

Keynote Talk by *Dr. Baishakhi Bose*

Navigating Change: Challenges and Opportunities for Early Career Faculty in the Era of Outcome-Based Learning

ABSTRACT

As the landscape of engineering education rapidly evolves, newly hired faculty find themselves at the intersection of innovation, accountability, and transformation. This presentation will explore the challenges and emerging opportunities faced by early career engineering educators in U.S. higher education space as they navigate outcome-based education (OBE) and accreditation processes. Balancing teaching excellence, research productivity, and institutional accreditation demands presents both obstacles and growth opportunities for new faculty. Key challenges include implementing OBE principles in curriculum design, embedding industry-relevant competencies, and generating evidence of student learning outcomes that align with accreditation standards such as ABET. Drawing on experiences from structured mentoring, faculty orientation, and accreditation-focused professional development programs in U.S. universities, this presentation will highlight how these initiatives empower young faculty to integrate assessment-driven teaching and continuous improvement practices. Furthermore, the presentation will explore how such capacity-building models can be adapted by institutions in Bangladesh seeking international or national accreditation frameworks. By sharing experiences, challenges, and best practices, this presentation aims to emphasize how early career engineering faculty can become catalysts for curricular innovation, quality assurance, and sustainable educational excellence in a rapidly changing global engineering education environment.



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Dr. Baishakhi Bose is currently a lecturer at the Department of Engineering Education at The Ohio State University and a Research Affiliate at Lawrence Berkeley National Laboratory. She has a PhD in Materials Engineering from Purdue University. After her PhD graduation, she had a joint appointment as a postdoctoral fellow at Lawrence Berkeley National Laboratory and University of California, Berkeley where her research focused on life cycle assessment, technoeconomic analysis and supply chain analysis of various building materials and commercial products, in addition to being a Teaching Scholar at the Berkeley Lab K-12 Program. She has a BS and MS in Civil Engineering from Bangladesh University of Engineering and Technology. She also served as a lecturer at Dept. of Civil Engineering at BUET for 3 years. Since 2014, she has taught multiple courses in Structural/Materials Engineering/First Year Engineering to undergraduates, and mentored undergraduate, graduate and high school students in various STEM fields to foster research and professional development skills. She also has relevant experiences in organizing undergraduate research symposium/conferences, hosting professional development workshops, and curriculum development and assessment.