Engineer IT

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Lending a helping hand in Aceh

While most of us can only imagine the devastation caused by the 2004 Boxing Day tsunami in Banda Aceh, Indonesia, one young Griffith University civil engineering student knows first hand the destruction it left behind.

Daniel Dray, with his colleague Steve Davies, spent their most recent summer holidays in Aceh Province and Nias Island as volunteers assisting with reconstruction efforts. Working with the Zero-to-One Foundation they employed the engineering and project management skills learnt at Griffith to aid in the massive task of rebuilding homes, schools, medical clinics and sanitation systems for people who had been left with nothing.

Daniel spent the majority of his time in the small fishing town of Sirombu on the west coast of Nias Island, off Sumatra. There, the Zero-to-One Foundation is working with international aid agencies to provide housing for over 500 families whose homes were destroyed by the tsunami and then again three months later by an earthquake.

Daniel’s tasks ranged from design, site management and quality control to shovelling concrete and helping to build houses. He helped in the construction of over 60 houses and a school for the local children.

This is not the first time Daniel has put his skills to good use in the name of humanitarianism. In the summer of 2004/2005 he took part in the University Mobility in Asia Pacific (UMAP) program and spent three months working in Ho Chi Minh City in southern Vietnam. Daniel worked, unpaid, with a Vietnamese company on a World Bank funded project to build the city’s first wastewater treatment system. This also gave him the chance to travel all over Vietnam.

Daniel said that his overseas experiences had given him a wealth of engineering experience as well as phenomenal life experience and highly recommends it to all engineering students.

To find out more about engineering at Griffith visit www.griffith.edu.au/engineering
Where are they now?

Carlia Cooper

**Why did you choose to study at Griffith?**

Griffith offered the opportunity for me to study both Environmental Science and Civil Engineering in only five years. I also liked the convenience of being able to study the combined degree on the Gold Coast campus.

**What did you enjoy about your degree?**

I really enjoyed studying both civil engineering and environmental science, as the subjects were so diverse and matched my interests. The engineering class sizes were especially small, which enabled close interaction between the lecturers and students. I also enjoyed meeting and studying with some of my now closest friends.

**What are you doing now?**

Since March this year I have been working in Sydney for Kellogg Brown and Root (KBR) - one of the world’s leading engineering, construction and services firms. Working in the structures group, I have already had the opportunity to work on a great variety of building, rail and water projects. My role has involved reinforced concrete and steel frame design and finite element modelling. I also have the opportunity to work for the environmental group in the future which I’m looking forward to.

Tell us about your educational background

I completed grade 12 at Trinity Lutheran College (Southport) and then attended Griffith University. While there I was able to win a number of awards that provided financial assistance during my studies.

Around the world speed skater

Edward Dimmack

**International speed skater Edward Dimmack recently returned to his double degree in Electronic Engineering/IT at Griffith University after pursuing the World Inline Cup title in Switzerland.**

Edward, who represents Australia for inline speed skating, received a call at the end of March this year from the Kantonal Bank Team Manager in Switzerland asking him to join their team to compete for the World Inline Cup. The Cup comprises a series of events hosted in Europe and Asia. Edward’s first event was a 42 km marathon in Korea in April before he travelled to Switzerland where he was based for seven weeks with his team-mates – other professional skaters from New Zealand, South Africa and Australia. The team specialises in marathons of between 30 and 52 kilometres.

In February this year Edward was selected to represent Australia at the World Inline Speed Championships to be held in Incheon, Korea, in early September.

Edward has been involved in inline skating since he was 10 years old and is used to juggling his love of the sport with ongoing studies. He completed Year 12 over two years at Browns Plains High School to accommodate his inline skating commitments. In 2002 he competed in the Junior World Inline Championships and last year he travelled to Suzhou in China to represent Australia as a senior in long distance events for the World Inline Championships.

Edward has worked part-time to support his sporting endeavours but is also thankful for the support he has been given by Logan City Council and his local sponsor RBC Boots manufacturer Clint Jensen who has also previously supported Olympic gold medal winner Steve Bradbury.

Griffith’s commitment to helping athletes by offering flexible study options has also assisted Edward. After taking up the opportunity to defer his studies for a year Edward is looking forward to returning to Griffith in second semester.
Making a sustainable difference

Cheryl Paten

It was witnessing the rubbish left on a pristine beach by New Year’s Eve revellers 15 years ago that set environmental engineering lecturer Cheryl Paten on a path to achieving sustainable outcomes.

Cheryl was born in Mauritius, a tiny island fringed with reef off the east coast of Madagascar. After moving to Queensland as a child, Cheryl attended Moreton Bay College and spent a year as an exchange student in Aomori, Japan, before enrolling in the Bachelor of Environmental Engineering at Griffith. She graduated with first class honours and was awarded the University Medal for Academic Excellence and the prestigious Ove Arup Scholarship for undergraduate excellence in engineering. Cheryl has since held various committee appointments with Engineers Australia and was president of Young Engineers Queensland in 2003.

In 2005 she was named the Engineers Australia 2005 Young Professional Engineer of the Year for her commitment to introducing sustainability principles and practices to the engineering curriculum at Griffith. The award also highlighted her role as Education Coordinator for The Natural Edge Project (TNEP).

Cheryl said engineers had a responsibility to adopt sustainability principles because they provided the infrastructure society needed on a daily basis, from turning on the tap in the morning to driving home on the highway in the evening.

“It is increasingly being recognised that the engineering profession will play a significant part in moving society to a more sustainable way of life,” Cheryl said.

“Engineers have a responsibility to design a better future so our children and their children can enjoy a quality of life equal to or better to what we enjoy today.”

Cheryl currently holds a collaborative role as Education Coordinator for TNEP, a not-for-profit project that assists nations through a whole-of-society approach to achieve sustainable progress. Cheryl was previously a volunteer contributor to TNEP for two years.

As a lecturer in the School of Engineering (a joint arrangement between Griffith and TNEP) Cheryl recently established Griffith’s role as the Queensland node in the Sustainable Living Challenge (SLC). Hosted by the University of New South Wales and supported by the United Nations Environment Program, SLC is the peak national education for sustainability program in Australia. The SLC engages students, teachers and their communities in the learning challenges presented by sustainable living concepts.

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Griffith School of Engineering
undergraduate degree programs

Bachelor of Engineering with Advanced Studies
If you’re looking for ‘something extra’ in your engineering degree, this advanced studies program is for you. Only a select number of students of outstanding ability will have the opportunity to undertake the program. You’ll be required to complete all the requirements of the Bachelor of Engineering and will be assigned specialist project work throughout the degree. This additional work, performed under the supervision of academic staff, is designed to ensure that you develop exceptional understanding in a major area of your choosing.

The Bachelor of Engineering (Civil Engineering)
Four year degree program
This degree program will enable you to develop knowledge and skills in the planning, design, management, construction and maintenance of civil engineering projects; as well as the communication, research and critical analysis skills which are vital to a successful career as a professional engineer. The program provides a foundation in civil engineering, with an emphasis on current industry practices, and a strong foundation in basic science, engineering principles, practice and management. It’s delivered by expert, dynamic and motivated lecturers complemented with strong industry input, in the form of guest lecturers and participation in real engineering projects.

The Bachelor of Engineering (Electronic & Computer Engineering)
Four year degree program
In this degree program you will develop the hardware and software design and implementation skills you’ll need for a career in leading-edge, high-technology fields such as communications, microelectronics, computer systems, biomedical engineering, and control systems (robotics). The program emphasises the development of your electronics and computer engineering and design skills through continual laboratory access. Its focus on work integrated learning includes off-campus industry placement in your final year, ensuring that you’ll graduate fully prepared for a challenging career in industry, and research and development enterprises.

The Bachelor of Engineering (Environmental Engineering)
Four year degree program
This degree program has a strong interdisciplinary focus on formulating solutions to environmental problems, and developing innovative strategies and technologies for a sustainable future. The program equips you with the necessary understanding of complex environmental problems, as well as the engineering knowledge, competence and design skills required to develop solutions for environmental protection and management, waste management, water and waste-water management, land rehabilitation, and air quality monitoring and control. In your final year, your skills are enhanced through off-campus industry experience, preparing you for a smooth entry into the workforce.

The Bachelor of Engineering (Software Engineering)
Four year degree program
This degree program is distinguished by its focus on group project work in developing software for external clients. The program gives you invaluable experience in teamwork, project management, quality management, the application of international standards and the utilisation of industry best practice techniques. You’ll receive an introduction to software development and program construction, supported by mathematics, computer systems, engineering principles and information systems. You’ll develop an understanding of the theoretical foundations of software engineering and their application to the specification, design, implementation, verification, maintenance and documentation of large-scale software systems. In your final year, you’ll have the opportunity to hone your skills through off-campus industry experience, or to work on a major project.
Every student who enrols in a Griffith engineering degree program has the exciting opportunity to complete a four month work placement. During the first semester of their final year of study, the Industrial Affiliates Program (IAP) places students with an engineering company full time to work on a substantial industry project.

The program is unique to Griffith and has become so highly regarded by industry that the Queensland Government recently provided the University with funds to expand the program to science students. This will result in between 250 and 300 students from engineering, information technology and science completing their final year project through the IAP with local, national and international industry placements each year.

Students regularly report the IAP as the “best part of my whole degree” and say that it provides them with a substantial advantage in job interviews. Not that all students graduating from the Griffith School of Engineering need to go to a job interview. A large number are offered continuing full time employment by their IAP industry partner. In fact, 50% of IAP students are under the supervision of a Griffith engineering graduate who is still employed by their original IAP industry partner.

All degrees come with work placement

Attention all senior students with a keen interest in science, engineering, environment and IT!

Don’t miss your opportunity to be a Griffith University “Myth Buster” and explore and break myths using cutting-edge science and technology techniques.

Myth Busters is an action packed two-day event held on September 25 and 26 at Griffith’s Nathan (Brisbane) and Gold Coast campuses with a variety of myth busting workshops to choose from.

Some of the myths to be explored include whether a butterfly can cause a tornado, intelligible backwards messages in music and whether falling coconuts can kill.

Myth Busters is a great chance for high school students interested in science to learn from Griffith scientists and explore the University’s state of the art facilities.

Places are strictly limited.
For more information:
Web: www.griffith.edu.au/mythbusters
Email: mythbusters@griffith.edu.au
Phone: (07) 5552 8532
Find out more about Engineering at Griffith University Open Day
9am – 2pm, Sunday, July 16, 2006

At Open Day on Sunday, July 16, information on Griffith’s degrees in engineering and the exciting careers they can lead to will be available at our Gold Coast and Nathan campuses.

Below are just a few of the exciting activities you can experience when you visit the Griffith School of Engineering on Open Day.

Nathan campus

• Tour Griffith’s brand-new state-of-the-art Semiconductor Facility and see the latest in R&D of electronic devices and circuits.
• Environmental Engineering - Visit Griffith’s unique EcoCentre. The construction and operation of the EcoCentre follows strict ‘eco-design’ principles, which reflect domestic scale environmental technologies that can be used in the family home.
• Race Driver Telemetry – Hear how Griffith engineering was involved in showing a driver’s heart rate and g-forces live on TV screens at the Gold Coast Indy.
• Extreme Electronics – Snowboarding, swimming and other sports get a technology boost from Griffith electronics students.

Gold Coast campus

• Hands-on Bridge Design – Try your skill at bridge building and test it to destruction.
• Quicksand and Earthquake Simulation – We know that the sand can disappear after a storm. How can we design the shore line for minimal impact?
• Wave Simulation and Harbour Design Displays – See buildings sink when an earthquake hits.

Griffith School of Engineering staff and students will be on hand at each location to provide information sessions and answer any questions you may have.

In addition to engineering information, at Open Day you will also be able to find the answers to any questions you may have regarding admissions, fees, accommodation, support services and many other topics.

For further details about the information sessions and displays on offer at Griffith University’s Open Day, visit www.griffith.edu.au/openday

Visit Griffith or have us visit you

Professor David Thiel (Head, Griffith School of Engineering), Mr Aidan Cameron (Coordinator, High School Workshops) and other academic staff across all disciplines of engineering offer their services to deliver specialist talks to high school students. If you are interested in a talk on civil, environmental or electronic and computer engineering contact the School office on (07) 3735 5004 or fax (07) 3735 5198. Alternatively, arrangements can be made for your class to visit Griffith University’s microelectronic fabrication facilities, the concrete structure laboratory, and many other world class engineering facilities.