

IN THIS ISSUE . . . we announce the publishing of our definitions of engineering qualifications and a new survey of recruitment practices, and the development of a Degree Apprenticeship Standard in Infrastructure Asset Management, and update progress on Wintec's Secondary-Tertiary Pathways Project.

EARLIER THIS MONTH, *Engineering eze Steering Group* members Matt Durkin, Carrie Murdoch, Andrew Goldie and I met with Tertiary Education, Skills and Employment Minister Paul Goldsmith to discuss *Engineering eze's* achievements to date. We were able to update the Minister on the perception issue facing ITPs, and the Memorandums of Understanding being formed between *Engineering eze* and engineering professional organisations.

With the achievement of the 500+ goal, the Minister asked what was next for the programme. We were clear that the problem remained and explained that the emphasis had now shifted to addressing the balance of engineering graduate numbers.

We stressed the value of engineers as enablers across industries and highlighted the opportunity the programme offers to challenge the status quo by trialling different ways to increase graduate numbers. We noted that *Engineering eze* is piloting initiatives that will have application in other sectors.

SIR NEVILLE JORDAN
Chair, *Engineering eze Steering Group*

Initiatives undertaken through the *Engineering eze* programme contribute directly to the achievement of the Government's Business Growth Agenda priority of building a more productive and competitive economy.



Plain English definitions of engineering qualifications

As part of a programme by *Engineering eze* and the NZ Board for Engineering Diplomas to raise engineering employers' awareness of engineering qualifications, we have just published plain English definitions of them, and an online survey on recruitment practices.

Plain English definitions of NZDE, NZDEP, BEngTech and BE (Hons) qualifications have just gone live on the *eze* website.

"We had great engagement from the sector," says Neville Jordan. 'As you would expect, a lively debate about how best to describe the qualifications in language a layperson would easily understand. As a result of that feedback, the Steering Group feels we have a set of definitions that's good enough to 'road test' by going live on the website."

"We are still open to suggestions for improvement though and we formally review the definitions after about six months, including feedback from website users."

SURVEY ON RECRUITMENT PRACTICES

Engineering eze is asking those involved in recruiting engineers to complete a short online survey to help us understand recruitment challenges and behaviour. The research will be used to develop communications and tools to help both engineering graduates and employers.

"There's evidence that employers – especially small- to medium-sized companies and those outside larger cities – have difficulty finding the people they need," says Neville Jordan. "We want to test that view and understand who is applying, and which qualifications are being considered."

See: www.surveymonkey.com/r/Q6YQ53V

The definitions come in both long and short versions. Read the long versions at www.engineeringe2e.org.nz/Employers/a-guide-to-engineering-qualifications.cfm

New Zealand Diploma in Engineering (NZDE)

I'm a hands-on engineer. I build the things others have designed – and sometimes I'm able to suggest design improvements by applying my knowledge of what works on the ground. NZDE is an internationally recognised qualification and to earn one I studied full-time for two years – though you can also do it part-time while working.

NZ Diploma in Engineering Practice (NZDEP)

I'm a senior practical engineer. It takes a minimum of four years of study and work experience to become an NZDEP engineer, but most of us have advanced technical skills built up over years of work, study and work-based assessment. You'll find us in every field of engineering, using our knowledge to implement engineering designs – and solve the practical issues that always crop up along the way. NZDEP is an internationally recognised qualification.

Bachelor of Engineering Technology (BEngTech)

BEngTech graduates are the 'all-rounders' of the engineering world because we combine strong practical skills with specialist engineering knowledge. This combination means we can be found in almost every part of engineering practice, from design to detailed build. We work at the level of broadly defined engineering problems in the widest range of engineering jobs of any type of engineer. Our ability to bridge the practical and the theoretical also makes us great project managers. The BEngTech is an internationally recognised qualification and to

DEGREE APPRENTICESHIP STANDARD IN INFRASTRUCTURE ASSET MANAGEMENT

Commissioned by Engineering e2e, Massey University Professor Jane Goodyer and her research team facilitated a group of engineering employers and ITP representatives to develop a Degree Apprenticeship Standard in Infrastructure Asset Management. The development of the standard, in an area of impending engineering employee shortage, was the first phase towards development of associated assessments, programmes and ultimate accreditation.

Engineering e2e thanks IPWEA for their collaboration on this project.

Read the report [here](#).

become one I studied full-time for three years at an Institute of Technology or Polytechnic.

Bachelor of Engineering (Hons)

I do the complex calculations, design and problem solving for engineering projects. As a BE (Hons) graduate, I'm a specialist engineer. Like other engineers we work in a particular area – such as civil, mechanical, electrical or IT engineering – and we tend to stay in the specialty we trained in, becoming more expert over time. Generally the buck stops with us, so you will often find an experienced BE (Hons) graduate heading an engineering team and taking overall responsibility for the quality of the design and implementation. It takes four years full-time study to become a BE (Hons) in New Zealand and the qualification is internationally recognised.

SECONDARY-TERTIARY PATHWAYS PROJECT UPDATE

The Secondary-Tertiary Pathways Project is well underway, with all six institutions delivering programmes aimed at engaging students with engineering and preparing them to pathway into tertiary engineering study. This month we look at Wintec.

WINTEC: BUILDING ON SUCCESS

Wintec's Integrated Engineering programme for Year 12/13 students from Fraser High School and Fairfield College builds on a highly successful pilot programme run in 2016 that saw almost half the group going on to study Mechanical Engineering at tertiary level.

This year's programme includes Mechanical, Civil

and Electrical Engineering, to give students a broad overview of engineering disciplines. The emphasis is on contextualised learning – students take core subjects at school together, learning knowledge and skills within an engineering context. Students have six visits a year to local engineering companies. They see how what they are learning is applied in the workplace, and are exposed to industries where they could work in the future. Student work at Wintec is assessed by tutors, and they can achieve up to 60 NCEA credits.

Teachers have observed and worked with Wintec tutors, while Wintec's Schools Liaison Steffan Auliff has regular meetings with the schools and observes teachers delivering their programmes.