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FROM THE CHAIR ...

THIS MONTH, we are holding a workshop on the role that micro-credentials can play in engineering education, particularly at Levels 4-6.

Participants will have the opportunity to help shape the design of micro-credentials for engineering education and help inform Engineering e2e Steering Group decisions around supporting pilots of these credentials.

Those involved in exploring, developing and delivering micro-credentials in the New Zealand context will share their experiences and plans. Participants will also hear more about the initial pilots run by NZQA, and how micro-credentials support the Government's response to the Productivity Commission's recent report on tertiary education.

The workshop is a first step in the design, preparation and procurement of one or more micro-credential pilots in engineering education.

For more information on this workshop or any Engineering e2e initiative, please get in touch: engineerge2e@tec.govt.nz

Sir Neville Jordan
Chair, Engineering e2e Steering Group

Initiatives undertaken through the Engineering e2e programme contribute directly to the achievement of the Government's Business Growth Agenda priority of building a more productive and competitive economy.

MAKE THE WORLD

EFFICIENT



Make the World continues for another year

The Make the World public awareness campaign completed its first full year at the end of June and will continue to provide a public service to young people for another year.

So far the campaign has delivered good results. The final evaluation of its first year highlighted a strong connection with the target audience (potential students) and key sub-segments (Māori, Pasifika and women). This is shown through:

- a positive perception of engineering increasing from 31% to 52% amongst potential students
- engineering moving from the 10th most considered career to 3rd, with 34% of females now seeing it as a possible career (was 11% prior to the campaign launch)
- an increase in positive perception amongst Māori and Pasifika, which is now 55% (was 25%).

However, it has been found that potential students are defaulting to universities when investigating engineering study options. Communications tracking revealed the following:

- Only 29% of those who have contacted a university about studying engineering intend to contact an institute of technology or polytechnic (ITP).
- Understanding of BEngTech and NZDE qualifications remains low amongst all potential students – including those who have contacted an ITP about engineering studies.

ITPNZ, the representative organisation of New Zealand's institutes of technology and polytechnics (ITPs), has combined the Make the World evaluation results with results of their own research,

and is planning an ITP-wide approach to address this issue. Engineering e2e hopes to see Make the World incorporated into ITPNZ's approach in the future.

Ongoing funding for Make the World will provide a website content upgrade, digital display retargeting, and search engine marketing support over 12 months. This will allow Make the World to deliver a basic public service for young people.

See: maketheworld.nz

IPWEA'S 'FOSTERING OUR FUTURE' INITIATIVE

Engineering e2e will co-fund the IPWEA NZ's 'Fostering our Future' initiative to identify the right mix of projects to address the significant skills shortages in New Zealand's public works sector.

'Fostering our Future' responds to the significant challenges faced by public works organisations to attract and retain the people they need. It aims to proactively manage the future capability and capacity of the public works engineering profession in New Zealand.

New Zealand's public works profession is entering a phase of sustained pressure to upgrade and expand New Zealand's infrastructure. This is at a time of recognised shortages of engineers nationally.

The 'Fostering our Future' team is investigating the scale and nature of this problem and is soliciting stakeholder support for a way forward. The team has identified the following issues:

- A focus on cost and ignoring the approaching capability crisis means that there is no investment in the sector, eroding capability and capacity
- Negative perceptions and lack of promotion limits the

RECRUITMENT PRACTICES SURVEY: SOME EARLY TRENDS

Engineering e2e is asking those involved in recruiting engineers to complete a short online survey to help us understand recruitment challenges and behaviour.

Analysis of early results reinforces the need to change employers' perceptions of engineering qualifications:

- Half of our respondents either had few suitable candidates or other difficulties in recruiting.
- Perceptions of NZDE, NZDEP and BEngTech are significantly less positive than BE (Hons).
- Lack of knowledge or understanding of those qualifications is a major factor in willingness to consider these qualifications when recruiting.
- Lack of confidence in the quality of the training and the training institutions is also a factor.

We want to find out about YOUR experience, so please take the survey. The research will be used to develop communications and tools to help both engineering graduates and employers.

See: www.surveymonkey.com/r/Q6YQ53V

attractiveness of the sector

- A need for diverse skills with siloed and uncoordinated development makes it difficult for the sector to communicate what it needs, and means that potential employees can't see a career path.

We will update you on 'Fostering our Future' in our upcoming newsletters.

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 Ara

ARA: EXTENDING A SUCCESSFUL INITIATIVE

After an approach by Papanui High School, Ara set up a pilot programme in 2016 to deliver Electrotechnology programmes to Year 12 and 13 students. It has been extended this year to include more schools, with Christchurch Boys' High School Year 12 students working on the same model as Papanui students: Ara tutor Pete Wilson teaches two periods a week at each school, and students come to Ara for two periods.

A multi-school course was introduced to enable small numbers of students from other schools to participate. The Level 2 course runs for one day a week at Ara and involves familiarising students with the creation of printed circuit boards. The Level 3 course focuses on logic and microcontrollers.

Pete assesses student work – they can gain up to 20 NCEA credits – and attends parent-teacher meetings and careers events at the schools, where he can discuss study pathways into engineering.

Ara also incorporates industry visits into its programme – showing students how electronics skills are used in a variety of engineering companies and exposing them to potential opportunities with local firms.

IF YOU HAVE ANY ENQUIRIES, PLEASE CONTACT US: ENGINEERING E2E PROGRAMME TEAM

Tertiary Education Commission Te Amorangi Mātauranga Matua

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