

Keynote Talk by Prof. Dr. Anisul Haque

Assessment of Outcomes Attainment for Sustainable Development and Entrepreneurship

ABSTRACT

Program outcomes (POs) as stipulated by BAETE for accreditation have undergone significant changes in version 3.0 of the accreditation manual. The motivations for these changes are twofold. First, the International Engineering Alliance has revised its Graduate attribute statements in the Graduate Attributes and Professional Competencies (GAPC) international benchmark (version 4) in 2021 explicitly acknowledging that engineers are vital contributors for making progress towards achieving the United Nations Sustainable Development Goals (UN SDG). As a signatory of the Washington Accord, BAETE too has emphasized the role of engineers in sustainable development in version 3 of the manual. The second motivation for changes arises from the publication of the Bangladesh National Qualification Framework (BNQF), also in 2021, by the University Grants Commission (UGC) of Bangladesh. BNQF is applicable to all higher education institutions of the country. While accreditation requirements of BAETE were broadly similar to the competencies outlined in BNQF, BAETE has introduced a new PO on entrepreneurship to close the remaining gap.

Considering sustainable development in engineering practice and acquiring knowledge and skills to transform an idea into a business opportunity are two of the most important new competencies that the graduates of BAETE accredited programs now must demonstrate. To most of the engineering programs in Bangladesh, these are new challenges since the curricula of no engineering program in the country included these topics to the best of our knowledge. Even globally, these competencies have begun to receive attention only recently. It is imperative that the engineering programs planning for BAETE accreditation will have to incorporate sustainable development and entrepreneurship in their curriculum, teaching-learning and assessment. Assessment of attainment of the relevant POs is the most critical part. The assessment framework must be fully aligned to the detailed requirements as articulated in the PO statements, assessment tools selected should appropriately capture the essence of the relevant course outcome and/or PO indicator and the evaluation should be free from cognitive or other types of biases.

In this presentation, we will discuss how attainment of outcomes related to sustainable development and entrepreneurship can be effectively assessed. The challenges will be identified and the ways to overcome the challenges will be proposed.



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Dr. Anisul Haque is working as a professor in the Department of Electrical and Electronic Engineering, East West University. Before joining East West University, he taught at the Electrical and Electronic Engineering Department, BUET for eighteen years. He has been a visiting faculty at Tokyo Institute of Technology, Japan, University of Connecticut, USA and Clarkson University, USA. Dr. Haque's research interests include photovoltaic devices and systems, nanoelectronic devices and engineering education. Dr. Haque is the recipient of the Bangladesh University Grants Commission Award in 2006 and the gold medal from the Bangladesh Academy of Science in 2010. Dr. Haque is an associate editor of IEEE Electron Devices Review. Previously, he has served as an editor of IEEE Transactions on Electron Devices and as an associate editor of IEEE Access. He has also been serving as an IEEE Distinguished Lecturer. Dr. Haque was in the Board of Accreditation for Engineering and Technical Education (BAETE), Institute of Engineers, Bangladesh (IEB) as a board member. He is also engaged with Bangladesh Accreditation Council (BAC) in various capacities. Dr Haque has conducted many training and workshop sessions on Outcomes Based Education (OBE) for academic program leaders and on Outcomes Based Accreditation (OBA) for BAETE program evaluators.