

Careers in Technology



Why Computing?

A Computer Science or Information Technology degree is a great solution for people who want a well paid, flexible, global, working from anywhere career.



Australia will need

600,000

more people working in the tech industry by 2030*



Computer Science and IT jobs are some of the

highest paid jobs

and most secure in the industry*



This is a global market

and you can work from anywhere



You get to build your own schedule

where you can maintain a work-life balance





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Disclaimer

Disclaimer The information in this Guide is accurate as at July 2024. However, the University has many programs and courses, and refreshes and updates its programs and course offerings from time to time and without notice. It is your responsibility to visit study.uq.edu.au for up-to-date information.



UQ acknowledges the Traditional Owners and their custodianship of the lands on which UQ is situated. — **Reconciliation at UQ**

Where are you going?

Never before have technological changes been faster or more fundamental.

The digital age is creating countless new and exciting opportunities for people to help shape the future using technology. From creating virtual realities to artificially intelligent machines that analyse health and environmental data, technology is at the core of a sustainable future.

At UQ, we are focused on providing you with the skills and capabilities to ensure you are prepared not just for your first job, but a lifetime of success. Whether you're interested in becoming a digital designer, creating innovative tools or a data scientist spotting trends across the health or legal industries, discover how your talents and passions can turn into an exciting and dynamic career in technology.

Skills you need



Communication



Problem-solving



Organisation



Resourcefulness



Analytical abilities



Curiosity



Creativity



Collaboration



Project management





Focus areas



Cyber Security

Learn the fundamental processes and practices to protect computing systems – be it smartphones, engine control units of your car, computers or servers – from attack, damage or unauthorised access.



Data Science

Discover comprehensive and fundamental techniques for end-to-end processing that transforms data into information, and become one of the new breed of data science professionals.



Machine Learning

This is a massive growth area as society looks for automated and continuous improvements on ways to enhance business and our lives through the use of computing systems and data.



Programming Languages

You will study the craft and science of programming, which will enable the construction of effective programming languages as well as correct and reliable software.



Scientific Computing

Solve complex mathematical problems in scientific fields like biology, chemistry, and medicine. These methods are important for many different types of scientific research and work done by companies in the public and private sectors.



Software Design

Follow a career in the creation and management of software applications, with courses focused on areas such as programming, software development, project management, human-computer interaction, algorithms, and more.



Software Information Systems

Develop the skills to design and build the information systems that are used everywhere in our modern life: in retail, banking, health care, transport, education, entertainment, science and engineering.



User Experience Design

New technologies only succeed if they work for people. Ensure the design of software, websites, or technologies meets their intended use – from commercial software to personal fitness apps to games, and everything in between.

Your study options

Content and Design

I like...	My degree options	My speciality	I could be a...
<ul style="list-style-type: none"> + Creating videos, graphics or memes for social media + Developing apps or websites in tech clubs + Being creative + Organising virtual events or online study groups + Joining student clubs and committees + Working on detailed art projects + Playing puzzles or strategic games + Presenting complex topics in an easy way + Designing quirky art projects + Building and programming robots 	<p>Bachelor of Information Technology User Experience Design</p> <p>Bachelor of Design Information Environments</p>	<p>Creative Content and Communications</p>	<ul style="list-style-type: none"> + Graphic Designer + Digital Marketer + Digital Strategist + Design Manager + Digital Media Manager + Product Designer + User Experience (UX) Designer + User Interface (UI) Designer
		<p>Product Design</p> <p>Web and Mobile Design</p> <p>Wearable Technology, VR and AR</p>	<ul style="list-style-type: none"> + Web Designer/Developer + App Developer + E-Commerce Specialist + User Interface (UI) Designer + Front-End Developer + Game Developer + User Experience (UX) Designer + Project Manager + Interaction Designer

Technology Services

I like...	My degree options	My speciality	I could be a...
<ul style="list-style-type: none"> + Taking apart and assembling computers + Taking on challenging projects in STEM classes + Creating student surveys and analysing the data + Joining a coding club + Exploring different operating systems + Taking on leadership roles in clubs or teams + Automating tasks to make assignments easier + Getting involved in cybersecurity competitions 	<p>Bachelor of Computer Science Cyber Security or Scientific Computing</p> <p>Bachelor of Computer Science / Master of Cyber Security</p> <p>Bachelor of Information Technology Software Design or Software Information Systems</p> <p>Bachelor of Engineering (Honours) Software</p>	<p>Systems and Networks</p>	<ul style="list-style-type: none"> + Cloud Specialist + Systems Administrator + IT Consultant + Software Engineer + Systems Performance and Resilience Engineer + Systems Designer + Game Developer + Site Reliability Engineer + Network Engineer + Applications Developer
		<p>IT Security and Forensics</p>	<ul style="list-style-type: none"> + Digital Forensics Investigator + Ethical Hacker + Cyber Security Specialist + Systems Administrator + Application Security Specialist + Security Architect + Security Analyst Certificate Authority Consultant

Business Services

I like...	My degree options	My speciality	I could be a...
<ul style="list-style-type: none"> + Working on school IT projects + Volunteering for community service projects + Participating in debate club or mock trial + Creating online schedules for your study group + Organising school parties, fundraisers, or club activities + Creating feedback surveys for school events or publications 	<p>Bachelor of Computer Science Data Science</p> <p>Bachelor of Computer Science / Master of Data Science</p> <p>Bachelor of Information Technology Software Information Systems</p>	<p>Data Management and Analysis</p>	<ul style="list-style-type: none"> + Security + Privacy Engineer + Business Analyst + Data Scientist + Digital Analyst + Senior Data Engineer + Market Analyst + Big Data Architect
		<p>Business Information Systems</p>	<ul style="list-style-type: none"> + Data Migration Specialist + Social Media Data Strategist + Information Architect + Database Administrator (DBA) + IT Support Officer + Cloud Architect + Chatbot Developer

Product Development

I like...	My degree options	My speciality	I could be a...
<ul style="list-style-type: none"> + Creating projects with Arduino or Raspberry Pi + Participating in hackathons or coding challenges + Developing apps or tools for school use, such as digital planners + Taking online courses on AI and Machine Learning + Designing unconventional art or tech projects + Working on personal projects that push the boundaries of current technology + Contributing to open-source projects + Building DIY electronics kits + Competing in logic-based competitions like chess or math contests 	<p>Bachelor of Engineering (Honours) Electrical or Mechatronic or Software</p> <p>Bachelor of Computer Science Data Science or Machine Learning or Programming Languages</p> <p>Bachelor of Computer Science/Master of Data Science</p> <p>Bachelor of Information Technology Software Design</p>	<p>Hardware</p>	<ul style="list-style-type: none"> + Electrical Engineer + Product Design Engineer + Automation Engineer + Hardware Systems Design Engineer + AI Programmer + Robotics Engineer + Machine Learning Engineer
		<p>Software</p>	<ul style="list-style-type: none"> + DevOps Engineer + Software Engineer + Games Developer + Software Architect + Programmer + Full Stack Developer + Software + System Test Engineer + Natural Language Processing (NLP) Engineer + Machine Learning Engineer

Careers that create change



“I’ve always liked making things, and I loved computer science in high school, so when I found that engineering wasn’t for me in the first semester of uni, I made the switch.

After completing my computer science degree at UQ, I applied for every job I could find, and I never expected to get an interview, let alone a job offer!

The fast-paced environment appealed to me and Canva’s ethical values aligned with my own, so accepting a role as a backend software engineer was an easy decision. I wanted to do something that I was passionate about and where the day-to-day work excited and challenged me.

I’m constantly having to think outside the box to solve problems, and that takes a lot of creativity.”

Abbey Van De Vorst

Bachelor of Computer Science (Programming Languages)
Backend Software Engineer, Canva, Brisbane

“For me it was not clear cut as to what I wanted to do at university after high school. I knew I was creative, and having dabbled in software like Photoshop, I showed a light interest in design. So, when I saw a degree that offered web and graphic design subjects, I decided to take a leap and undertake a degree in Information Technology.

I feel that I am lucky that I selected a degree based on my interest in design as it turned out to be a degree I truly loved, with endless opportunities and career paths.”

Madeleine Kingsley

Bachelor of Information Technology graduate
Senior UX Designer, Virgin, Brisbane





“After studying a coding subject in my first year, I started to consider software engineering (which had never occurred to me). After each new coding course, I was hooked, and decided to pursue programming. I eventually decided on Computer Science and Mechatronic Engineering to have the most flexibility, with a focus on software.

If I had to name my favourite memories, they would definitely be the events hosted by clubs and societies and being a part of the team that organised them. The community of club executives was one of the tightest I’ve been in since school.”

Tom Nugent

Bachelor of Engineering (Honours) (Mechatronic) /
Bachelor of Science (Computer Science)
Backend Software Engineer, Canva, Sydney



“The best knowledge I gained from studying a Bachelor of Information Technology at UQ was how to effectively learn new things. It’s easy to get overwhelmed when presented with something you know very little about, but by being guided through the process, it’s now much easier to pick up new and exciting concepts. I still use the base knowledge I learned through the first- and second-year programming courses every day.

My favourite part of my job is the satisfaction of finding a pain point that affects someone’s day-to-day life and creating a solution that makes their life easier.”

Nathan Dench

Bachelor of Information Technology (Software Design) graduate
Co-founder and Software Engineer, ProcurePro, Brisbane



“I ultimately chose UQ due to its location in Brisbane and its superior reputation. I also knew that UQ had partnerships with industry-leading Australian companies and international organisations. This combined with the unique opportunity to major in Machine Learning at an undergraduate level convinced me to enrol at UQ.”

Mallika Mukherji

Bachelor of Computer Science (Machine Learning)
Technology Graduate, BHP, Brisbane

More information

Visit study.uq.edu.au
or scan the QR code



Bachelor of Computer Science

Duration: 3 years full-time

Entry requirements: QLD Year 12 (or equivalent) English, and Mathematical Methods

Accreditation: Australian Computer Society

Bachelor of Computer Science / Master of Cyber Security

Duration: 4 years full-time

Entry requirements: QLD Year 12 (or equivalent) English, and Mathematical Methods

Accreditation: Australian Computer Society

Bachelor of Computer Science / Master of Data Science

Duration: 4 years full-time

Entry requirements: QLD Year 12 (or equivalent) English, and Mathematical Methods

Accreditation: Australian Computer Society

Bachelor of Design

Duration: 3 years full-time

Entry requirements: QLD Year 12 (or equivalent) English

Bachelor of Engineering (Honours)

Duration: 4 years full-time

Entry requirements: QLD Year 12 (or equivalent) English, Mathematical Methods, and one of Chemistry or Physics

Accreditation: Engineers Australia

Bachelor of Information Technology

Duration: 3 years full-time

Entry requirements: QLD Year 12 (or equivalent) English, and Mathematical Methods

Accreditation: Australian Computer Society

Want to know more?

Visit study.uq.edu.au