

IN THIS ISSUE ... *we look Budget 2015's increase of funds to engineering education, and the Waterview Challenge and its in-schools programme*

ON TUESDAY 9 JUNE, the Engineering EzE Steering Group hosts a group of 25 employers from around New Zealand at the **ENGINEERING EzE TALKING WITH EMPLOYERS WORKSHOP** in Wellington. The Steering Group is keen to better understand what the sector requires of graduates. The workshop will be facilitated by **Emeritus Professor Geoff Scott** of the University of Western Sydney.

There is a world-wide push towards graduates who are not only technically skilled but also change-implementation savvy, creative, inventive and sustainability-literate. Geoff Scott uses the term 'work-ready plus' to cover the skills of immediate value to employers, together with the capability to meet the requirements of jobs that will emerge in the future.

For many years Geoff has been involved in research to establish a graduate capability framework that can give focus to conversations between employers and educators. The framework enables discussion to go beyond general feedback on what we want to see in graduates to something more specific and actionable – that can be used in design and deliver of engineering education can be.

In Australia, Geoff interviewed successful early career graduates on the capabilities that really count and what aspects of their tertiary education has proven to be most and least valuable in practice. Geoff found this feedback an excellent way to enable employers to engage with quality of focus in tertiary programmes.

Australian employers who participated in Geoff's research said it was helpful to use a framework and to compare their perceptions of what was needed with the successful early career graduates.

During this workshop employers will also be asked to consider where they think their field of engineering may be going in the future. The results will help firms to focus on the capabilities that count when selecting, inducting and promoting early career graduates.

I am acutely aware of the significant contribution these employers are making by giving up a day to attend this workshop and I greatly appreciate their support.

SIR NEVILLE JORDAN

Chair, Engineering EzE Steering Group



Huge boost to engineering education in Budget 2015

Budget 2015 will provide \$11.4 million over four years to increase the number of engineering graduates and funding for activities to raise the profile of engineering and support more people to become engineers.

On 21 May, Tertiary Education, Skills and Employment Minister Steven Joyce announced that Budget 2015 will provide a further \$112.3 million of operating funding over four years and \$1 million of capital funding to invest in knowledge and skills to grow New Zealand's economy,

Over \$11.4 million of this funding is specifically targeted to engineering education in New Zealand, which will include:

- \$5.2 million for more engineering places at tertiary institutions for 50 additional equivalent full-time places (EFTS) in 2016, which will increase to an additional 300 EFTS by 2019
- a public awareness campaign in 2016-17 to raise interest in engineering and the broad range of study options available, particularly at ITPs
- workforce challenge grants to encourage innovative ideas for supporting student success and transitions to work
- a pilot secondary-tertiary pathways programmes to support a small number of schools and TEOs to work together to deliver secondary-level programmes designed to prepare and pathway students into further tertiary engineering study.



FEATURED CASE STUDY

MENTORING PASIFIKA ENGINEERING STUDENTS

How can educators and employers encourage young Pasifika people into engineering pathways and support them to achieve?

We discuss the rationale for supporting Pasifika engineering students and look at mentoring at tertiary level.

We then talk to Winston Hiliau about his role as Pacific Mentor for Unitec's Civil Engineering Department, where their Pasifika student initiatives over the past four years have seen an almost 50% rise in Pasifika student participation in engineering courses, and an almost doubling of pass rates.

www.engineeringe2e.org.nz/Employers/Case_study.cfm?ID=26



retaining existing funding levels for tertiary education overall and reallocating some money to priority areas in this year's Budget."

For the Minister's press release on this topic, see: www.beehive.govt.nz/release/further-113m-boost-tertiary-education-skills

For related E2E initiatives, see: www.engineeringe2e.org.nz/Progress

Budget 2015 will also include the manifesto priority allocation of an \$8.4 million contingency fund to grow Māori and Pasifika Trades Training (up to 500 new learners per annum from 2016).

The Budget announcement also included a number of other allocations relevant to engineering education, including:

- \$85.8 million over four years for significant targeted increases in tuition rates at degree level and above, including a 7.5% increase for science, a 20% increase for agriculture, and increases for optometry, pharmacy and physiotherapy
- \$1.9 million to expand the Youth Literacy and Numeracy Assessment Tool
- baseline funding to introduce Rate My Qualification, which allows employers to provide direct feedback to tertiary providers, and students to see what qualifications employers value.

The Government's investment will come from funding made available by the reducing demand for tertiary education, reprioritisation within Vote Tertiary Education, continuing to target student support to those who most need it, and some additional money from the Crown.

A stronger economy with more people in paid work and a decline in the size of the population aged 18-25 are reducing demand for tertiary education over the next few years, Mr Joyce says.

"Normally when demand for tertiary education reduces, the per-student funding model means the amount of spending also reduces. However, the Government is

Introducing engineering via the Waterview Project

The Waterview Project is an Auckland-based engineering-related in-school programme leading up in the Waterview Challenge event.

Pre-selected Auckland schools are being invited to participate in a comprehensive engineering-related in-school programme of learning for Year 10 students that culminates in the competitive Waterview Challenge event.

In-school engineering-related activities will include:

- awareness-raising within each school by teachers and careers advisers
- presentations by the Futureintech Engineering Ambassadors focusing on "What is engineering?"
- student visits to Auckland tertiary institution(s) to find out about study and work in engineering
- virtual 'experiential learning' focusing on the Waterview Project
- visits to the Waterview Connection construction sites.

Following the in-school programme each participating school will select a team of three students to participate in the Waterview Challenge scheduled for 4 September, which is in two parts:

- student presentations of a poster or a video clip on "What is engineering?" based on their in-school programme, including their participation in the LEARNZ Waterview-based field trip
- a one-hour competitive, fun, achievable practical task at the Waterview Site office judged by 2-3 engineers.

Tertiary Education, Skills and Employment Minister Steven Joyce and Transport Minister Simon Bridges will present the prizes to the winners.

To find out more, email Janet.Hay@education.govt.nz