Importance of Standards in Engineering and Technology Education

Authors : Ahmed S. Khan, Amin Karim

Abstract : During the past several decades, the economy of each nation has been significantly affected by globalization and technology. Government regulations and private sector standards affect a majority of world trade. Countries have been working together to establish international standards in almost every field. As a result, workers in all sectors need to have an understanding of standards. Engineering and technology students must not only possess an understanding of engineering standards and applicable government codes, but also learn to apply them in designing, developing, testing and servicing products, processes and systems. Accreditation Board for Engineering & Technology (ABET) criteria for engineering and technology education require students to learn and apply standards in their class projects. This paper is a follow-up of a 2006-2009 NSF initiative awarded to IEEE to help develop tutorials and case study modules for students and encourage standards education at college campuses. It presents the findings of a faculty/institution survey conducted through various U.S.-based listservs representing the major engineering and technology disciplines. The intent of the survey was to the gauge the status of use of standards and regulations in engineering and technology coursework and to identify benchmark practices. In light of survey findings, recommendations are made to standards development organizations, industry, and academia to help enhance the use of standards in engineering and technology curricula.
Keywords : standards, regulations, ABET, IEEE, engineering, technology curricula
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020