

**Establishing an Internationally Benchmarked Accreditation System for
Engineering Education in Bangladesh**

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Abstract

Engineering education at the tertiary level started in Bangladesh in 1947, when the Ahsanullah Engineering College in Dhaka started admitting students to 4-year degree programmes in five engineering disciplines. It was affiliated to Dhaka University. In 1962, the college was upgraded to an independent university and named East Pakistan University of Engineering and Technology. With independence of Bangladesh in 1971, it was renamed as Bangladesh University of Engineering and Technology. During the last two decades, the education system has expanded very rapidly and currently 29 public, 79 private, and one international university are operating in Bangladesh, offering 260 undergraduate engineering programs. The engineers graduating from some of these institutions have made their marks around the world in the last seven decades in every branch of engineering.

In order to achieve the present government's goal to elevate Bangladesh's status to a developed nation by 2041, adequate numbers of competent engineers with the knowledge, skills, and attitude to plan, design, build, operate, and maintain our infrastructure is needed. Moreover, there exists a considerable opportunity to convert the country's additional human resources into world-class engineers for the world market to greatly scale up the national earnings from the international market.

Graduates from some of the universities of Bangladesh have no difficulty in getting admitted to top universities in the world for pursuing Masters and PhD degrees, and on completion, join the profession in those countries. However, many countries are now making it a requirement that the degree must be accredited by a national body which is a signatory of Washington Accord. To this end, the Institution of Engineers, Bangladesh, the lone nationally approved and internationally recognized professional body for engineers in the country, has established the Board of Accreditation for Engineering and Technical Education (BAETE), bestowing it full autonomy and support to establish and enforce an internationally benchmarked accreditation system for The BAETE became a provisional signatory of the Washington Accord (WA) in 2011. At present, the BAETE is working closely with WA and its appointed mentors to enhance the quality of the accreditation system with the implementation of the outcome-based new accreditation manual, creating a more systematic, transparent, and fair system; to ensure the adoption of WA graduate attributes as standard outcomes; to elevate the quality and competency of the program evaluators; and finally, to enhance the BAETE's reputation, image, and ability to attract more public and private higher institutions of learning to apply for accreditation under the BAETE. It is expected that by attaining these definite targets, the Institution of Engineers, Bangladesh will achieve the full signatory status of the WA in the very near future. This will enable our graduate engineers to enter into national

and international engineering projects at home and abroad, not only with better knowledge, skills, and attitudes but also with quantified assessment track records generated from an efficient outcome-based education system.



Professor (Dr. Engr.) Jamilur Reza Choudhury is one of the leading engineers and academics in the country. He started his career in 1963 as a lecturer in the Department of Civil Engineering at Bangladesh University of Engineering and Technology and was appointed a professor in 1976. He was head of the department (1978-79, 1981-83), dean of the Faculty of Civil Engineering at BUET (1983-85), and director of the Computer Centre at BUET (1982-92), the largest computing facility in the country. He received his PhD from the University of Southampton, UK, in 1968 and was awarded the Doctor of Engineering (Honoris Causa) degree by the University of Manchester, UK, in 2010. He has been involved with the planning, design, and construction of some of the largest infrastructure projects in Bangladesh (ports, airports, buildings, and bridges). He was the president of Institution of Engineers, Bangladesh (1992-93). He was elected a Fellow of the Institution of Civil Engineers, UK, in 1995. He was an advisor (minister) in the Caretaker Government of Bangladesh in 1996 and was in charge of the Ministry of Energy and Mineral Resources and Ministry of Water Resources. He has headed a large number of committees and task forces formed by the government to formulate ICT policies and plans (1997, 2001, 2007). He was the first vice-chancellor of BRAC University (2001-10), and since 2012, he has been the vice-chancellor of the University of Asia Pacific. In 2018, he was appointed a national professor by the government. He has been chair of the Board of Accreditation for Engineering and Technical Education, Institution of Engineers, Bangladesh, since its inception in 2003.



Dr. A.F.M. Saiful Amin is a professor of civil engineering whose fundamental contributions have resulted in major improvements in the design and performance of bridges, strengthening the noncompliant structures. Dr. Amin focuses especially on improving codes and standards and the construction quality of civil engineering infrastructure. His dedicated R&D teams have overseen the repair and retrofitting of structures, helping increase and preserve the structural soundness of many important buildings and remarkable bridges in Bangladesh. Specializing in the fields of structural engineering—particularly structural mechanics—and applied mechanics, Dr. Amin's expertise also includes thermodynamics, thermophysics, cement chemistry, and, more recently, engineering education. Prof. Amin is a respected Fellow with the Institution of Civil Engineers, United Kingdom (on presidential invitation) and Institution of Engineers in Bangladesh. He also held visiting professorships in 2004 at the University of Kassel (Germany) and in 2007 at the University of Federal Armed Forces, Munich (Germany) on invitation from the German Academic Exchange Service and Alexander von Humboldt Foundation, Germany. After graduating from BUET in 1996 as a civil engineer and completing his MSc studies there in 1998, Dr. Amin completed his PhD at Saitama University in 2001. He also received the Malik Akram Hossain Gold Medal 1996, University Merit Scholarships, F.R. Khan Scholarship, and many other honors. In 2017, Japan Society of Civil Engineers honored him in Tokyo with the prestigious JSCE International Outstanding Collaboration Award; he was the first person from Bangladesh to receive it. The Institution of Civil Engineers, UK flew him to London as the lone ambassador from South Asia to participate in the bicentenary celebration of the Institution of Civil Engineers, UK in 2018. Prof. Amin took current responsibility for the Board of Accreditation for Engineering and Technical Education, Institution of Engineers, Bangladesh in 2016.