

NCDEAS Report to the Engineers Canada Board – May 27, 2016
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NCDEAS is grateful for the close cooperation with the AB and Consultation Group to make needed improvements to our accreditation system. Special thanks to Gerard Lachiver, Wayne MacQuarrie, and Larry Staples for their leadership in moving this important initiative forward, and to the staff of Engineers Canada for their helpful assistance and support. Our Deans Liaison Committee (DLC) has some concerns as follows but wishes to continue working as a collaborative partner with the AB, regulators, and all stakeholders to move these discussions forward in regards to accreditation changes.

1) Lack of substantive progress over the past year. Deans are concerned that we're pretty much where we started about a year ago, more or less, in terms of proposed accreditation changes. The present model requires a minimum of 1950 AU's including a minimum of 1545 AU's of engineering science, engineering design, math, natural sciences, and complementary studies. The proposed changes in the latest consultation document are 1545 AU's plus an interpretive statement of additional relevant learning that is equivalent to 405 AU's, in other words totaling 1950 AU's. It's essentially, by and large, what we already have now. Deans cannot see how this shifts the emphasis to outcomes based assessment, or is substantively different from the present system.

2) Need to shift emphasis to outcomes based assessment. This was a significant criticism from the last Washington Accord review. In addition to technical skills, employers need graduates to have other "enabling" skillsets as per the graduate attributes, with a broader knowledge of the world, as more well-rounded individuals, who can be integrators of complex systems, and multi-disciplinary in addition to being technically proficient. There has not been satisfactory progress towards this objective of shifting the emphasis to outcomes based assessment.

3) Inadequacy of AU's and k-factors for educational innovation. Additional relevant learning is proposed to be mapped onto 405 AU's based on how the HEI assigns credits to those activities. It's inappropriate for contact-time based measurement of curriculum to be mapped onto objectives of educational innovation, flexible learning styles, and inquiry-based learning. Using variants of the credit hour or the AU or k-factors is a patch job. It will continue to be considered too risky to be used by many programs. Blended classroom structures (combinations of online, face to face, self-study materials, etc.) should be able to be quantified in a straightforward and transparent fashion, not by trying to map these activities onto an AU structure. This is like trying to fit a square peg into a round hole.

4) Correction of a misunderstanding with AU's. Some people equate AU's with learning and educational achievement. They equate a higher number of AU's with better education and more learning. This is incorrect. More AU's mean more time spent in classrooms. Too many AU's means professors need to dumb down their courses, reduce expectations of students, and give out shorter and easier assignments. Spending time in classrooms is just one of many learning environments, and not necessarily the most effective to get the broader skills needed by employers to succeed and be competitive in the global marketplace.

5) Trust. Deans are concerned with a lack of movement by some regulators, lack of sufficient understanding of our educational processes, and a perceived lack of trust with HEIs whose primary reason for existence is to provide the best education possible for our students. Without this trust, it is becoming increasingly difficult to move forward in a productive way.

6) Excessive emphasis of quantity over quality. There has been an inordinate amount of time, effort and obsession of "getting more AU's" and preserving 1950 AU's, not for the benefit of students or the quality of programs. There have been many examples where this has adversely impacted programs, like additional contact time added to programs, in the form of additional tutorials or even full courses not driven by a need for the topic or contact time, but purely to get more AU's. This is wasteful and inefficient. How does it benefit the student or program quality? It usually doesn't - it just adds more volume to their workload to get the AU counts up. The amount of emphasis that we are placing on total AU's is entirely disproportionate to the lack of emphasis that is being placed on the actual program content and quality.

7) Inaccurate representation of how we got here. Various documents over the past year including a recent draft of the Consultation Report present an inaccurate "rosy picture" of our progress made over the past decade in the transition to outcomes based assessment. Engineers Canada and CEAB gave a very clear commitment that the "post GA" accreditation process would not be more complex or more demanding than the pre-2008 system. This has not happened. Quoting from a recent report: "since the inclusion of graduate attributes and continual improvement criteria, there have been attempts to develop a simpler method of measuring curriculum content [1] to balance the additional workload". This was supposed to be completed during the 2008 – 2014 transition period, not after!

8) Need for continual improvement. It's in all of our best interests that our accreditation model seeks to stay relevant and high tier by changing over time with improvements that reflect the modern needs of society and industry. We should get in line with other accreditation systems around the world that are primarily outcomes based rather than time based. The WA review criticized our system for being too heavily focused on inputs and that it should shift the emphasis to outcomes. We've spent a large amount of time and effort and progressed very little towards this objective.

9) A silent majority? In the consultation process, a few voices were vigorously opposed to any changes in the AU system, but there was a lack of sufficient understanding in the remarks. A majority were silent. We would all benefit from knowing what are the collective views on the issue. Deans have shown that they are not satisfied with the status quo. But we are not certain that all regulators are united in their views that oppose changes. Are the voices of a few blocking progress?

10) Call to action. We recommend that Engineers Canada and the CEAB develop and champion a modernized accreditation process that meets the needs of regulators and gives universities freedom to innovate to enhance the career opportunities of our graduates and to allow for innovations in curriculum and pedagogy. The process should shift the emphasis to graduate outcomes and reduce our reliance on AU's, as committed by Engineers Canada about a decade ago, and recommended by the Washington Accord review. Deans have provided a draft White Paper to the AB in this regard that uses program syllabi and mirrors the current process used by regulators for foreign trained engineers. The White Paper is entitled "Outcome-Based Vision for Engineering Program Accreditation". We recommend that Engineers Canada and the CEAB champion a method that demonstrates to regulators that AU's are no longer necessary in the same way as they have been used in the past since we now have outcomes based assessment of 12 graduate attributes. You can all count on the NCDEAS as full and collaborative partners in these efforts.