

UTS: INFORMATION TECHNOLOGY

UNDERGRADUATE COURSES GUIDE 2013



WELCOME TO UTS: INFORMATION TECHNOLOGY

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Building 10, IT Faculty

Front cover:
UTS Open Day app
developed by Bachelor of
Information Technology student
Sebastian Kade.



WHY INFORMATION TECHNOLOGY AT UTS?

LEADERS IN CAREER RELEVANT EDUCATION

With our global, practice-based learning model, UTS is a recognised leader in teaching and learning. In 2011, we received a five star rating from QS, in recognition of world-class achievements across a broad range of areas, internationally renowned research and teaching, and cutting edge facilities. Many of our lecturers are leaders in their areas of expertise, and many are active in professional practice. This means you'll be exposed to the most relevant and up-to-date knowledge and skills.

PRACTICE-BASED DEGREES

Learning the theory is important, but the real value lies in knowing how to apply it. Many assignments are based on real-world case studies and all IT students can take advantage of our strong industry partnerships by undertaking an internship as part of their degree. Our practical approach to teaching and soft skills development means our students graduate with the relevant knowledge, skills and hands-on experience. What you learn at UTS will not only help you land a graduate job – it will build the skills you need to adapt and grow throughout your career.

INDUSTRY NETWORKS

More than 150 companies partner with UTS, sharing their resources and expertise in our research and innovative programs, and many offer internships and employment opportunities for our best graduates. From corporate, government and community bodies to small and medium enterprises, our range of connections will give you insight into how industry works and what employers look for in graduates. Expand your network through ours and make valuable contacts for your future career.

CONVENIENT LOCATION

Within easy walking distance of Central Station and the Sydney CBD, our City campus is easily accessible by bus and train. Close to cosmopolitan inner-city suburbs such as Glebe, Surry Hills and Darling Harbour, the City campus is surrounded by places to shop, eat and just hang out.

WORLD-LEADING CAMPUS AND FACILITIES

Our vision is to create a world-class interconnected campus – a place where students can study, socialise and connect. Four new iconic buildings, enhanced social spaces and major refurbishments of existing buildings are underway on our City campus, with new student accommodation and sporting facilities already complete.

INTERNATIONAL OPPORTUNITIES

The personal, social and professional development you gain through an international study experience will add excitement and value to your degree, and broaden your career options. You can study overseas as part of our global exchange program and our international studies program can be combined with other majors, giving you the opportunity to spend a year studying in another language overseas. Other opportunities for international engagement include our popular BUiLD program, which offers overseas volunteering opportunities.

FLEXIBLE STUDY OPTIONS

UTS offers flexible timetabling, enabling you to schedule your study to suit your lifestyle and commitments. Our classes are offered in different timeslots, giving you the option to choose day classes, evening classes or part-time study. We also encourage you to undertake a combined degree to broaden your career opportunities, or choose electives outside your field of study to keep you inspired by subjects that interest you.

STUDENT LIFE AND SUPPORT SERVICES

A great university experience also relies on being part of a social and supportive community. UTS has over 100 clubs and societies on campus, along with bars, cafes and a range of sporting facilities, including a gym. To ensure you feel confident and supported, we offer help with housing, finances, making friends, health, cultural issues and career development.

Orientation Camp - at the Engineering and IT Faculty Orientation Camp you get to meet your fellow students. It's a lot of fun and a fantastic opportunity to meet staff and prepare for uni.

IT Clubs - there are two large and active student societies you can join:

- > **BiG** - social club for all IT students - see www.utsbig.com.au
- > **ProgSoc** - programming society to help you enhance your programming skills - see www.progsoc.uts.edu.au

Women in Engineering and IT Program (WiE&IT) - offers support, mentoring, referrals and networking opportunities to current female students in the faculty. New students can connect with WiE&IT at our Orientation Camp in February and follow up with regular lunchtime functions throughout the year. See www.utswomeninengineeringandit.blogspot.com.au

RESEARCH PATHWAYS

UTS: IT has built an impressive research profile so if you are already thinking about a research career, then why not consider our Honours program? Research is conducted in areas such as: advanced analytics; bioinformatics; cloud computing; decision systems and e-service intelligence; information systems; interaction design; internetworking; knowledge discovery; mobile technologies; next generation IT services; quantum computation; and software development.

WORLD CLASS FACILITIES

UTS: IT students study in the Sulman Award winning, Building 10. This building was re-designed and transformed into a modern, light-filled, engaging space – a great place to work and study. The re-design of this building allowed us to design purpose built facilities to cater to the specific needs of IT staff and students.

The purpose built computer labs, break-out rooms and study areas, student lounges and kitchens allow students to enjoy facilities far and above the norm. UTS: IT students also have exclusive access to computer labs which are equipped with the latest software.



COMPUTER LABS

The Building 10 computer labs can be grouped into 10 general purpose labs, each with 30 computers, as well as four specialist internetworking labs, a professional presentation lab and a graphics lab.

UTS is a Cisco Regional Academy, and so the internetworking labs are all resourced with the latest equipment from Cisco Systems. Labs are regularly updated with the latest hardware and undergo a complete upgrade of operating systems and programs before most semesters.

There are a mix of Windows and Linux labs and IT students have 24/7 access to Building 10 and labs.



NETWORK SERVICES

UTS: IT provides a Unix shell, via SSH, with a home directory that is backed up regularly. Students can access additional services such as Oracle, MySQL, PostgreSQL databases, Subversion repositories, and internal websites.



BREAKOUT ROOMS AND LOUNGE AREAS

These areas provide space for students to work together or for individuals to have time on their own. All areas have access to the wireless network and many, particularly the breakout rooms, have whiteboards, wired access and power. Breakout rooms can be booked by students for group work. New undergraduate students have exclusive access to the First Year Undergraduate Student Lounge, which has a kitchen and TV.



NEW FACULTY OF ENGINEERING AND IT BUILDING

In 2014 the Faculty will relocate to a new state-of-the-art building, with a dramatic urban presence. It is designed and will be fitted according to contemporary architectural principles, including achieving a minimum 5-Star Green Star Rating.

PRACTICAL EXPERIENCE

Feedback from employers consistently show that students who have gained work experience during their studies are highly desired. With this in mind, UTS: IT courses are offered in conjunction with the Diploma in Information Technology Professional Practice, which enables students to undertake work experience as part of their course.

WHAT IS THE DIPLOMA IN INFORMATION TECHNOLOGY PROFESSIONAL PRACTICE?

To succeed in IT you need to continually learn and adapt to a rapidly changing industry. At UTS we are committed to the life long learning of IT professionals, and this starts while you are a UTS student.

With the Diploma in IT Professional Practice you can undertake a minimum of nine months of paid IT work experience as part of your course. Most students go out to work in their third (full-time) year of their course. This is available to all Bachelor of Science in Games Development and combined Bachelor of Science in Information Technology degree students.

By completing an internship through the Diploma in Information Technology Professional Practice you will develop your practical IT skills and understand the challenges involved in succeeding in a real work environment. You will learn more about yourself and expand your learning goals and strategies by applying what you learn on the job.

All jobs offered to our students are vetted and must meet certain criteria – it will be a real IT job!

WHAT ARE THE BENEFITS OF AN INTERNSHIP?

UTS: IT graduates are work-ready and have an invaluable head-start over other graduates because they have a year of work experience under their belt before they even finish their course.

You gain experience solving practical IT problems by applying the concepts you have learned in the classroom in a real work environment – something that can't be learnt from a text book.

You also develop better communication and interpersonal skills, learning to work in a team and function as a true professional. Our students find that they perform better in their final year subjects after completing their internship as they are able to contribute more in class and bring their work experiences to their classroom learning.

Visit <http://www.handbook.uts.edu.au/courses/c20049.html> for more information.

CLARISSE REYES



**Bachelor of Business,
Bachelor of Science in
Information Technology
5th Year Student**

“To compliment my degree I decided to undertake the Diploma in IT Professional Practice and was offered a cadetship with MLC as a Junior Business Analyst where I was involved in projects which allowed me to gain a good insight into how organisations set out to improve their systems and processes to empower their people with the right tools and provide greater value for customers.

“During my internship I was lucky enough to be exposed to a range of roles and responsibilities which allowed me to develop and learn skills in the areas of business analysis, solution development, testing and project management. After completing my cadetship at MLC, I continued to work as a contractor which helped in securing my next role.

“After MLC, I joined NSW Health as a Business Analyst where I assisted in the development and implementation of their integrated delivery framework. I have since joined Microsoft as a Technical Account Manager.

“Undertaking industry training as part of my course has been invaluable, providing me with the confidence to seek roles with major organisations before even graduating. This has given me a competitive edge over someone who has just graduated with no industry experience. I have also gained a better understanding of the IT industry and developed as a professional.”

CAREERS IN INFORMATION TECHNOLOGY

WHAT YOU WILL GAIN WITH A CAREER IN IT...

- > ability to contribute to society through new developments in IT
- > good working conditions and a balanced lifestyle
- > transportable skills across all industries
- > flexibility – you can work from home and the office
- > work overseas – IT is a global industry
- > interesting, challenging work in a dynamic industry that is always changing
- > always learning new things – IT is never boring

THE IT INDUSTRY NEEDS PEOPLE WHO...

- > are good communicators and like dealing with people
- > are creative thinkers and good problem solvers
- > are motivated and results driven
- > are team players
- > are willing to learn new things and adapt to an ever changing environment
- > have a mix of business and technical skills
- > understand how a business works – IT is not just about computers

WHAT CAN I DO WITH A CAREER IN IT?

There are many different jobs in IT and they are not all technical. Typical first jobs in the main career areas in IT are:

Technology Building

- > web designer/developer
- > software developer/programmer

Technology Services

- > network administrator
- > systems administrator
- > network engineer
- > data analyst

Technology Implementation

- > systems integrator
- > business analyst
- > quality/testing analyst

Technology Governance

- > business process modeller
- > information management specialist
- > applications architect

According to the government website, *Job Outlook*, the in-demand IT jobs are:

- > computer network professionals - high demand
- > database and systems administrators and ICT security - high demand
- > ICT business and systems analysts - high demand
- > ICT support and test engineers - high demand
- > multimedia specialists and web developers - very high demand

For comprehensive career information visit <http://joboutlook.gov.au>

“American Express is a founding member of the UTS Bachelor of Information Technology Co-op Scholarship program and values this relationship between Industry and University for the highly qualified and work ready graduates it delivers to our organisation. We enjoy the opportunity to help shape first year Bachelor of Information Technology students through on the job experience with a wide array of technologies projects. We also receive tremendous benefit from the third year IT students who come to us ready to take accountability for a project and leave a legacy with us. American Express offers Business Analyst roles to graduating IT students and finds the skills that they bring to the role quickly see them progress within our organisation.”

Kate Hanson
World Service Technologies Delivery Director
American Express Australia Limited

UTS:IT COURSES

At UTS: IT the courses are practical and hands-on and include business information systems as well as the technical knowledge and skills you need. The compulsory subjects cover all the fundamental building blocks across a range of areas such as information systems, programming, databases, web systems, project management, and networking. You'll also learn where IT fits within a business strategy and the courses are also designed to develop your communication, presentation and teamwork skills.

What are the differences between our courses?

BACHELOR OF INFORMATION TECHNOLOGY CO-OP SCHOLARSHIP

This is a fast-track course offered to high academic achievers who can demonstrate leadership potential. This course covers some of the same material as the Bachelor Science in Information Technology, but has more of a business focus. It includes two compulsory six-month blocks of industry placements with sponsor organisations. For more information see page 10.

BACHELOR OF SCIENCE IN INFORMATION TECHNOLOGY, DIPLOMA IN IT PROFESSIONAL PRACTICE

This is the main IT course at UTS and has nothing to do with science. This is an IT course that provides you with a strong understanding across a range of IT subjects and then allows you to specialise with an IT major. There are no compulsory Maths subjects in the course and you can tailor the course with your electives depending upon what areas of IT interest you. This degree can be combined with Business, International Studies or Law. For more information see page 8.

DIPLOMA IN INFORMATION TECHNOLOGY PROFESSIONAL PRACTICE

The Diploma in Information Technology Professional Practice is not a separate course but is taken in conjunction with other UTS: IT undergraduate courses. Students must obtain suitable employment and work for a minimum of nine months full time and must undertake the academic subjects related to their internship. The diploma is extremely beneficial for students and provides invaluable experience when applying for graduate jobs.

For more information see page 5.

BACHELOR OF SCIENCE IN GAMES DEVELOPMENT

This course provides a sound foundation in information technology including the same eight compulsory subjects that all IT students study. In addition there are eight core games development subjects where students specialise in games development and animation. There are some subjects unique to this course that other IT students cannot take as electives, such as the game studio 1 and 2 and programming for special effects.

For more information see page 12.

TEAGAN HICKEY



Bachelor of Information Technology Graduate
Business Analyst, ING Direct

"I work as a Business Analyst at ING Direct on various mortgage projects, with various different business areas such as risk, marketing, the contact centre, savings team, to understand any problems they are experiencing with IT systems and/or business processes. My job is to gather the business requirements and then work with a solution architect to come up with the best solution.

"I chose to study the Bachelor of Information Technology because it was a fast-track degree with two, six month industry placements included. So I would not only graduate with a degree, but also one year of full-time work experience. The many opportunities to meet and network with the sponsors of the course were extremely beneficial.

"I completed my first industry placement with a company called EDS, a HP Company and worked as a business analyst associate for a service offering entitled Agile Enterprise View (AEV). Then in my second placement at American Express I worked as a business analyst within the corporate card team.

"When I began attending interviews for graduate positions in my final year I had so many 'real life' experiences working on IT projects to talk about which gave me a huge advantage over other candidates. I love my job and want to return in the near future to complete my Masters at UTS!"

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

KEY INFORMATION

2012 ATAR: 85.00

Location: City campus

UAC Code: 603200

Duration: 4 years (full time)
6 years (part time)

Combine this degree with:

Bachelor of Business, see page 14

Bachelor of Arts in International Studies, see page 15

Bachelor of Laws, see page 16

Assumed Knowledge:

Mathematics and any 2 units of English

Recommended Year 12 Subjects:

Mathematics Extension 1 and English Advanced

Bonus Points: Available, see page 17

How to Apply: See page 19

Professional Recognition:

Professional level membership of the Australian Computer Society

COURSE DESCRIPTION

This is not a science degree but an IT degree that allows you to tailor the course to meet your interests. The course combines the theoretical knowledge and practical skills in both computer science and business analysis. The flexible course structure gives you a good grounding across all the fundamentals, allows you to choose a specialisation with an IT major and tailor the course to your interests with your remaining elective subjects. You can even choose elective subjects from other faculties or undertake a study exchange semester overseas.

WHY CHOOSE THIS COURSE?

At UTS you won't just learn the theory but will also practice it. As well as gaining strong technical skills in IT, you will gain skills in business analysis, problem solving, teamwork and communication. Employers look for graduates with industry experience and, in this course, students are exposed to real IT problems as well as the opportunity to undertake a minimum of nine months work experience with the Diploma in IT Professional Practice.

CAREERS OPTIONS

- > business analyst
- > computer game designer/ animator
- > data analyst
- > database designer/ manager
- > IT architect
- > IT project manager
- > network administrator/ manager
- > software developer
- > systems analyst
- > web developer



Internetworking lab

COURSE STRUCTURE

| 8 Core Subjects | + | One IT Major - 8 Subjects | + | 8 Elective Subjects | + | Diploma in Information Technology Professional Practice |
|--|---|---|---|--|---|--|
| <ul style="list-style-type: none"> > Communication for IT Professionals > Introduction to Information Systems > Programming Fundamentals > Web Systems > Business Requirements Modelling > Networking Essentials > Database Fundamentals > Project Management and the Professional | | Choose one IT major from the following: <ul style="list-style-type: none"> > Business Information Systems Management > Enterprise Systems Development > Internetworking and Applications > Computing and Data Analytics | | Choose: <ul style="list-style-type: none"> > A second IT major or > 2 sub-majors (from IT or another Faculty) or > 1 sub-major and 4 electives or > 8 electives Students may also undertake a study abroad semester overseas. | | A one year work placement, with four supporting subjects at UTS. |

Please note this course is being reviewed and course structure is subject to change in 2013.

MAJORS

A major consists of eight subjects and allows you to gain an IT specialisation.

Business Information Systems Management

Businesses are looking for graduates who can use information technology to provide business solutions that add value to the business and improve its competitiveness. This major focuses on the business side of IT.

You will learn:

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

This major also includes some accounting, finance, contract/vendor management, organisational theory and project management.

Enterprise Systems Development

This major introduces the practice of creating software applications and is concerned with technology building. It covers how to build software by applying technologies and practice from computer science, project management, and other fields to produce business solutions with known characteristics.

You will learn:

- > how build software systems – more than just programming
- > programming, testing of programs, databases, design, analysis, implementation and deployment

Internetworking and Applications

This major provides the necessary knowledge and skills in network design and application development and is concerned with technology services.

You will learn:

- > all about networks – routing, local area networks (LANs), wide area networks (WANs) and wireless.
- > industry certification preparation for Cisco CCNA and Linux
- > developing software for networked applications
- > design and management of networks
- > network and systems security

Computing and Data Analytics

This major integrates the mathematical and information technology foundations for developing and applying business analytics systems and is concerned with technology services. Computing and 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 a business.

You will learn:

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

SUB-MAJORS

The four areas listed as majors can also be taken as sub-majors which consist of four subjects and allow you to gain an IT sub-specialisation. Computer Graphics and Animation is 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 3D computer graphics applications. This knowledge is applied to building a ray tracer, producing a 3D computer animation and completing a computer graphics project. You can also choose to study computer games design and programming.

UTS has produced a number of graduates who have gone on to work in films including those who gained credits on films which won Academy Awards for Special Effects – “The Matrix”, “King Kong” and “Avatar”, and of course “Happy Feet” which won the Academy Award for Best Animated Feature Film in 2007.

GREG LOUDEN

Bachelor of Science in Information Technology Graduate

FX Technical Director MPC, London

“I really enjoyed my degree and can honestly say I use all the foundation subjects I studied in my work. My elective subjects focused on programming, 3D computer graphics and animation, human computer interaction, and business IT related subjects. I have been able to build on these skills since graduation - programming assists my scripting; business subjects guide my planning; and the 3D animation subjects provide me with core skills required.

“After finishing my degree I worked on “Legend of the Guardians: The Owls of Gahooole” and “Sucker Punch” at Animal Logic. I was an FX Technical Assistant providing FX R&D and artist support and then I moved on to doing FX shot work.

“My next job was Animation Technical Director at Dr. D Studios supporting the “Happy Feet 2” animation team through fixing technical issues, developing the animation pipeline, creating animation specific tools and mentoring new animation technical assistants.

“For the next step in my career I relocated to London to work at MPC as a FX Technical Director. I have been performing shot-work and rendering ranging from particle effects to volumetric effects on “Prometheus”. I have also been creating effects for the compositing team through collaborating and providing elements to be used for interior effects in the film.”

Bachelor of Information Technology Co-op Scholarship

KEY INFORMATION

2012 ATAR: It is expected that students will achieve an ATAR around 90.

Location: City campus

UAC Code: 603210

Duration: 3 years (full time)

Assumed Knowledge: Mathematics and any 2 units of English

Recommended Year 12 Subjects:

Mathematics Extension 1 and English Advanced

Bonus Points: Not applicable

How to Apply: This is a scholarship course. See page 19 and opposite.

Professional Recognition: Professional level membership of the Australian Computer Society

COURSE DESCRIPTION

This is a three year fast-track co-op scholarship course sponsored by industry. If you are successful in gaining a place into this course you will be paid a scholarship valued at around \$46,500. Designed with help from our sponsors, this is an IT course with a business focus where you develop an understanding of both business practice and technical skills, preparing you for a management role in IT.

WHY CHOOSE THIS COURSE?

Graduates from this course are highly sought after. You can expect an excellent starting salary and rewarding career prospects. Most students find work even before they graduate from UTS. You will undertake two industry placements in your first and third years of the course. Your industry placements are an integrated work-based learning experience which includes formal coursework delivered by industry. WiseTechGlobal are now offering overseas industry placements.

CAREER OPTIONS

- > business analyst
- > information systems manager
- > IT project manager



COURSE STRUCTURE

| 14 Core Subjects | 4 Electives | Industry Placements |
|--|---|---|
| <ul style="list-style-type: none"> > Communication for IT Professionals > Introduction to Information Systems > Programming Fundamentals > Web Systems > Business Requirements Modelling > Applications Programming > Information System Development Methodologies > Networking Essentials > Database Fundamentals > Collaborative Business Processes > Software Engineering Practice > Systems Development Project > Business Process and IT Strategy > Project Management and the Professional | <p>Electives can be IT subjects or chosen from other faculties. Students may also undertake a study exchange semester overseas.</p> | <p>Year 1 – Semester 2</p> <ul style="list-style-type: none"> > Industry Study 1 > Industry Project 1 <p>Year 3 – Semester 1</p> <ul style="list-style-type: none"> > Industry Study 2 > Industry Project 2 |

Please note this course is being reviewed and course structure is subject to change in 2013.

WHO SHOULD APPLY FOR THE BIT CO-OP 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 sport.
- > interested in IT. You don't need to have completed an IT subject at the HSC.

We are interested in the whole you - not just an ATAR. You'll be selected on a combination of interview performance and ATAR.

HOW TO APPLY

You **must** complete the online Bachelor of Information Technology application questionnaire to UTS as well as applying through UAC. There are two application rounds:

Round One - applications must be lodged by 29 June 2012 with interviews on 13 July 2012 during the NSW school holidays;

Round Two - applications must be lodged by 31 October 2012 with interviews on 16 November 2012.

INDUSTRY SPONSORS

Accenture

ACS Foundation

American Express

ANZ Wealth

Appliances Online

ASIC

Bank of America Merrill-Lynch

Coca-Cola Amatil

Commonwealth Bank of Australia

CSR

CustomWare

David Jones

Deloitte

Envoy Advanced Technologies

Ernst & Young

Hewlett-Packard

IBM

IBM Global Business Services

IMC Financial Markets

ING Direct

J. P. Morgan

KPMG

Lend Lease Management Services

Lloyds International

Macquarie Group

Ninemsn

Optus

PricewaterhouseCoopers Services

ResMed

Unilever

UGL Limited

Westpac

WiseTechGlobal

Woolworths

ALAN YEUNG



Bachelor of Information Technology
2nd Year Student

"Technology always fascinated me and from early on I recognised that it was central to our modern society. I'm a creative person, and IT allows me to be creative and innovative.

"I was resolved to apply for an IT-focused course and when I read about the UTS Bachelor of Information Technology course, it sounded perfect - a convenient location, a fast track course and I would receive a scholarship to do what I already loved doing!

"As I'd studied IT subjects for the HSC, many first semester subjects felt like revision which allowed me to dedicate more time to my assignments and have a social life too. Although an extensive grounding in IT isn't necessary, I have found it useful to know programming and information systems.

"During my first industry placement, I worked at Westpac under a team from IBM, on a project to develop their latest teller client system. It was great to know that this software product - including my work - would be experienced by Westpac tellers and customers across the nation.

"IT is an industry which opens doors to all others. Businesses in all sectors require IT graduates and so with just one three year degree you are very employable. If you are creative, you can move into design and development. If you are business focused, you can move into consultancy and project management. There are just so many options with a degree in IT. In my opinion, the UTS Bachelor of Information Technology course offers me the best foot forward for my career."

Bachelor of Science in Games Development

KEY INFORMATION

2012 ATAR: 91.95

Location: City campus

UAC Code: 603225

Duration: 3 years (full time)
6 years (part time)

Assumed Knowledge:

Mathematics and any 2 units of English

Recommended Year 12 Subjects:

Mathematics Extension 1 and English Advanced

Bonus Points: Available, see page 17

How to Apply: See page 19

Professional Recognition:

Professional level membership of the Australian Computer Society

COURSE DESCRIPTION

Today's games are large sophisticated computer programs that model 3D worlds in detail, implementing realistic physics with believable computer controlled characters that connect thousands of players through virtual worlds. This course offers a sound education in all aspects of information technology and develops the diverse skills necessary for a career in computer games development.

WHY CHOOSE THIS COURSE?

Students gain:

- > enhanced work-ready expertise in games development
- > practical problem-solving skills based on leading-edge IT theory
- > communication skills in a variety of forms including written, verbal, online and technical literacies
- > an awareness of the principles of ethics and corporate governance in a variety of settings.

CAREER OPTIONS

- > computer games developer
- > computer animation/graphics specialist
- > software developer

HOW TO APPLY

School leavers are eligible to apply for this course and entry is based on your ATAR. Non-current school leaver applicants, including those who have successfully completed 19050 Diploma of IT (Games Development) offered by TAFE NSW, may also apply for this course.

COURSE STRUCTURE (DIRECT ENTRY)

| 8 Core Subjects (IT) | 8 Core Subjects (Games Development) | 8 Electives |
|--|---|--|
| <ul style="list-style-type: none"> > Communication for IT Professionals > Introduction to Information Systems > Programming Fundamentals > Web Systems > Business Requirements Modelling > Networking Essentials > Database Fundamentals > Project Management and the Professional | <ul style="list-style-type: none"> > Applications Programming > Digital Multimedia > Game Design Studio 1 > Game Design Studio 2 > Introduction to Computer Game Design > Introduction to Computer Graphics <p>Select 2 subjects from the following:</p> <ul style="list-style-type: none"> > 3D Computer Animation > Computer Graphics Rendering Techniques > Data Structures and Algorithms > Introduction to Computer Game Programming > Human-Computer Interaction > Programming for Special Effects | <p>2 sub-majors (IT or from another Faculty)</p> <p>or</p> <p>1 sub-major and 4 electives</p> <p>or</p> <p>8 electives</p> |

Please note this course is being reviewed and course structure is subject to change in 2013.

NATALIE HARROLD
**Bachelor of Science in
Games Development
3rd Year Student**

"I've had a passion for game playing for as long as I can remember, so it only seemed natural to carry that passion into a career in games development.

"I began my studies in information technology at TAFE, where I completed a two year Diploma in Games Development. I was then accepted into the Bachelor of Science in Games Development at UTS. The excellent reputation of the IT courses at UTS made the decision to continue my studies an easy choice.

"I love the flexibility of studying at UTS - shifting between part-time and full-time study is very easy. The lecturers often bring industry experience to their teaching, offering a real insight into how the games industry operates.

"Working in teams has also taught me how to organise and manage a heavy work load and meet deadlines. I also love brainstorming and bouncing ideas off other team members, seeing the development of new mechanics, game play and storylines.

"When you see a project come to life it really reinforces the fact that we are preparing to work on real games that will be made for sale.

"I understand the principles of programming and I have learned how to apply different design methods to different products in order to achieve the most effective outcomes. In the game programming subject, alongside a team member, I was required to create a fully functional 3D game engine. For the game design subject I had the opportunity to come up with my own game designs.

"I want to pursue my passion for games as a career, perhaps through independent development projects or with an already establishment game development company, and of course, continue my education."



UTS Games Studio - student project



UTS Games Studio - student project

Bachelor of Business, Bachelor of Science in Information Technology

KEY INFORMATION

2012 ATAR: 88.05

Location: City campus

UAC Code: 603220

Duration: 4 years (full time)

Assumed Knowledge:

Mathematics and any 2 units of English

Recommended Year 12 Subjects:

Mathematics Extension 1 and English Advanced

Bonus Points: Available, see page 17

How to Apply: See page 19

Professional Recognition:

Professional level membership of the Australian Computer Society

COURSE DESCRIPTION

The IT component provides a sound education in all aspects of computing and IT for students who intend to make a career in the profession. The course adopts a practice-based approach to IT education and the course content is designed with a mix of theory and practice. The business component provides students with the knowledge, competencies and values necessary for fulfilling an effective career in business. Students gain two degrees, leading towards a career in business IT operations in only four years.

WHY CHOOSE THIS COURSE?

Graduates with solid IT skills who also understand business operations are in strong demand in industry. This course allows you to gain a broad understanding of both business and IT and gain a specialisation in each area. Students are equally equipped to take on careers as business or IT professionals. Business knowledge is an increasingly important tool for IT professionals to enable them to understand how IT fits into a successful business strategy.

CAREER OPTIONS

- > information systems development/management
- > software development in the banking and finance sector
- > electronic business operations management

Graduates are also prepared for traditional business careers such as:

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



Group study area for IT students

COURSE STRUCTURE

| 8 Core IT Subjects | 8 Core Business Subjects | IT Major – 8 Subjects | Business Major – 8 Subjects |
|--|--|--|---|
| <ul style="list-style-type: none"> > Communication for IT Professionals > Introduction to Information Systems > Programming Fundamentals > Web Systems > Business Requirements Modelling > Networking Essentials > Database Fundamentals > Project Management and the Professional | <ul style="list-style-type: none"> > Accounting for Business Decisions A > Managing People and Organisations > Marketing Foundations > Economics for Business > Fundamentals of Business Finance > Business Statistics > Integrating Business Perspectives > Accounting for Business Decisions B | <p>Choose one IT major from the following:</p> <ul style="list-style-type: none"> > Business Information Systems Management > Enterprise Systems Development > Internetworking and Applications > Computing and Data Analytics | <p>Choose one Business major from the following:</p> <ul style="list-style-type: none"> > Accounting > Economics > Finance > Financial Services > Human Resource Management > International Business > Management > Marketing > Marketing Communication |

Please note this course is being reviewed and course structure is subject to change in 2013.

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

KEY INFORMATION

2012 ATAR: 86.00

Location: City campus

UAC Code: 609230

Duration: 5 years (full time)

Assumed Knowledge:

Mathematics and any 2 units of English

Recommended Year 12 Subjects:

Mathematics Extension 1 and English Advanced

Bonus Points: Available, see page 17

How to Apply: See page 19

Professional Recognition:

Professional level membership of the Australian Computer Society

COURSE DESCRIPTION

The IT component provides a sound education in all aspects of computing and IT. The international studies component offers an in-depth understanding of another culture through academic and experiential learning, enhancing professional training and career options. The course adopts a practice-based approach to IT education and the course content is designed with a mix of theory and practice. Students normally undertake the In-Country Study in their fourth (full-time) year. UTS pays for your travel and tuition fees are based on Australian HECS.

WHY CHOOSE THIS COURSE?

Why limit your horizons to Australia and other English-speaking countries? This challenging course enables you to gain a thorough knowledge of IT and computing as well as skills in business analysis, problem solving, teamwork and communication. The international studies component of this course means that graduates have the added advantage of knowing another language which opens up opportunities to work overseas.

CAREER OPTIONS

The international studies component of this degree means that graduates are well prepared to work in a diverse range of IT careers in multinational companies or overseas. Career options available are the same as the Bachelor of Science in Information Technology, see page 14.



COURSE STRUCTURE

| 8 Core IT Subjects | + | IT Major – 8 Subjects | + | Electives – 8 Subjects | + | Country major choice – 6 subjects + in-country study |
|--|---|---|---|---|---|--|
| <ul style="list-style-type: none"> > Communication for IT Professionals > Introduction to Information Systems > Programming Fundamentals > Web Systems > Business Requirements Modelling > Networking Essentials > Database Fundamentals > Project Management and the Professional | | Choose one IT major from the following: <ul style="list-style-type: none"> > Business Information Systems Management > Enterprise Systems Development > Internetworking and Applications > Computing and Data Analytics | | Choose: <ul style="list-style-type: none"> > A second IT major or > 2 sub-majors (IT or from another Faculty) or > 1 sub-major and 4 electives or > 8 electives | | <ul style="list-style-type: none"> > Foundations in International Studies > Contemporary Society Subject > 4 Language and Culture subjects > In-Country Study 1 > In-Country Study 2 |

Please note this course is being reviewed and course structure is subject to change in 2013.

Bachelor of Science in Information Technology, Bachelor of Laws

KEY INFORMATION

2012 ATAR: 99.00

Location: City campus

UAC Code: 609020

Duration: 5 years (full time)

Assumed Knowledge:

Mathematics and any 2 units of English

Recommended Year 12 Subjects:

Mathematics Extension 1 and English Advanced

Bonus Points: Not applicable

How to Apply: See page 19

Professional Recognition:

Professional level membership of the Australian Computer Society, Supreme Court of NSW. This course satisfies the academic requirements for admission as a legal practitioner in New South Wales. Students wishing to obtain full recognition as graduate lawyers have the option of completing the Practical Legal Training program also offered by UTS: Law.

COURSE DESCRIPTION

The law component of this course provides a thorough grounding in Australian legal practice. The information technology component offers a sound education in all aspects of computing and information technology and allows students to gain a specialisation with an IT major. UTS adopts a practice-based approach to IT education and the course content is a mix of theory and practice. As well as gaining strong technical skills in IT, students gain skills in business analysis, problem solving, teamwork and communication.

WHY CHOOSE THIS COURSE?

The primary goal of the combined degree is to prepare graduates for work as lawyers or IT professionals in a legal environment. As the world of IT changes rapidly, lawyers with IT skills are in demand.

CAREER OPTIONS

Options include roles in IT or Law. This combined degree offers you a career as an in-house counsel, legal consultant or patent lawyer in:

- > e-commerce
- > intellectual property
- > internet regulation
- > online privacy
- > technology law



UTS: IT breakout room

COURSE STRUCTURE

| 8 Core IT Subjects | 14 Core Law Subjects | IT Major - 8 Subjects | Law Electives - 7 Subjects |
|--|--|--|--|
| <ul style="list-style-type: none"> > Communication for IT Professionals > Introduction to Information Systems > Programming Fundamentals > Web Systems > Business Requirements Modelling > Networking Essentials > Database Fundamentals > Project Management and the Professional | <ul style="list-style-type: none"> > Perspectives on Law > Legal Method and Research > Criminal Law > Torts > Contracts > Australian Constitutional Law > Real Property > Commercial Law > Equity and Trusts > Corporate Law > Administrative Law > Evidence and Criminal Procedure > Civil Litigation > Ethics and Professional Conduct | <p>Choose one IT major from the following:</p> <ul style="list-style-type: none"> > Business Information Systems Management > Enterprise Systems Development > Internetworking and Applications > Computing and Data Analytics | <p>Students may choose from a wide range of Law electives and may also undertake a study exchange semester overseas.</p> |

Please note that both Law and IT undergraduate degrees are being reviewed and course structures are subject to change in 2013.

GETTING IN TO UTS

CURRENT SCHOOL LEAVERS

Selection is based on your ATAR only, except for the Bachelor of Information Technology Co-op Scholarship course. You may also increase your chances of getting into UTS with Year 12 bonus points and/or access schemes.

Year 12 bonus points

If you are applying as a current school leaver you may be eligible for the UTS Year 12 Bonus Scheme. Bonus points are awarded to you based on performance in selected high school subjects that are relevant to the course you are applying for. You can receive a **maximum of five bonus points**.

Bonus Points do not apply to the Bachelor of Information Technology Co-op Scholarship or the Bachelor of Science in Information Technology, Bachelor of Laws.

For more information see the table to the right or visit www.undergraduate.uts.edu.au/bonuspoints

MATURE-AGED AND NON-CURRENT SCHOOL LEAVERS

Applicants for IT courses are selected on academic merit and the highest level of qualification is usually considered when assessing non-current school leaver applications. For more information visit www.undergraduate.uts.edu.au/mature/entry/requirements/index.html

Relevant work experience counts

If you have relevant work experience you may be eligible for up to 6 bonus points towards your application score. To be considered, ensure you complete the Employment question on the UAC application and provide supporting documentation as required. For more information visit www.undergraduate.uts.edu.au/mature/entry/requirements/ug_crit_it.pdf

Alternative entry pathways

If you did not receive the required ATAR to get into a UTS: IT course or if you don't have recent study experience, you can complete one of the approved Diplomas in IT offered by TAFE NSW (www.tafensw.edu.au) or UTS: INSEARCH (www.insearch.edu.au). You can then apply for a UTS: IT course and credit recognition for some of the units will apply.

| Subject Code | Subject Name | Performance Band | Bonus Points |
|--------------|--------------------------------------|------------------|--------------|
| 15080 | Design and Technology | 6 | 4 |
| | | 5 | 4 |
| | | 4 | 2 |
| 15130 | English Standard | 6 | 3 |
| 15140 | English Advanced | 6 | 4 |
| | | 5 | 4 |
| | | 4 | 2 |
| 15160 | English Extension 1 | E4 | 4 |
| | | E3 | 4 |
| | | E2 | 2 |
| 15170 | English Extension 2 | E4 | 4 |
| | | E3 | 4 |
| | | E2 | 2 |
| 15200 | Industrial Technology | 6 | 4 |
| | | 5 | 4 |
| | | 4 | 2 |
| 15210 | Information Processes and Technology | 6 | 4 |
| | | 5 | 4 |
| | | 4 | 2 |
| 15240 | Mathematics | 6 | 3 |
| 15250 | Mathematics Extension 1 | E4 | 4 |
| | | E3 | 4 |
| | | E2 | 2 |
| 15260 | Mathematics Extension 2 | E4 | 4 |
| | | E3 | 4 |
| | | E2 | 2 |
| 15360 | Software Design and Development | 6 | 4 |
| | | 5 | 4 |
| | | 4 | 2 |
| 18095 | Information Technology (TVET) | 6 | 4 |
| | | 5 | 4 |
| | | 4 | 2 |

EDUCATIONAL ACCESS SCHEMES

UTS Educational Access Schemes take into account a range of educational disadvantages that may have affected your most recent academic performance. The following schemes assist applicants to gain entry to UTS courses:

> inpUTS Educational Access Scheme

awards up to 10 concessional ATAR points for high school leavers and students with post-secondary qualifications who have experienced educational disadvantage.

> UTS Elite Athletes and Performers Special Admissions Scheme

awards up to 5 concessional points off the ATAR cut-off to applicants who are elite athletes and/or performers and whose sport or performance commitments have impacted on their studies.

For more information contact:

UTS Equity & Diversity Unit

Tel: (02) 9514 1084

Email: equity@uts.edu.au

FEES, SCHOLARSHIPS & FINANCIAL ASSISTANCE

TUITION FEES

Local students

Most local students will be studying in a Commonwealth Supported Place which means the Australian Government makes a contribution to the cost of your study while you pay a student contribution.

If eligible, you can elect to pay your student contribution upfront and receive a 10% discount. Alternatively, you can defer payment of your student contribution using HECS-HELP.

Students are also required to pay a Student Services and Amenities Fee.

This fee funds services and amenities at UTS such as social and cultural clubs, services for developing students study skills, UTS Union food, beverage and retail outlets (including a 10% discount for students), the planned free legal services centre for students, and the second-hand bookstore. If you're an Australian citizen or on a humanitarian visa, this fee may be deferred through a new government loan scheme called SA-HELP.

For more information on fees visit:

www.sau.uts.edu.au/fees

SCHOLARSHIPS

UTS offers a range of scholarships to high achieving students and to assist those in need of financial assistance.

UTS: INFORMATION TECHNOLOGY SCHOLARSHIPS

Scholarships offered to students who are studying IT at UTS include:

Bachelor of Information Technology Co-op Scholarship - see pages 10-11.

FEIT Aboriginal and Torres Strait Islander Scholarship

Value: One scholarship of \$5,000 offered per year for four years for Bachelor of Science in Information Technology, Diploma in Information Technology Professional Practice students.

Application deadline: mid January 2013
Interviews conducted January/February 2013.

Dean's ACS Foundation Scholarship

Bachelor of Science in Information Technology, Diploma in Information Technology Professional Practice, Bachelor of Science in Games Development and combined degree students with Business and International Studies are eligible for this scholarship.

Value: A limited number of scholarships of \$3,000 paid in two tranches.

Application deadline: Students apply after their first semester of study at UTS.

Interviews are not conducted for this scholarship.

John Hughes Memorial Scholarship

Bachelor of Science in Information Technology, Diploma in Information Technology Professional Practice and combined degree students with International Studies and Law are eligible for this scholarship.

Value: One scholarship of \$2,500 offered per year.

Application deadline: Students apply after one year of full time study at UTS.

UNIVERSITY-WIDE SCHOLARSHIPS

Vice-Chancellor's Outstanding Achievement Scholarship

UTS offers up to five of these scholarships to top HSC students.

Value: \$12,500 per annum for the duration of your undergraduate study in any discipline

Application deadline: 30 November 2012.

Vice-Chancellor's Merit Scholarship

UTS offers up to five of these scholarships to top HSC students who are assessed as being in need of financial assistance.

Value: \$12,500 per annum for the duration of your undergraduate study in any discipline

Application deadline: 30 November 2012.

Vice-Chancellor's Indigenous Undergraduate Tuition Fee Scholarship

Scholarships are awarded on academic merit to Australian Indigenous students who are commencing higher education studies for the first time.

Value: Tuition fees for the duration of your undergraduate studies.

Application deadline: 30 November 2012.

For information on all scholarships visit www.undergraduate.uts.edu.au/scholarships

FINANCIAL ASSISTANCE

The UTS financial assistance service can help students with practical and financial aspects of life at university.

Local UTS students with ongoing and long-term low income, can approach our financial assistance service for support with advocacy to Centrelink, information on HECS & FEE-HELP, loans and equity based scholarships and grants, and advice on budgeting.

Student Loans

As a UTS student you may be eligible for an interest free student loan from UTS of up to \$500 to assist with bills, rent, one-off living expenses and other costs, such as medical costs.

For information on financial assistance at UTS visit www.ssu.uts.edu.au/fassist



UTS: IT student centre

CURRENT SCHOOL LEAVERS

If you are in Year 12 or are attempting the HSC or equivalent in 2012 you must apply online through the Universities Admissions Centre (UAC) at www.uac.edu.au

Applications open in August and must be received by UAC by the end September 2012. Late applications are accepted but late fees apply.

BIT CO-OP SCHOLARSHIP

This course is aimed primarily at Australian Year 12 students and is not available to international students. Applicants must apply through UAC but also apply directly to UTS by completing the online BIT application questionnaire. For more information and to apply online visit www.it.uts.edu.au/courses/scholarships/bit

MATURE-AGED AND NON-CURRENT SCHOOL LEAVERS

If you are not coming straight from school you are a non-current school leaver and you must apply online through UAC at www.uac.edu.au

Applications open in August and must be received by UAC by the end of September 2012. Late applications are accepted but late fees apply.

Any extra information such as appropriate post secondary study or work experience in support of your application is to be included in your UAC online application.

CREDIT RECOGNITION

TAFE NSW

Students who have completed an eligible TAFE Diploma or Advanced Diploma are eligible for 24 credit points of unspecified electives in most of our undergraduate IT courses except for the Bachelor of Business, Bachelor of Science in Information Technology or Bachelor of Science in Information Technology, Bachelor of Laws which have no electives. Students may be eligible for additional credit recognition depending upon the diploma completed.

Those who have successfully completed 19050 Diploma of IT (Games Development) offered by TAFE NSW who then enrol in the Bachelor of Science in Games Development receive credit recognition for one year (eight subjects) which includes three core subjects and 30 credit points of advanced standing.

UTS: INSEARCH

Graduates from the relevant INSEARCH IT diplomas who are then accepted into the UTS Bachelor of Science in Information Technology Diploma in Information Technology Professional Practice will receive up to 48 credit points of credit recognition.

IF YOU'VE EXPERIENCED EDUCATIONAL DISADVANTAGE

You should contact UTS Equity & Diversity Unit to discuss the option of applying through a UTS Educational Access Scheme.

Contact:

UTS Equity & Diversity Unit

Tel: +61 2 9514 1084

Web: www.equity.uts.edu.au/admission

Email: equity@uts.edu.au

INDIGENOUS AUSTRALIANS

If you identify as Australian Aboriginal or Torres Strait Islander, Jumbunna Indigenous House of Learning will provide specialised assistance to help you gain entry to UTS through the Yana Muru Pathway Program.

For more information contact:

Jumbunna Indigenous House of Learning

Tel: 1800 064 312

(free call within Australia)

Tel: +61 2 9514 1902

Web: www.jumbunna.uts.edu.au/students

Email: atsirecruitment@uts.edu.au

INTERNATIONAL STUDENTS

If you are not a citizen or permanent resident of Australia or a New Zealand citizen, you need to apply as an international student.

International students apply to UTS International, either in person, by mail, online or through an accredited UTS representative.

For more information contact,

UTS International

Tel: 1800 774 816

(free call within Australia)

Tel: +61 3 9627 4816

(for international calls)

Web: www.uts.edu.au/international

Email: international@uts.edu.au

WANT MORE INFORMATION?

VISIT OUR WEBSITE

it.uts.edu.au

The IT handbook –
www.handbook.uts.edu.au/it

CONTACT US

Engineering and IT Outreach Office
Building 2, Level 4, Room 4.16
City Campus, Broadway
Tel: (02) 9514 2666
Email: it@uts.edu.au

WATCH OUR “CAREERS IN IT” DVD AT:

www.it.uts.edu.au/video

VISIT UTS

**UTS: IT Undergraduate Courses and
Scholarships Information Evening**

Wednesday 13 June 2012
City campus
6pm–8pm

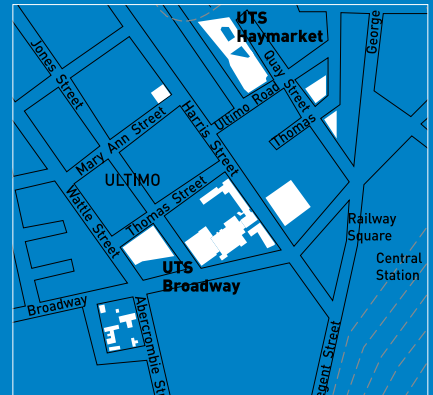
UTS Open Day

Saturday 25 August 2012
City campus
9am–4pm

UTS Info Day

Thursday 3 January 2013
City campus
9am–4pm

CITY CAMPUS



DISCLAIMER: The information in this brochure is correct at February 2012. Changes in circumstances after this date may alter the accuracy or currency of the information. The UTS reserves the right to alter any matter described in this brochure without notice. Readers are responsible for verifying information that pertains to them by contacting the University.

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