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***Nuclear mindset assurance in an undergraduate nuclear engineering program.***

Australian government agencies and industry are working together to accelerate Australia's technical capability in nuclear engineering, driven by AUKUS commitments. Successfully applied nuclear engineering is characterised by a mandatory requirement to excel in nuclear safety, nuclear security, and nuclear safeguards throughout the complete scope of the discipline. The Australian Submarine Agency has invested effort in defining this so-called *nuclear mindset* for the purposes of recruitment and training of nuclear professionals. This work reports on our efforts at UNSW to design education programs that not only reference, but show the potential to provide specific, measurable assurance of nuclear mindset attributes and behaviours resulting from experience in such an education program. We do this by designing a 4-year undergraduate education program around nuclear mindset attributes and behaviours. The conference presentation will show the methods and workflow used to set the learning outcomes, assessments, and curriculum derived from a statement of attributes and behaviours, such as the ASA nuclear mindset definitions. Whereas any nuclear engineering education program may go some way to educate graduates in the required Knowledge or Skills for nuclear engineering competency, the current case study provides a demonstration of providing assurance of the required graduate Attributes and Experiences, leading to a complete nuclear mindset for nuclear engineering graduates. While graduates may achieve nuclear competency including Attributes and Experience by a range of roundabout professional pathways, a dedicated and intensive program like the one proposed is the fastest, and most assured means to ensure excellence.