

Hot degrees for a changing world



Hot degrees for a changing world

Our critical water shortage, global warming, climate change and disappearing flora and fauna are some of the major environmental challenges facing mankind. As each day goes by the means to tackle these issues becomes increasingly important.

Griffith University has long been recognised for its groundbreaking degrees, designed to educate tomorrow's scientists, engineers, environmentalists, health specialists, business practitioners, IT specialists and criminologists.

For example, Griffith's new Bachelor of Science (Water Resources) to be introduced in 2008, has been specially developed in response to the critical shortage of professionals in water resource management, aquatic ecosystems and water quality. Similarly, the University's new Bachelor of Marine Science will prepare students for important careers in coastal management and engineering, aquaculture and marine conservation.

Through innovation in its education and research, Griffith plays a vital role in sustainable resource management—within Australia and across our region.

This guide outlines the hottest degrees and careers within the world of Science and Technology offered at Griffith University Nathan and Gold Coast campuses.

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For more information log onto
www.griffith.edu.au/hot-degrees

Bachelor of Marine Science

Gold Coast campus
Three years full-time

As vulnerable as they are infinite, our oceans are a timeless source of life, food and precious resources.

Only now, with the threat of climate change, pollution and a global decline in fisheries, has society realised our economic and environmental well-being is inextricably linked to our oceans.

Government and industry employers now demand graduates who are equipped with multidisciplinary skills in both physical and life sciences to lead them through the challenges ahead.

Griffith University is a leader in water sciences and has met this demand with the Bachelor of Marine Science degree.

This challenging new multi-disciplinary qualification will develop a critical knowledge link between marine biology, water science, coastal management and coastal engineering to produce graduates who will be sought after by governments and private organisations involved in a variety of industries and pursuits.

As a student you'll take part in an industry placement with key organisations working on real-life projects in fisheries, aquaculture, marine conservation, coastal and resource management.

You will graduate with the knowledge, networks and hands-on experience necessary to succeed in a world of exciting and fulfilling careers

The degree is offered at our Gold Coast campus, which is strategically located in Australia's fastest developing coastal region and close to a major part of our marine industry.

Areas of study

- Coastal physical sciences
- Coastal management
- Marine chemistry
- Marine ecology

Careers

- Environmental consultant modelling and meteorology, oceanography
- Environmental assessment and planning
- Pollution control
- Chemical oceanography
- Tourism operations
- Biological oceanography
- Protected area management
- Fisheries management

Students interested in a research career can continue their studies in the Honours, Masters or PhD programs at Griffith.

The best way to solve the water problem is to delve deeper.



Bachelor of Science (Water Resources)

Gold Coast and Nathan campuses
Three years full-time

With drought, desalination and water recycling dominating the national agenda, the water resources industry has reached a new level of complexity.

It's not enough these days to have a science or a resource management qualification alone—industry needs graduates who understand water issues from the catchment to the tap, arid inland to sea and back again.

Griffith University is an innovator in water sciences and developed the new Bachelor of Science (Water Resources) degree to meet the special needs of this rapidly growing industry.

The only Australian undergraduate degree of its kind, it will equip people with the sound biology and chemistry essential in a science degree as well as the skills in the social and community aspects of water resource management, conservation and restoration that are needed today.

As a student you'll learn from leading researchers at Griffith's Australian Rivers Institute (www.rivers.edu.au), the largest concentration of university-based water scientists in Australia and have access to the \$18m Queensland Smart Water Research Facility now under construction at our Gold Coast campus.

Areas of Study

- Aquatic science
- Water quality and technology
- Water governance

Careers

- Water resource planning
- Water quality testing and data analysis
- Waterways management and rehabilitation
- Catchment and groundwater monitoring and management
- Wastewater treatment
- Policy development, community consultation and public education
- Engineering or environmental consultancy in a range of industries

Students interested in a research career can continue their studies in the Honours, Masters or PhD programs at Griffith.



Bachelor of Urban and Environmental Planning

Gold Coast and Nathan campuses
Four years full-time

The cities of the future will need planners who can balance environmental values with vibrant and sustainable built environments.

The next generation of planners need the vision to develop sustainable towns and cities that don't repeat the social and environmental mistakes of the past and have the vision to rejuvenate existing suburbs and towns to meet tomorrow's standards. There is a critical nation-wide shortage of such skilled planning professionals and to meet this demand Griffith University offers the Bachelor of Urban and Environmental Planning. This degree combines environmental studies and urban planning to equip students with the skills and knowledge they will need to plan and manage our future urban environments.

You will have the chance to explore wide-ranging issues including coastal development; design of livable spaces; resource conservation and management; noise and air quality; waste management; indigenous land management; alternative dispute resolution and community development.

You'll be challenged to find creative solutions to controversial real-life planning issues covering these areas through our award winning, professionally accredited planning degree.



You'll learn to understand, evaluate and solve complex urban and environmental problems and to engage with local communities, planning authorities and developers. The aim of your education is to equip you with the skills and knowledge needed to achieve win-win solutions for communities and the natural environment.

Careers

- Town and environmental planning
- Local, state and federal government statutory planning
- Policy planning and analysts
- Advocacy planning
- Private planning consultancy
- Strategic planning
- Specialist consultancy in conservation, natural resources, coastal management, tourism, housing, catchment management, water, climate change



Tiffany Lacey
Bachelor of Environmental
Planning

Since graduating from Griffith, Tiffany has gone on to work with a major planning firm preparing land-use plans for some of Queensland's busiest sea and air ports and working with leading commercial

developers. She also has won the coveted Queensland Planning Institute of Australia 2006 Young Planner of the Year Award.

'If you want to be actively involved in improving and evolving livable and sustainable communities, then this is the degree for you.'

*Help shape your world
with proper planning*

Bachelor of Engineering

Gold Coast and Nathan campuses
Four years full-time

With the range of electronics, mechatronics, coastal, biomedical, communications, civil, environmental and computer engineering careers now on offer, it's no wonder many students have trouble deciding which career path to take and what degree to choose.

That's why Griffith has designed the Bachelor of Engineering, a degree that gives you the ability to choose a specialty now, or test-drive a range of engineering disciplines in your first year.

In your first semester you'll be introduced to all the engineering disciplines that Griffith offers.

In second semester you will be able to move into civil or environmental engineering or the computer, software or electronics streams and then specialise further in your second year.

Of course, if you've got your heart set on a particular discipline you can undertake some specialist studies right from the word go.

Later in your degree you'll gain experience and vital contacts working on real projects with leading engineering companies in our Industrial Affiliates Program. You will also be able to challenge yourself with a 12-week international work placement through the Overseas Industrial Experience Program.



Geoff Young
Bachelor of Engineering

Geoff's final year student project—an electronic device that can spot and spray weeds with a measured amount of herbicide—won an Australia-wide competition and a trip to the UK Institution of Engineering and Technology.

"The project was completed in my Industrial Affiliates Program during my final year. I was meant to spend about 400 hours on it, but I got so involved that I ended up spending about 1200.

"It's great to actually look forward to going to work and translating everyday work problems into exciting challenges."

Geoff is now a RAAF Officer Cadet working as an electronics engineer.

Specialisations

- Civil engineering
 - civil design, coastal engineering, construction management
- Electronic and computer engineering
 - biomedical, communication, computer systems, control systems, microelectronics
- Software engineering
- Environmental engineering

Careers

- Biomedical engineering
- Civil engineering
- Coastal engineering
- Control systems engineering
- Environmental engineering
- Electronics hardware engineering
- Electronics software engineering
- Microelectronics engineering
- Communications engineering



Engineer a better future

Bachelor of Information Technology

Gold Coast and Nathan campuses
Three years full-time

If you want a career at the nerve-centre of business in the 21st Century you can't go past Griffith's Bachelor of Information Technology.

The variety of careers on offer in Information Technology has exploded in recent years. Griffith Bachelor of Information Technology graduates are working in internet and information security, software development, programming and information architecture, virtual reality, games development, special effects, robotics and artificial intelligence.

This comprehensive degree was developed with leading Information Technology industry partners to provide graduates with the essential practical and theoretical skills needed to succeed in today's IT industry.

While studying, you'll complete real projects for real companies and then graduate with first-hand experience and industry contacts.

Careers

- Analyst programmer
- Applications engineering
- Business technical support
- Business and technical analysis
- Control systems engineering
- Computer programming/testing
- Database administration
- Games programming
- Information technology officer
- MIS consultancy
- Multimedia specialist
- Network administration
- Project managing
- Security expert
- Software developing, engineering and testing
- Systems engineering and analysis
- Technical services consultancy
- Web developing

Bachelor of Information Technology @ Work

Logan campus
One year full-time and three years part-time

Can't choose between getting a degree or going into the workforce? You don't have to with Griffith's unique new Bachelor of Information Technology @ Work.

Our industry contacts told us they want keen, skilled Information Technology professionals and they want them now.

The Bachelor of Information Technology @ Work is designed to accelerate your entry into an exciting IT career. You'll complete a foundation year and then apply to work with one of our industry partners or the company of your choice.

You'll then complete your degree through intensive summer semesters over three years, while earning a real wage. Importantly, you'll also graduate way ahead of the pack with both work experience and a valuable degree.



Peter Shipway
Bachelor of
Information Technology

Peter is a member of a team of Information Technology students who are finalists in the Australian Information Industry Association Awards for a project helping young families access information electronically by developing a touch-screen kiosk application for the Salvation Army's Communities for Children Initiative.

"Our project involved creating a unique software application that guides and assists parents, guardians and relatives of very young children to access a range of community service information."

*Study, work and earn at
the same time*



Linda Hey
Bachelor of Medical Science

As an OP1 student, Linda Hey had the world at her feet when it came to choosing a university degree.

"I was going to enrol in a three-year degree but I didn't really want long breaks. When I saw the new Medical Science program I thought I'd go for it.

"I only started in January this year and can't believe I could be ready to start a graduate Bachelor of Medicine/Bachelor of Surgery just 20 months later!"

Bachelor of Medical Science

Gold Coast and Nathan campuses
Two years full-time

If you just can't wait to become a medical doctor the new Bachelor of Medical Science is the degree for you!

This program provides high-achieving secondary school leavers with an intensive two-year degree that offers guaranteed entry into the Griffith Bachelor of Medicine/Bachelor of Surgery degree for students who maintain a high grade point average.

In first year you'll be introduced to the essential basic sciences that underpin biomedical science: anatomy, chemistry, biochemistry, cell biology, microbiology, physiology, molecular genetics and psychology.

In second year you'll add medically-focused courses in immunology, infectious diseases, pharmacology, metabolism, law and ethics, health and epidemiology.

Both years will involve knowledge and problem-based learning as well as practical, laboratory-based training in the biomedical and clinical sciences.

You'll graduate ready to tackle your medical degree or a range of other post-graduate degrees that will streamline your path to an exciting and challenging health career.



Careers

By graduating with credit average or better, you will be fully prepared to begin studies towards a degree in medicine which is your pathway to a number of rewarding careers including:

- Medical doctor
- Specialist
- Primary care medicine
- Medical research
- Health care services.

*Fast-track your
medical career*

Bachelor of Aviation

Nathan campus

Three years full-time

The Bachelor of Aviation is the first degree of its kind in Queensland and will equip you with the practical skills and knowledge to work as a commercial pilot in the exciting and rapidly growing international aviation industry.

You can also double-up by completing an intensive Bachelor of Aviation/Graduate Diploma of Flight Management in just three years, to give you an in-depth knowledge of commercial airline operations.

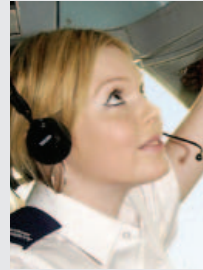
In another first for Australian aviation, Griffith has put the sky within the reach of all students regardless of financial status by them being able to access the FEE-HELP government loan scheme to defer the up-front costs of flight training and other program costs for the Graduate Diploma of Flight Management.

Griffith also offers on-line study for second and third-year courses from wherever your career takes you.

Careers

Students will graduate as qualified pilots and be prepared for employment in general aviation including charter operators, tourism operators and cattle/sheep stations.

Aviation careers take-off at Griffith



Kahlie Jensen
Bachelor of Aviation

Student Kahlie Jensen always wanted to fly but, like most young people, the up-front flight training fees put an aviation career out of reach.

"I thought I'd have to defer, but the fee-help eligible course meant I could fly now and pay later. "I've just done my first five hours flight training and the moment I touched down I knew this was what I wanted to do for a career."



Griffith Honours College

This program, which begins in 2008, has been designed exclusively for outstanding high achieving students who will be provided with enriching life experiences while studying their undergraduate degree.

Students will take part in regular one-on-one sessions with a mentor and academic advisors, share ideas and work with leading Griffith researchers. They'll be encouraged to gain a global perspective by studying or working overseas for some of their degree.

Students will develop skills that are in high demand by employers, including leadership, teamwork, community engagement, intellectual curiosity, research and practical work experience.

For further information email: honourscollege@griffith.edu.au