Assumed knowledge: HSC (or equivalent)
Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

**Professional recognition:** The Faculty of Engineering and Information Technology is seeking accreditation from the Australian Computer Society

^Part-time study option is not available to international students

Data is being produced globally in unprecedented volumes. Specialists who understand complex information systems in fields such as Systems Analytics, Service Innovation, Smart Infrastructure, and Sustainable Enterprises will be in greater demand.

In this program you will be able to able to harness the transformative power of Information Systems to drive sustainable and resilient environmental, economic and social change in business, government, community, health, non-government organisations and more.

#### WHY CHOOSE THIS COURSE?

At UTS you won't just learn the theory, but will also practice it. You will gain:

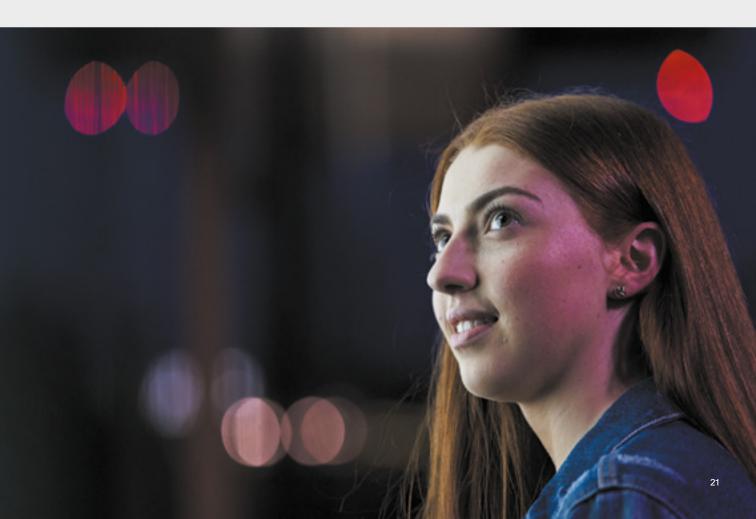
- solid knowledge and skills in information system applications across different areas
- ability to analyse complex problems and develop solutions
- communication skills in a variety of forms including written, verbal, online and technical literacies
- exposure to real IT problems employers look for graduates with industry experience

#### **CAREERS**

- Information Systems Analyst/Designers
- Business Analyst
- Smart Infrastructure Professional
- Supply Chain Modeller
- Digital Transformation Analyst
- Data Modeller

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

Core (10 subjects)	IS studios (6 subjects)	IS stream choice (4 subjects)
<ul> <li>Business Intelligence</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Enterprise Process Management</li> <li>Introduction to Human-centred Complex Systems</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Sustainability and Information Systems</li> </ul>	<ul> <li>IS Value Creation Studio</li> <li>IS Data Visualisation Studio</li> <li>IS Implementation Studio</li> <li>Social Impact of IS Studio</li> <li>IS Professional Capstone A</li> <li>IS Professional Capstone B</li> </ul>	<ul> <li>Information Systems choice</li> <li>Systems Analytics choice</li> </ul>



# Combined degrees

Design the perfect double degree to suit your career goals.

## Bachelor of Business Bachelor of Science in Information Technology

2020 Selection rank\*: 80.20

**Duration:** 4 years (full-time)

Available intakes: Autumn (February)

 UAC code:
 603220

 UTS course code:
 C10219

 CRICOS code:
 047835B

**Assumed knowledge:** HSC (or equivalent)
Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

Professional recognition: Graduates are eligible to apply for professional-level membership of the Australian Computer Society

**Honours:** Available in Business and IT as an additional year (full time) to meritorious students

#### Technology transcends every company department.

Technology is one of the fastest growing industries, and essential to every successful business. This course provides a sound education in all aspects of computing and IT for students pursuing a career in the profession.

It adopts a practice-based approach, with the course content designed as a mix of theory and practice. The business component will provide you with the knowledge, competencies and values necessary for fulfilling an effective career in business.

#### WHY CHOOSE THIS COURSE?

Graduates with solid IT skills who also understand business operations are in strong demand in industry. Business knowledge is an increasingly important tool for IT professionals, enabling them to understand how IT fits into a successful business strategy.

#### **CAREERS**

- Electronic business operations management
- Information systems development/management
- Software development in the banking and finance sector
- Systems analyst
- Web developer

Graduates are also prepared for traditional business careers such as:

- accountant
- advertising consultant
- business analyst
- financial planner
- human resource manager
- management consultant
- marketing manager

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

# Kevin Vilaythong Bachelor of Business Bachelor of Science in Information Technology



"In high school, I did a number of IT subjects like Information Process Technology and Software Design. I didn't have any background in business or accounting, but I felt the degree would offer opportunities in both fields.

I have a graduate accountant position at Waterway Constructions, found through the UTS Careers Hub. It's been a big learning curve on accounting as well as an IT project to automate processes in the company. It's important to be transparent and constantly communicating with your supervisor or colleague. I focussed on my interpersonal and collaboration skills with the team to successfully deliver projects."

**Divya Saravana**Bachelor of Business
Bachelor of Science in Information Technology



"I really wanted to choose a degree that helped me combine my passion and prior experience. Coming to UTS and selecting this particular double degree has allowed me to fulfil my ambition and achieve my career goals!

The way that this degree is structured really enabled me to understand and experience the different career pathways within this industry. This, in combination with the course content being very future focused and hands on, is what helped me secure my internship at the Big 4!"

IT core (8 subjects)	Business core (8 subjects)	IT major (8 subjects)	Business major (8 subjects)
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	<ul> <li>Accounting for Business Decisions A</li> <li>Accounting for Business Decisions B</li> <li>Business Statistics</li> <li>Economics for Business</li> <li>Fundamentals of Business Finance</li> <li>Integrating Business Perspectives</li> <li>Managing People and Organisations</li> <li>Marketing Foundations</li> </ul>	Choose one IT major from the following:  - Business Information Systems Management  - Data Analytics  - Enterprise Systems Development  - Interaction Design  - Networking and Cybersecurity	Choose one Business major from the following:  - Accounting  - Advertising and Marketing Communications  - Economics  - Finance  - Human Resource Management  - International Business  - Management  - Marketing

# Combined degrees

## Bachelor of Science in Information Technology, Bachelor of Arts in International Studies

2020 Selection rank\*: 82.35

**Duration:** 5 years full-time **Available intakes:** Autumn (February)

 UAC code:
 609230

 UTS course code:
 C10239

 CRICOS code:
 059726G

**Assumed knowledge:** HSC (or equivalent)
Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

**Professional recognition:** Graduates are eligible to apply for professional-level membership of the Australian Computer Society

**Honours:** Available in IT as an additional year (full time) to meritorious students

# Why settle for one specialisation? Create your niche by combining your global areas of interest.

This program provides a sound education in all aspects of computing and IT. The international studies component offers the study of a language and culture other than English and the opportunity for students to study overseas for an academic year, pursuing a major research project in a field of their choice.

Take subjects in language and culture as well as a year studying overseas in one of the countries available as a major, allowing you to immerse yourself in another language and culture. The overseas year is normally undertaken as part of your fourth year (full-time). UTS pays for your travel between Sydney and your country of study, tuition fees at the overseas institution, visa fees and the cost of the UTS Overseas Insurance Policy.

#### WHY CHOOSE THIS COURSE?

Why limit your horizons to Australia and other English-speaking countries?

#### You will gain:

- a thorough knowledge of IT and computing as well as skills in business analysis, problem solving, teamwork and communication
- exposure to foreign culture and language skills, opening up opportunities for you to work in a global workforce
- an understanding and appreciation of, and sensitivity towards, diverse cultural perspectives, practices, needs and values, in international and local contexts.

For career options available to Bachelor of Science in Information Technology graduates, see page 11.

IT core (8 subjects)	IT major (8 subjects)	Electives (8 subjects)	Country major (6 subjects + in-country study)
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	Choose one IT major from the following:  - Business Information Systems Management  - Data Analytics  - Enterprise Systems Development  - Interaction Design  - Networking and Cybersecurity	Choose:  - A second IT major  OR  - 2 sub-majors (IT or from another faculty)  OR  - 1 sub-major and 4 electives  OR  - 8 electives	Choose one Country major from the following:  - Canada  - China  - France  - Germany  - Italy  - Japan  - Latin Americas  - Spain  - Switzerland

<sup>\*</sup>Selection rank: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admission schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2020 intake (for December Round 2 and January Round 1).



## Bachelor of Science in Information Technology, Bachelor of Laws

**2020 Selection rank\*:** 97

**Duration:** 5 years full-time

Available intakes: Autumn (February)

 UAC code:
 609020

 UTS course code:
 C10245

 CRICOS code:
 064382G

**Assumed knowledge:** HSC (or equivalent)
Mathematics Advanced and any 2 units of English

Recommended Year 12 subjects: Mathematics Extension 1 and English Advanced

Professional recognition: Graduates are eligible to apply for professional-level membership of the Australian Computer Society. The course satisfies the academic requirements for admission to the Supreme Court of NSW as a lawyer. Students wishing to obtain full recognition for admission as a lawyer have the option of undertaking the UTS Practical Legal Training (PLT) program upon completion of the course.

**Honours:** Available in IT as an additional year (full time) to meritorious students. Available in Law to meritorious students.

# Use your unique experience to apply legal practice to existing and emerging technology.

Lawyers are important business partners in today's fast-paced digital world. In this combined information technology and law degree, you'll gain a blend of technical knowledge and legal skills.

This program also provides you with a thorough grounding in Australian legal practice, including an understanding of the legal system, technology legislation, technology-specific criminal law, contract law and environmental law.

The IT component adopts a practice-based approach to IT education and its content is a mix of theory and real-world experience. You'll gain a sound education in all aspects of computing and IT and allows you to gain a specialisation with an IT major.

#### WHY CHOOSE THIS COURSE?

The primary goal of this combined degree is to prepare you to become a future lawyer with expert knowledge in IT, qualifying you to work as an IT professional in a legal environment. Because of the rapidly changing nature of IT, lawyers with IT skills are in demand.

You will gain:

- strong technical skills in IT
- skills in business analysis, problem solving, teamwork and communication
- a thorough grounding in Australian legal practice

#### **CAREERS**

Communication, teamwork, problem solving, analytical and creativity will be key skills, adding to your expertise in IT and Law. Roles are available throughout industry and include:

- intellectual property expert
- internet regulation specialist
- legal technology specialist
- online privacy manager
- solicitor IP and technology

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

# Combined degrees

IT core (8 subjects)	Law core (15 subjects)	IT major (8 subjects)	Law electives (6 subjects)
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	- Administrative Law - Australian Constitutional Law - Civil Practice - Commercial Law - Contracts - Corporate Law - Criminal Law and Procedure - Equity and Trusts - Ethics Law and Justice - Evidence - Foundations of Law - Public International Law - Real Property - Remedies - Torts	Choose one IT major from the following:  - Business Information Systems Management  - Data Analytics  - Enterprise Systems Development  - Interaction Design  - Networking and Cybersecurity	Students may choose from a wide range of Law electives and may also undertake an exchange session overseas. See the handbook for more detail. handbook.uts.edu.au/it



## Bachelor of Science in Information Technology, Bachelor of Creative Intelligence and Innovation

2020 Selection rank\*: 80.05

**Duration:** 5 years full-time

Available intakes: Autumn (February)

 UAC code:
 609565

 UTS course code:
 C10327

 CRICOS code:
 079757B

**Assumed knowledge:** HSC (or equivalent)
Mathematics Advanced and any 2 units of English

Recommended Year 12 subjects: Mathematics Extension 1

and English Advanced

**Professional recognition:** Graduates are eligible to apply for professional-level membership of the Australian Computer Society

**Honours:** Available in IT as an additional year (full time) to meritorious students. Available in Creative Intelligence and Innovation to meritorious students.

# Build a brighter future with creative intelligence and innovation skills.

With a combined information technology and creative intelligence and innovation degree, you'll gain a blend of technical knowledge underpinned by a philosophy of innovation and creativity that will help you turn ideas into reality. The creative intelligence competencies you'll pick up should enable you to navigate a rapidly accelerating world of change.

Using multiple perspectives from diverse fields, it integrates a range of industry experiences, real-world projects and self-initiated proposals to provide you with the creative and entrepreneurial skills to address the problems, complex challenges and untapped opportunities tomorrow will bring.

#### WHY CHOOSE THIS COURSE?

This course focuses on high-level conceptual thinking and problemsolving practices that lead to the development of innovative, creative and entrepreneurial outcomes.

You will gain:

- strong technical skills in IT
- leading-edge capabilities that are highly valued in the globalised world, such as dealing with critical and creative thinking, invention, complexity, innovation, future-scenario building and entrepreneurship
- the ability to work on your own, across and between other disciplines

#### CARFERS

You will maximise your potential in your chosen profession by being a:

- creative thinker
- entrepreneur
- initiator of new ideas
- scenario planner
- global strategist
- open network designer
- sustainable futures innovator

This combined degree will help you develop the ability to identify and find solutions to some of the most complex issues that face many disciplines and society; these are highly sought after attributes in graduates.

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

# Combined degrees

IT core (8 subjects)	IT major (8 subjects)	Electives (8 subjects)	Creative Intelligence and Innovation (12 subjects)
<ul> <li>Business Requirements Modelling</li> <li>Communication for IT Professionals</li> <li>Database Fundamentals</li> <li>Introduction to Information Systems</li> <li>Network Fundamentals</li> <li>Programming Fundamentals</li> <li>Project Management and the Professional</li> <li>Web Systems</li> </ul>	Choose one IT major from the following:  - Business Information Systems Management  - Data Analytics  - Enterprise Systems Development  - Interaction Design  - Networking and Cybersecurity	Choose:  - A second IT major  OR  - 2 sub-majors (IT or from another faculty)  OR  - 1 sub-major and 4 electives  OR  - 8 electives	<ul> <li>Problems to Possibilities</li> <li>Creative Practice and Methods</li> <li>Past, Present, Future of Innovation</li> <li>Creativity and Complexity</li> <li>Leading Innovation</li> <li>Initiatives and Entrepreneurship</li> <li>Professional Practice at the Cutting Edge</li> <li>Innovation Internship A</li> <li>Industry Innovation Project</li> <li>Creative Intelligence Capstone</li> <li>Choose one of the following:</li> <li>Innovation Internship B</li> <li>Speculative Start-Up</li> <li>Research Proposal</li> <li>Choose one of the following:</li> <li>Envisioning Futures</li> <li>New Knowledge-making Lab</li> </ul>



### Bachelor of Information Systems Bachelor of Business

2020 Selection rank\*: 85.05

**Duration:** 4 years (full-time) or equivalent part time^

Available intakes: Autumn (February), Spring (July)

 UAC code:
 603221

 UTS course code:
 C10278

 CRICOS code:
 0100484

**Assumed knowledge:** HSC (or equivalent)
Mathematics Advanced and any 2 units of English

**Recommended Year 12 subjects:** Mathematics Extension 1 and English Advanced

**Professional recognition:** The Faculty of Engineering and Information Technology is seeking accreditation from the Australian Computer Society

^Part-time study option is not available to international students

**Honours:** Available in Business as an additional year (full time) to meritorious students

## Leverage the strengths of Information Systems and Business

Graduates of the course leverage the strength of Information Systems and Business to drive sustainable and resilient environmental, economic and social change in businesses, government, community, health, non-government organisations and more.

In this program is a cross-faculty offering, leveraging the strengths of Information Systems and Business. The offering is aimed at meeting the emerging demands of a new generation of technology managers ready to deal with the challenges of complex systems.

#### WHY CHOOSE THIS COURSE?

This course focuses on high-level conceptual thinking and problemsolving practices that lead to the development of innovative, creative and entrepreneurial outcomes.

You will gain:

- strong technical skills in IT
- leading-edge capabilities that are highly valued in the globalised world, such as dealing with critical and creative thinking, invention, complexity, innovation, future-scenario building and entrepreneurship
- the ability to work on your own, across and between other disciplines

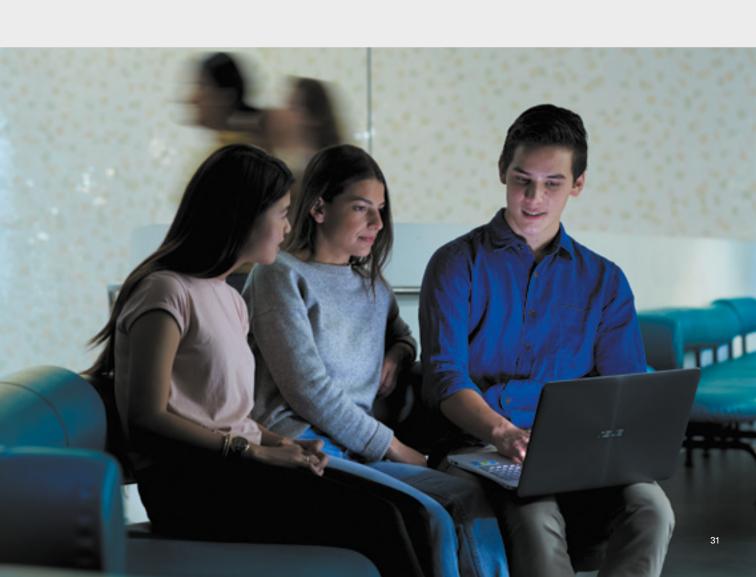
#### **CAREERS**

- information systems analyst/designers
- business analyst
- smart Infrastructure professional
- supply chain modeller
- digital transformation analyst
- data modeller
- business process modeller

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

# Combined degrees

IS core (12 subjects)	Business core (8 subjects)	IS Stream choice (4 subjects)	Business major (8 subjects)
<ul> <li>Communication for IT Professionals</li> <li>Introduction to Information Systems</li> <li>Programming Fundamentals</li> <li>Database Fundamentals</li> <li>Network Fundamentals</li> <li>Business Intelligence</li> <li>Project Management and the Professional</li> <li>IS Value Creation Studio</li> <li>Social Impact of IS Studio</li> <li>IS Professional Capstone A</li> <li>IS Professional Capstone B</li> <li>Introduction to Human-centred Complex Systems</li> </ul>	<ul> <li>Accounting for Business Decisions A</li> <li>Managing People and Organisations</li> <li>Marketing Foundations</li> <li>Economics for Business</li> <li>Fundamentals of Business Finance</li> <li>Business Statistics</li> <li>Integrating Business Perspectives</li> <li>Accounting for Business Decisions B</li> </ul>	Systems Analytics choice     Information Systems choice	Choose one Business major from the following:  - Accounting  - Advertising and Marketing Communications  - Economics  - Finance  - Human Resource Management  - International Business  - Management  - Marketing



# Degree add-ons

# Give yourself more options with add-ons to your degree.

# Smarter futures start here

The Diploma in Innovation is a qualification that adds to your degree by preparing you for the future of work. It responds directly to industry demand for graduates who can collaborate across disciplines.

There's an emphasis on entrepreneurial thinking, too: by the time you graduate, you'll be ready to be an entrepreneur or intrapreneur. Our course content embraces the unlimited possibilities of the new world of work. Subjects include 3-week intensive studios on innovation and entrepreneurship, explorations of complexity and sustainability, and deep dives into concepts of frame innovation and futures thinking.

Interested? You can add the diploma to any UTS bachelor's degree (except BCII). What's more, all diploma subjects are offered as winter and summer school intensives, so even though you're adding an extra qualification, you'll still graduate on time.

# + Add the Diploma in Languages

#### Gain a global outlook

Bring the world to your doorstep with a Diploma in Languages. Add this one-year diploma to your UTS degree to gain language and cultural skills, build your professional identity, and graduate with a range of capabilities that will prepare you for an international career. Language options include Chinese, French, German, Italian, Japanese and Spanish.

No need to apply just yet – the diploma is available to students already studying an undergraduate or postgraduate coursework degree program at UTS, so sign up when you enrol. No matter what you study, the diploma can give your qualification an international edge.



# Additional courses for international students

## Bachelor of Science in Information Technology

Direct entry open to international students only

**Duration:** 3 years full-time

Available intakes: Autumn (February), Spring (July)

603201 **UAC code:** UTS course code: C10148 040941A **CRICOS code:** 

Professional recognition: Graduates are eligible for professionallevel membership of the Australian Computer Society

Honours: Available as an additional year to meritorious students

#### Combine your degree with:

Bachelor of Business, see page 22 Bachelor of Arts in International Studies, see page 24 Bachelor of Laws, see page 26

Bachelor of Creative Intelligence and Innovation, see page 28

If you're an international student, you have the option of completing the Bachelor of Science in IT with or without the Diploma in Information Technology Professional Practice. You'll follow the course structure outlined on page 11.

#### You will gain:

- strong technical skills in IT
- skills in business analysis, problem solving, teamwork and communication
- exposure to real IT problems
- graduates with industry experience are highly sought after by employers



<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

# Women in Engineering and IT (WiEIT)

Inspire. Educate. Empower.

We create and lead social change so that study and career journeys in Engineering and IT are not limited by gender. As an IT student at UTS, you are a part of our diverse community of inspiring students, staff, professionals and allies who will be part of your journey with us from your first day to graduation.

#### **BUDDY UP**

Get insider info from our students on how to make the most of uni when you start with us! We will pair you with a buddy, a student in second year or above, who can help you navigate your first year of engineering/IT with us at UTS. Get a tour of the campus, explore the local café scene, join student society events, tips on how to balance uni with life, and meet other students across the uni.

#### **DEDICATED HANG OUT SPACE**

Find your people in the Women in Engineering and IT (WiEIT) Cube on Level 5 in Building 11, the Engineering and IT building on our city campus. Use this space to meet the community, host events, ideate projects or just hang out with friends.

#### **INSPIRE FUTURE GENERATIONS**

Creating engineering and technology solutions needs diverse minds to design solutions that include the needs of those who are different and similar to us.



Inspire girls in primary and high school to create the change of tomorrow by sharing your own journey and helping them build the skills and confidence through our STEM school outreach initiatives.

# CONNECT WITH AN INDUSTRY PROFESSIONAL THROUGH MENTORING

From second year onwards, connect with an IT industry professional through the Lucy Mentoring Program. Your industry mentor will help guide your study and career journey, no matter whether you have no plan, one plan, or many plans!

Not sure which career pathways are for you? Your mentor's experience and advice could help design your future career!

Does mentoring really help? Yes! In 2018 and 2019, 203 women participated in the Lucy Mentoring program. In 2019:

- 80% of students were confident in making career decisions after the program, compared to 27% before the program.
- 86% of students could identify female role models in their field compared to 27% before the program.
- "The program has helped me find which aspect of software engineering I want to focus on, which is AI and machine learning."
- 2019 mentee

#### **GET INVOLVED**

Check out our website for more info on what we do and join our Women in Engineering and IT community on Facebook. We share events, internships, jobs, scholarships, volunteering opportunities and things to get involved with - join us for social events, networking with

industry, and events both on and off-campus!

wieit.uts.edu.au

# Satya Pranavi Gangapuri Bachelor of Engineering

Diploma in Professional Practice (Biomedical)



"Lucy Mentoring has been an amazing opportunity to gain an abundance of knowledge about my industry of biomedical engineering, the professional workplace and many other aspects to planning my future career. I gained vital knowledge that helped me improve immediate skills such as resume and cover letter writing as well as interview preparation. Beyond learning about applying and improving myself as an engineering student, I learnt more about the various career paths open for me and essential skills

that I can focus on building from now, so I can grow to be an ideal candidate for future opportunities. I was able to connect with my mentor and also share my own personal worries and needs, developing a range of soft skills and perspective throughout our meetings. Lucy Mentoring impacted me in a life-changing way, as throughout each session with my mentor and the check-in points, I felt more confident in my own skills and experience, as well as learning about diverse topics from an industry perspective."

# University life

To ensure you feel confident and supported, we offer help with housing, money, making friends, health, cultural issues and career development.

Here are just a sample of clubs and programs at UTS. You can check out the full list of programs and events to help you broaden your social network at uts.edu.au/current-students/ university-life

#### **PROGSOC**

ProgSoc is a society established by students for students who have an interest in programming. Its main aim is to encourage programming within UTS and to enable its members to develop non-commercial software and collaborate with organisations who share an interest in programming.

#### **UTS TECHSOC**

UTS TechSoc is the student society for Information Technology at UTS and is now one of the leading social societies at the university, attracting members from a variety of courses and disciplines. UTS TechSoc aims to provide all members with a variety of social and career-focused events.

utstechsoc.com

#### CYBER SECURITY SOCIETY

Boost your programming knowledge with exclusive workshops and study help sessions and learn how to defend against attacks through the techniques that attackers use. The Cyber Security Society aims to encourage personal and professional development and offers guidance and support to anyone with the interest to learn!

Higher Education Language and Presentation Support (HELPS) provides non-credited English language and academic literacy support to UTS students. Enhance your learning experience with individual and group support in a friendly and respectful environment.

helps.uts.edu.au

#### **UTS ROBOTICS SOCIETY**

Discover everything robotics, from servos to software, and connect with likeminded students. Gain access to equipment, participate in robot building competitions, and receive support from industry.

utsroboticssociety.org





#### Jacob Vartanian Bachelor of Engineering, Mechanical & Mechatronic

"At the Robotics Society we can give you an introduction to the field of robotics, provide you with the equipment and resources needed to design and build these robots and importantly introduce you to like-minded people. You have the chance to convert your imagination into a real thing which you can see and interact with!"

# Discover entrepreneurship at UTS

# Interested in entrepreneurship but not sure how to get involved?

Every career path benefits from an entrepreneurial mindset. UTS equips you with the tools to become entrepreneurs, whether it's with UTS Startups community or the entrepreneurial subjects, courses and degrees at UTS

- there's an entrepreneurial offering available for you!

### ENTREPRENEURIAL COURSES, SUBJECTS AND DEGREES

Gain insight into the world of entrepreneurship with subjects available across the undergraduate and postgraduate degrees, diplomas and certificates at UTS. You'll be introduced to entrepreneurial methods and tools to solve problems, test ideas, create impact and launch businesses.

### BEGIN YOUR JOURNEY AT UTS STARTUPS

Got an idea and the passion to make it into something big?

UTS startups is the home of entrepreneurship at UTS. We inspire students to be entrepreneurs and support them at scale. Come to one of our inspirational events. Try our on-demand experiences and join the UTS Startups community to meet other student founders, access our digital spaces and collaborative workspaces in Building 15 and 16, check-in with mentors and gain connections to industry!

startups.uts.edu.au



# Global opportunities

#### Ready for the world beyond?

At UTS, we're committed to getting you out into the world – in fact, we send more students overseas than any other uni in NSW. So what are you waiting for?

Dive headfirst into the language and culture of another country, travel the world during uni break, and get a global perspective on your IT degree that'll set you apart from your peers.

#### **GLOBAL EXCHANGE**

Study overseas for one or two teaching sessions at a UTS partner university. There are 256 exchange partners in over 43 countries and territories to choose from.

#### **INTERNATIONAL INTERNSHIPS**

The Bachelor of Science in IT includes a nine-month internship which can be taken with a local or international company.

Students who intern overseas develop an international business network, add another language to their resume, plus gain exposure to multinationals who don't have offices in Australia.

## BUILD FOR SHORT-TERM INTERNATIONAL OPPORTUNITIES

BUILD (Beyond UTS International Leadership Development) is a program that will help you develop your leadership potential through a range of local and global opportunities. You could study Amazonian languages in Peru, French in Switzerland or work with a social enterprise supporting developing communities with education or electricity.





# **Applying to UTS**

# It's time! Join the innovation generation as a student at UTS. Here's how:

#### Find a course

Choosing what to study can be tough. Start by checking out the course information pages of this guide (pages 10–31), as well as the UTS website.

#### More info:

uts.edu.au/it-ug-courses

## Check your admission requirements

Once you've chosen a course, check that you meet the admission requirements.

#### High school leavers:

If you're completing your HSC (or equivalent) in 2021, we'll assess your application based on your selection rank for entry into most UTS courses. Your selection rank is a combination of your ATAR/IB score, plus any adjustment points you receive.

#### Mature age and non-current school leavers:

If you're not a high school leaver, you'll be assessed on criteria such as your ATAR, post-school qualifications, or relevant work experience, along with any additional selection criteria.

#### More info:

uts.edu.au/admissions

#### Indigenous students:

If you're an Australian Aboriginal or Torres Strait Islander, the Jumbunna Institute for Indigenous Education and Research can help you get in to UTS through the Jumbunna Pathways Program or Unistart Program.

#### More info:

uts.edu.au/apply-jumbunnapathways

#### International students:

If you're not a citizen or permanent resident of Australia, or a citizen of New Zealand, you must apply as an international student directly through UTS International.

Tel: 1800 774 816 (free call within Australia)

Tel: +613 9627 4816 (for international calls)

#### More info:

international.uts.edu.au

If your prior education was not conducted in English, you must complete an English language test or show your results from a completed test in the last two years.

IELTS (Academic)	6.5 overall with a writing score of 6.0
TOEFLIBT	79–93 overall with a writing score of 21
AE5/AE6 (PASS)	AE5
PTE (Academic)	58-64
CAE	176–184

#### Check if you're eligible

#### Scholarships

When? Scholarship applications open as early as April 2021. See what's on offer and check your eligibility on our website.

#### More info:

uts.edu.au/scholarships

#### **Admission Schemes**

There's more than one way to get into uni. We offer a range of admission schemes that can help get you into the course you want.

#### Visit UTS

Come and say hello at one of our events or faculty info sessions – it's a great way to get to know UTS. And don't miss UTS Open Day (please check the website for dates and times), the biggest day on campus, where you'll have the chance to explore your course and career options.

#### More info:

undergraduate.uts.edu.au/ events

openday.uts.edu.au

#### **Apply through UAC**

Applications for most UTS undergraduate courses must be lodged online through the Universities Admissions Centre (UAC). On-time applications close at the end of September 2021\*. Be sure to have your UTS preferred course as your first preference.

Application information is available in the UAC Guide and on the UAC website. If you're a Year 12 student, you can obtain a free copy of the guide from your school. Some courses have additional selection criteria, so you may need to submit extra material to UTS in addition to your UAC application. Check out the UTS Handbook for more information about applying for your chosen course.

#### More info:

uac.edu.au

handbook.uts.edu.au

#### Complete the IT Questionnaire

If you fall short of the ATAR by 1-3 points, we will still consider your application if you complete the questionnaire and demonstrate a strong motivation to study IT at UTS.

Spend 20 minutes completing the IT Questionnaire, and give yourself the best chance to get into your preferred course at UTS.

#### More info:

it-questionnaire.uts.edu.au

The questionnaire is not applicable to the Bachelor of IT Co-operative Scholarship.

#### Review your options once

#### Are you eligible for subject points?^

Once your results are released, visit our Year 12 Subject Scheme table with your performance bands in hand to see if you're eligible for an adjustment of up to five points towards your selection rank. These subject points are in addition to any points you may receive from one of our other admission schemes.

#### More info:

uts.edu.au/admission-schemes

#### **Accept your offer**

The majority of our offers are released during December Round 2 via UAC on 21 December 2021\*. Check the UAC website for offer round dates.

Offers will be made to eligible IB students in January following the release of your results.

#### More info:

uac.edu.au

#### Get in touch

#### Domestic students

Phone: 1300 ASK UTS (1300 275 887)

Email: feit@uts.edu.au

#### More info:

ask.uts.edu.au

#### International students

Phone: 1800 774 816 (free call within Australia) Phone: +61 3 9627 4816

Email: international@uts.edu.au

#### More info:

uts.edu.au/international

#### Once you're in...

Congratulations! Keep the following dates in mind.

Monday 15 – Friday 19 February 2021: Orientation Autumn Session for new students.

Monday 22 February 2021: Autumn Session begins.

<sup>^</sup>For high school leavers only.

<sup>\*</sup> Correct at the time of printing. Visit uac.edu.au

# **Applying to UTS**

#### Admission schemes

Need to boost your selection rank? Apply for a UTS admission scheme and we'll consider your ATAR plus other selection criteria when we assess your application. There are a range of merit and access based schemes. If you're a high achiever, or if life events have impacted your Year 12 results, these schemes can help you make the leap into your chosen degree.

#### More info:

uts.edu.au/admission-schemes

#### Admission pathways

Our admission pathways provide an alternative route into your preferred UTS course – and there are lots of pathways on offer. From internal programs (Insearch, Jumbunna Unistart and internal degree transfers) to external options (STAT test, limited ATARs or vocational diplomas), there's more than one way to get into UTS.

#### More info:

uts.edu.au/admission-pathways

## Fees and financial assistance

As a domestic student, you'll study in Commonwealth Supported Place – the Australian Government will fund some of the cost of your study, while you'll pay a student contribution and other fees direct to UTS. The good news? The HECS-HELP loan scheme lets you defer the cost of your student contribution until you reach a set income threshold. What's more, the UTS Financial Assistance service can help you get on top of your personal finances, giving you more time to focus on study.

#### More info:

uts.edu.au/csp

This guide is not intended for international students. For information on fees for international students, visit the UTS International website:

international.uts.edu.au



# Scholarships

At UTS, we're all about rewarding effort – and supporting circumstance. That's why we offer more than \$12 million in UTS coursework scholarships and prizes every year. If you're a high achiever, in financial need, or if you're from a diverse background, a UTS scholarship can help take care of your finances so you can focus on the important stuff.

#### Scholarships for high achievers

Academic achievement is worth celebrating – and our high achievers' scholarships do just that. Some scholarships are awarded across all UTS undergraduate degrees (e.g. the UTS Vice Chancellor's Outstanding Achievement Scholarship, valued at \$12,500 per year for the duration of the course), while other scholarships are offered through our faculties (e.g. the UTS Business Dean's Scholarship, valued at \$30,000).

#### Co-operative scholarships

Get a foot in the door of your chosen profession with an industry-sponsored scholarship. These co-op scholarships provide funding to support your studies – and they usually include an internship with the partnering organisation as well. Interested? You'll need a good academic record, demonstrated leadership potential, enthusiasm and dedication, as well as a genuine interest in your chosen field.

#### UTS offers:

 Bachelor of Information Technology Co-operative Scholarship Program (see page 14)

#### **Equity scholarships**

Our equity scholarships aim to overcome financial disadvantage in whatever form it takes. Whether you have a disability or ongoing medical condition, a rural home address, a refugee background or carer's responsibilities, these scholarships can help make university study possible.

#### Scholarships for women

We pride ourselves on providing an inclusive work and study environment for women – in fact, we've been consistently recognised by the Workplace Gender Equality Agency for our efforts. We offer several scholarships to encourage women to undertake study in different areas.

#### Scholarships for Indigenous Australians

We're committed to offering scholarships and prizes to support Aboriginal and Torres Strait Islander students. Some of these are awarded on academic merit while others are equity-based.

#### Scholarships for athletes

You've given your life to your sport – now let your sport give something to you.

ActivateUTS assists students to combine high-performance sport with their studies, so you'll be supported to excel in both areas. They offer three scholarships: the Elite Athlete Program, Emerging Athlete Program and Elite Athlete Housing Scholarship.

We also offer a few other scholarships for athletes to assist you in pursuing your academic and sporting goals.

#### **Application dates**

Scholarship application dates vary. Be sure to check the UTS scholarship website for specific closing dates.

## Which scholarship is right for me?

With so many scholarships on offer, it can be tricky to figure out which ones you're eligible for. Use our online search tool to filter scholarships according to the criteria that best describes you.

#### More info:

uts.edu.au/scholarships

## IT Scholarships for commencing students (local)

Scholarship name	Awarded to	Benefit	Duration	Selection rank*	Other
BACHELOR OF INFORMATION TECHNOLOGY CO- OPERATIVE SCHOLARSHIP PROGRAM	Commencing students who have applied for the Bachelor of Information Technology. This is a fast-tracked undergraduate degree sponsored by industry. Recipients have the opportunity to participate in two six-month industry placements with two separate sponsoring organisations. Check UTS website for details.	\$49,500 over 3 years	3 years	90+	Merit and Industry Placements
ENGINEERING AND IT DEAN'S SCHOLARSHIP	High achieving commencing students with the top Selection rank* enrolled in a UTS Faculty of Engineering & Information Technology undergraduate degree.	\$10,000 per year	2 years	95+	Merit

As a current student, you can apply for scholarships with:

- Challenger
- Ericsson
- Telstra
- And more!

<sup>\*</sup>Selection ranks: published ranks indicate the lowest selection rank (ATAR plus any adjustment points applied through eligible admissions schemes) to which an offer was made to a domestic Current School Leaver (Year 12) in the Autumn 2021 intake (for December Round 2 and January Round 1).

#### **UTS Open Day**

Please check the website for dates and times

openday.uts.edu.au

#### **CONNECT WITH US**



UTSFEIT



UTSengineeringandIT



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\*QS Top 50 Under 50 2021

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Note, this guide is for local students. International students should refer to the International Course Guide or **uts.edu.au/international**