

Keynote Talk by Prof. Dr. Salekul Islam

Capacity Building and Enhancing Educational Competence of Engineering Educators

ABSTRACT

The rapid transformation of technology, steady growth of industry, and introduction of global educational standards demand continuous capacity building of the engineering educators. This keynote highlights different ways of capacity building and enhancing the pedagogical and professional competence of engineering educators. The introduction of OBE has shifted education from a traditional teacher-centered to a learner-centered model, aligning with local and global accreditation standards such as BAETE and the Washington Accord. The session will identify the competency domains of an educator, including pedagogical innovation, curriculum design, digital literacy, industry collaboration, and research integration. It will identify best practices for faculty development—mentoring systems, focused training programs, peer learning and continuous professional growth—that a higher-education institute should arrange. A set of essential skills, such as complex problem solving, critical thinking, teamwork, sustainability awareness and lifelong learning, must be cultivated in the students through effective teaching strategies and assessment practices. Ultimately, this presentation aims to inspire engineering educators to become transformative leaders who not only deliver technical content but also nurture the next generation of engineers to meet national and global challenges with competence, ethics, and innovation.



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Dr. Salekul Islam has been Professor of the Electrical and Computer Engineering (ECE) Department of North South University since 2024. Earlier, he served as a Professor of the Computer Science and Engineering (CSE) Department of United International University (UIU) since 2018, and was also the Head of the CSE Department of UIU. He was also in the position of the Director of Institutional Quality Assurance Cell (IQAC) and the Director of Centre for AI and Robotics (CAIR) at UIU. He was a Visiting Faculty Member of Anglia Ruskin University, UK in 2015.

Dr. Islam completed his PhD in Computer Science from Concordia University, Canada in 2008. He also worked as a Fonds de Recherche du Québec Nature et Technologies (FRQNT) Postdoctoral Fellow at Institut national de la recherche scientifique (INRS), Canada, from 2008 to 2011. He is actively involved with Bangladesh Board of Accreditation for Engineering and Technical Education (BAETE) in different capacities including as a Member of the Board, member of the Task Force for Preparing the OBE Manual and the Co-Chair of the Quality Assurance Cell.

His research areas mainly focus on Cybersecurity, Blockchain, NLP, Image Processing, Edge Cloud Computing, Robotics and Engineering Education. He has authored or coauthored more than 100 refereed papers in international journals and conferences. He has been serving as a Senior Editor of IEEE Access and an Associate Editor of Frontiers in High Performance Computing. As a PI/Co-PI, he successfully received more than 10 national and institutional grants. He served as the Organizing Chair of several international conferences. He is a Fellow of the Institute of Engineers, Bangladesh (IEB) and is also a Senior Member of IEEE.