Australian Council of Engineering Deans

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TEQSA GPO Box 1672
Melbourne, Victoria, 3001

Dear Sir/Madam

Re: Response to Guidance Note on Work-Integrated Learning
(Beta v 1.0 at 19 August 2016)

This response is written on behalf of the Australian Council of Engineering Deans (ACED), after discussion by members of its Working Group on Engagement with Professional Practice (EPP).

The Council established this Working Group in 2013 to address improvement of engineering degree students' engagement with professional practice, continuing the work of a major study on the subject undertaken by ACED with funding from the (then) Department of Industry. This study proposed that '*improved exposure to engineering practice needs to be fully integrated into authentic curriculum development and delivery'*, and provided recommendations on implementation to faculties, industry and professional bodies. (*Best Practice Guidelines for Effective Industry Engagement in Australian Engineering Degrees*, S Male and R King, ACED June 2014, see www.aced.edu.au/resources). The Working Group has been focussing particularly on improving the acquisition and conduct of work placements for the large number of students undertaking accredited engineering degrees.

In 2015, ACED's members produced more than 11,000 graduates from BEng(Hons) and MEng degrees that are designed as qualifications for entering practice as professional engineers. The graduate standards of these programs are validated by program accreditation by the professional membership body, Engineers Australia (EA). EA's standards and processes validated by its international peers in the Washington Accord. ACED works closely with the EA's Accreditation Centre, to ensure continuous improvement of engineering education. EA will make a separate submission to your Guidance Note.

To be accredited, an engineering degree program requires all students to gain adequate '*exposure to engineering practice*'. Engineering education providers (ACED members) use a range of methods to meet this requirement, including the three methods (placements, internships and workplace projects) cited in your definition of work-integrated learning (WIL). All providers have employer-based advisory processes, and employers voluntarily support engagement with students.

Almost all Australian accredited engineering programs have a specific requirement for students to undertake an industry placement of some form. This may be embedded in a credit bearing course, or is a (zero credit) graduation milestone. Invariably, the actual requirement is made clear to students at the start of their program, and all providers have good documentation systems to guide students and employers. Many providers provide placement support, even though in the zero-credit/milestone model, they receive no fee funding. For all placements, the safety and well-being of the student on placement are of paramount concern, and (Australian) employers must comply with the Fair Work Act. Increasingly, ACED providers are requiring students in placement to keep a journal and reflect on their attainment of learning outcomes. Placements contribute to three broad learning outcomes:

- understanding of the industrial/technical environment and the various activities of engineers;
- observation and conduct of engineering tasks, such as practical aspects of investigation, design and construction of engineering works, that complement theoretical studies;
- development of students' confidence and abilities to take responsibility, make decisions, and communicate with a range of stakeholders.

ACED is therefore in complete accord with the intention of the TEQSA Guidance Note, to set Standards to ensure that WIL activities (particularly work-based placements) are well-designed and implemented, and integrated into the curriculum, and contribute strongly to student learning. We do, however, have concerns that the proposed Standards on placements do not match the contexts of engineering practice, or scale to the needs and capacity of the engineering discipline.

Professional engineering practice is highly diverse, and takes place in a huge range of workplaces (research laboratories, corporate and municipal offices, design offices and laboratories, chemical plants, factories, construction sites, mine sites, etc.), mostly in the private sector, and dominated by small and medium enterprises. Furthermore, the accredited engineering degree is not a statutory qualification, so no formal pressure can be put on employers. This factor, and the contextual diversity of engineering are very different from nursing and education for which the proposed Standards appear to have been designed.

We have concerns about the following specific points:

1) **The binding nature of rigorous Standards**
   Given the strong history of placements and other modes of industry engagement in engineering degrees, and the complexity of engineering enterprises, the Standards need be allowed to be flexibly implemented and interpreted, while encouraging quality improvements, as currently under consideration by the ACED Working Group on Engagement with Professional Practice.

2) **Application to zero-credit/milestone program requirements:**
   Many engineering providers will wish to retain the zero-credit/milestone model for operating placements. The Standards should specifically encompass this approach.

3) **Operating internationally:**
   Approximately one third of Australian engineering students are international students (at both home and overseas campuses); many currently undertake placements in their home country. The Standards need to accommodate this without placing impractical demands on academic monitoring and supervision.

4) **Academic supervision load:**
   While ACED recognises the value of periodic in-location academic monitoring of placements, such oversight would place an unacceptable time and resources (travel) burden on most educational providers. Provision should be made in the Standards for on-line monitoring without the need for physical visits. This would also need to include monitoring the well-being of students on WIL placement.

5) **Expectations on a host/employer:**
   Since most engineering employers rarely have free capacity for extensive supervision of students on placement, the burden on employers must be as small as necessary to guarantee a good quality

experience and outcomes as outlined earlier. We are unclear of the TEQSA's expectations on workplaces and to what extent the educational institution can minimise these.

6) **Definition of WIL:**
   The TEQSA definition of WIL as being where students 'undertake learning in a workplace outside of their higher education provider as part of their course of study' is limiting, given the diversity of engineering. ACED members would want to include 'on campus opportunities such as simulated factories and research centres' in the definition to which these Standards apply.

7) **Organisation of work placements:**
   Within the examples of typical risks, is 'The provider is not adequately involved in organising WIL and student placements'. Many ACED providers favour student pro-activity in gaining their placements, as part of their learning experience of dealing with potential employers. As a result most engineering students will organise their own placements, many as paid positions, supported by provider systems, and approved by the educational provider. ACED would not wish to see this approach to gaining a placement to be disallowed by the Standards, and be replaced by a requirement on the provider to arrange all placements.

ACED would be very pleased to provide further information as required, and to discuss further these concerns.

Yours sincerely

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President ACED

cc. A/Prof Bill McBride, Chair, EPP Working Group