

Outcome-Based Engineering Program Accreditation for Quality of Education: Müdek Experience

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Abstract

Outcome-based evaluation for accreditation of engineering programs has become a key instrument that enhances and improves the quality of engineering education. The program outcomes, which are statements defining the knowledge, skills, and attitudes that students must have acquired by the time they graduate, compose the driving force of outcome-based accreditation. MÜDEK (Association for Evaluation and Accreditation of Engineering Programs) is an independent nongovernmental organization that carries out evaluation and accreditation of engineering programs. In Turkey, accreditation of engineering programs is not compulsory, and engineering programs apply for and are awarded accreditation with the main incentive of improving the quality. MÜDEK has been authorized to award the EUR-ACE (bachelor) label since 2008 and has been a full signatory of the Washington Accord since 2011. The program outcomes of MÜDEK hence comply with both EUR-ACE Framework Standards and Washington Accord Graduate Attributes. The assessment process used by MÜDEK is designed to be a tool for providing feedback to the educational programs on the areas in which they need to improve. This presentation will outline the accreditation criteria used by MÜDEK and summarize the main areas where the programs have shortcomings in complying with the MÜDEK criteria on program outcomes. Various actions taken by MÜDEK toward assisting the educational programs in remedying such shortcomings will be indicated. The impact of these actions on the degree programs will also be discussed.



Dr. Yavuz Ercil received his BS, MSc, and PhD degrees from Bogazici University (Turkey), University of Manchester Institute of Science and Technology (UK), and Brown University (USA) in 1974, 1976, and 1981, respectively. He completed his military service as a naval officer at the R&D laboratories of the Naval Shipyard Taşkızak, Istanbul, in 1983. Then he moved to the USA to start working as a test systems design specialist at Mosaic Systems Inc., Michigan. Upon returning to his home country, Turkey, in 1988, he worked as the head of the IC Design Department of Teletaş, a telecommunications company in Istanbul. In 1992, he joined the R&D Center of Arçelik AŞ, a leading manufacturer of durable consumer goods in Turkey, where he worked in several positions, including as an electronic technologies manager of the center, and published several articles on electronic control systems, as well as being a co-inventor of some granted patents, until his retirement in 2010. He started working for MÜDEK (Association for Evaluation and Accreditation of

Engineering Programs) of Turkey in 2005 as an assessor of electrical and electronic engineering programs, and he contributed to evaluation of several engineering programs. In 2010, he joined MÜDEK as the secretary general of the association and as one of the managers of its Economic Enterprise.